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HAMMOND REEF GOLD PROJECT

Site Water Quality Technical Support Document

VERSION 2

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PART A

Introduction

In support of the Osisko Hammond Reef Gold's (OHRG) Draft Environmental Impact Statement/Environmental Assessment (EIS/EA) Report, technical information related to water quality was provided in the following Technical Support Documents (TSD):

- **Water and Sediment Quality TSD** – provides a description of baseline water and sediment quality conditions within the Project site and surrounding waterbodies. This information is summarized in Section 3.0 of the EIS/EA Report.
- **Site Water Quality TSD** – provides predictions of potential changes to water quality within the mine study area as a result of the Project and information on site discharge volumes and water quality. The information and findings of this TSD are considered in other TSDs including the Lake Water Quality TSD and are summarized in Section 6.0 of the EIS/EA Report.
- **Lake Water Quality TSD** – provides a description of the predicted water quality conditions in the receiving water bodies, including Upper Marmion Reservoir, Lizard Lake and the discharge from Raft Lake Dam. The water quality analysis presented in this TSD considers site discharge water quality predictions presented in the Site Water Quality TSD, environmental processes such as hydrologic variability and hydrodynamic mixing within the receiving waters, and water level management activities at the Raft Lake Dam. The information presented in this TSD is summarized in Section 6.0 of the EIS/EA Report.

Version 1 of the Site Water Quality TSD was published on February 15, 2013 as part of the Draft EIS/EA Report.

The Draft EIS/EA Report underwent a seven week public review comment period after which, on April 5, 2013, OHRG received comments from the public, Aboriginal groups and the Government Review Team (GRT) seeking clarification and requesting new information.

Approximately 55 comments regarding the water quality component of the EIS/EA Report and water quality TSDs (Site Water Quality and Lake Water Quality) were received from the GRT. Written responses have been prepared for each comment and are provided in Appendix 1.IV of the EIS/EA Report.

Version 1 of the Site Water Quality TSD has not been revised. The methods used to define the site water quality during operations and closure are technically defensible and based on standard industry practices. The conclusions presented in the Site Water Quality TSD are sound. Some additional information and clarification is provided as part of this Version 2 Site Water Quality TSD..

The EIS/EA Report has been revised and updated based on comments received. Minor changes to the results are presented in this Version 2 TSD subsequent to the submittal of the Draft EIS/EA Report based on this new work. Version 2 of the Site Water Quality TSD is comprised of the following:

- Part A: Introduction
- Part B: Supplemental Information Package (attached) that provides additional detail on new work undertaken related to the Site Water Quality component, and changes to, or clarification of information presented in Version 1 of the Site Water Quality TSD.

- Part C: Version 1 of the Site Water Quality TSD. Part C was issued in February 2013, and is available online on OHRG's website; it has not been re-printed as part of this Version 2 of the Site Water Quality TSD. The Version 1 document should be reviewed within the context of this Version 2 document, and associated updated information as presented in Part A or Part B should be considered as correct should it differ from the information presented in Version 1.

A summary of the information found in Part B is provided below. Throughout the EIS/EA Report, unless otherwise noted, all references made to the Site Water Quality TSD are to Part C.

Revised Pit Flooding Duration

The pit flooding model was updated to better reflect planned water management activities at closure. The previous estimated flooding duration of 78 years was based on the assumption that runoff from the Waste Rock Management Facility (WRMF), Tailings Management Facility (TMF) and other project infrastructure would be diverted to the pits in perpetuity. However, as explained in the Conceptual Closure and Rehabilitation Plan TSD, runoff from these areas will be released to the environment when water quality is deemed to be suitable for discharge. The pit flooding model was updated based on this plan. The model update resulted in an increase in the predicted flooding duration to approximately 218 years. This change is not reflected in the Site Water Quality TSD. A technical memorandum summarizing the revised pit flooding model results is provided in the Supplemental Information Package attached to the Conceptual Closure and Rehabilitation Plan TSD.

Revised Cyanide Treatment Efficiency

Water in the cyanide leach circuit will undergo treatment through cyanide destruction processes prior to combination with the flotation tailings and release into the TMF and TMF reclaim pond. The effluent from the cyanide concentration circuit was assumed to have a concentration of 20 ppm weak acid dissociable cyanide in the previous water quality assessment. Based on ongoing engineering activities, an improved cyanide destruction efficiency been assumed, resulting in a revised concentration of effluent from the cyanide concentration circuit of 5 ppm weak acid dissociable cyanide. Tables 4-10 through 4-13 and Appendix 4.II have been revised based on this new assumption and are provided in the attached Supplemental Information Package

Clarification of Groundwater-Surface Water Modelling Approach

Several information requests received from the GRT recommended that a more sophisticated modelling approach be used to quantify groundwater releases and groundwater quality to surface water receptors from the TMF and other stockpiles. In the assessment completed, a conservative water balance approach was used to evaluate potential for near surface vs. groundwater water quality influence, whereby all water reporting to the various site areas is assigned an expected leachate water quality based on representative geochemical testing and is assumed to be released. This approach is considered to contain less uncertainty than a hydrogeological modelling approach due to the inherent uncertainty and heterogeneity in expected hydraulic conductivity values and/or boundary conditions. Further information on this approach is provided in the responses to information requests MOE-NR-GW-16 and MNDM-18 as included in the Part B of the Version 2 Hydrogeology TSD.

Supplemental Information Provided in Part B

- Revised Tables 4-10 to 4-13 of Site Water Quality TSD
- Revised Appendix 4.II of Site Water Quality TSD

PART B

Supplemental Information Package

Table 4-10: Summary of Steady State (Average) Conditions Results During Operations

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.7 - 7.8	7.8	6.9	6.9
Cyanide	**mg/L**	0.005			**0.16 – 0.23**	**0.028**[d]	N/A	N/A
NO_3[e]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.04	0.04
NH_4[e]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				142 - 200	242	1	1
Cl	**mg/L**				18 - 25	31	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.0001	0.0001
Al	**mg/L**	0.1	0.075		0.01 – 0.02	0.02	0.054	0.054
As	**mg/L**	0.005	0.005	1	0.00004 – 0.00005	0.0001	0.0006	0.0006
B	**mg/L**		0.2		0.0006 – 0.002	0.00002	0.019	0.019
Ca	**mg/L**				19 - 24	28	13	13
Cd	**mg/L**	Note[f]	0.0001		0.00002	0.00002	**0.00005**	**0.00005**
Co	**mg/L**		0.0009		**0.002**	**0.003**	0.0003	0.0003
Cr	**mg/L**	0.001	0.001		0.0002	0.0002	0.0006	0.0006
Cu	**mg/L**	0.002	0.001	0.6	**0.06 – 0.09**	**0.11**	0.0007	0.0007
Fe	**mg/L**	0.3	0.3		0.00007	0.0001	**0.4**	**0.4**
K	**mg/L**				24 – 34	40	0.78	0.78
Mg	**mg/L**				10 – 13	16	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.08**	0.0006	0.0006
Na	**mg/L**				62 - 87	106	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.007 – 0.009	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02	0.02	0.008	0.008
Pb	**mg/L**	0.001	0.001	0.4	0.0001	0.0002	0.0004	0.0004
Sb	**mg/L**		0.02		0.002	0.002	0.002	0.002
Se	**mg/L**	0.001	0.1		0.0006 – 0.0007	0.0008	0.0004	0.0004
U	**mg/L**		0.005		0.005 – **0.006**	**0.007**	0.002	0.002
V	**mg/L**		0.006		0.00002 – 0.00005	0.00004	0.0005	0.0005
Zn	**mg/L**	0.03	0.02	1	0.002	0.002	0.003	0.003

Notes:

[a] Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

[b] Provincial Water Quality Objectives.

[c] Municipal/Industrial Strategy for Abatement.

[d] Assuming 5 ppm in CN circuit and natural degradation of cyanide as described in Section 4.2.3.

[e] Assuming no oxidation of ammonia to nitrate.

[f] Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2.

Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

Table 4-11: Summary of First Flush Conditions Results During Operations

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.7 - 7.8	7.8	6.8	6.8
Cyanide	**mg/L**	0.005			**0.16 – 0.23**	**0.028**[d]	N/A	N/A
NO_3[e]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[e]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				150 - 206	242	2.2	2.2
Cl	**mg/L**				19 - 26	31	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.01 – 0.02	0.02	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.0002 – 0.0003	0.0001	0.0004	0.0004
B	**mg/L**		0.2		0.0006 – 0.002	0.00002	0.003	0.003
Ca	**mg/L**				21 - 26	28	11	11
Cd	**mg/L**	Note[f]	0.0001		0.00004 – 0.00005	0.000017	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.0002	0.0002	0.0009	0.0009
Cu	**mg/L**	0.002	0.001	0.6	**0.06 – 0.09**	**0.11**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.00007	0.0001	**1.3**	**1.3**
K	**mg/L**				25 – 34	40	0.37	0.37
Mg	**mg/L**				10 – 14	16	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.08**	0.0003	0.0003
Na	**mg/L**				63 - 88	106	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.007 – 0.009	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02	0.02	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0001	0.0002	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.002	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.0008	0.0005	0.0005
U	**mg/L**		0.005		0.0006 – 0.0007	**0.007**	0.00008	0.00008
V	**mg/L**		0.006		0.0001 – 0.0002	0.00004	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.003	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate.

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2.

Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

Table 4-12: Summary of Worst Case Condition Results During Operations (75th Percentile Process Water)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.6 - 7.7	7.8	6.8	6.8
Cyanide	**mg/L**	0.005			**0.16 – 0.23**	**0.028[(d)]**	N/A	N/A
NO_3[(e)]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[(e)]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				174 - 225	250	2.2	2.2
Cl	**mg/L**				22 - 29	35	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.009 – 0.01	0.01	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.0001 – 0.003	0.0004	0.0004	0.0004
B	**mg/L**		0.2		0.001 – 0.006	0.00002	0.003	0.003
Ca	**mg/L**				26 - 30	31	11	11
Cd	**mg/L**	Note[(f)]	0.0001		**0.0002**	0.000026	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002 – 0.003**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.0003	0.0002	0.0009	0.0009
Cu	**mg/L**	0.002	0.001	0.6	**0.08 – 0.11**	**0.14**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.0001	0.00007	**1.3**	**1.3**
K	**mg/L**				30 – 38	41	0.37	0.37
Mg	**mg/L**				13 – 16	17	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.09**	0.0003	0.0003
Na	**mg/L**				68 - 92	108	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.008 – 0.01	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02 – 0.03	0.03	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0001 – 0.0002	0.0002	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.003	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.001	0.0005	0.0005
U	**mg/L**		0.005		**0.006 – 0.007**	**0.008**	0.00008	0.00008
V	**mg/L**		0.006		0.0002 – 0.0005	0.000009	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.007 – 0.01	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate.

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2.

Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

Table 4-13: Summary of Worst Case Condition Results During Operations (Maximum Process Water)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	8.3	7.7	6.8	6.8
Cyanide	**mg/L**	0.005			**0.16 – 0.23**	**0.028**[(d)]	N/A	N/A
NO_3[(e)]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[(e)]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				192 - 250	280	2.2	2.2
Cl	**mg/L**				42 - 57	69	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.009 – 0.01	0.01	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.00001 – 0.00002	0.00003	0.0004	0.0004
B	**mg/L**		0.2		0.001 – 0.006	0.00002	0.003	0.003
Ca	**mg/L**				20 - 21	36	11	11
Cd	**mg/L**	Note[(f)]	0.0001		**0.0002**	0.000028	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002 – 0.003**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.00009	0.0002	0.0009	0.0009
Cu	**mg/L**	0.002	0.001	0.6	**0.09 – 0.13**	**0.16**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.0001	0.00008	**1.3**	**1.3**
K	**mg/L**				33 – 42	47	0.37	0.37
Mg	**mg/L**				10 – 11	21	1.8	1.8
Mo	**mg/L**		0.04		**0.06 – 0.08**	**0.09**	0.0003	0.0003
Na	**mg/L**				80 - 109	129	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.008 – 0.01	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.03	0.03	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0003 – 0.0004	0.0004	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.003	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.001	0.0005	0.0005
U	**mg/L**		0.005		**0.006 – 0.008**	**0.009**	0.00008	0.00008
V	**mg/L**		0.006		0.00002 – 0.0005	0.000002	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.007 – 0.01	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2.

Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

TABLE 1
Operations Model Results
100 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-		-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.00001	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.00001	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.00001	0.0002	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00001	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.00001	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.95	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00003*	3.8	0.0002	0.00001	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.00001	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.00001	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.96	0.0009	0.003	0.00001	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.001	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.001	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.00001	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	*0.00001*	1.0	0.0000	0.0003	0.0003	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.2	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.1	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.7	0.000	0.0004	0.0004	0.0002	0.00001	0.2	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	***14***	***27***	13	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.0	17	7.9	***15***	7.5	0.002	0.0007	0.0002	0.006	0.004	6.4	*0.00002*	2.0	0.00009	0.00005	0.0003	0.0002	0.000008	0.39	0.70	0.03	0.0002	0.42	0.0004	0.008	0.00002	0.0005	0.00004	0.50	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.9	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	5.9	11	5.5	0.003	0.0005	0.0003	0.004	0.003	4.9	*0.00001*	1.3	0.0001	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.25	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	121	0.000004	4.5	4.5	0.02	0.002	0.00004	0.0005	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***	0.0001	0.00001	34	13	0.04	**0.07**	88	0.009	0.02	0.0001	0.0007	0.00001	200	0.27	0.03	0.00002	0.0002	**0.006**	0.002	***0.23***
Process Control Pond	7.0	17	7.1	***14***	6.7	0.002	0.0007	0.0002	0.007	0.005	6.3	*0.00002*	2.0	0.0001	0.0001	0.0003	0.0003	0.000008	0.47	0.76	0.03	0.0002	0.44	0.0004	0.009	0.00003	0.0005	0.00005	0.55	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	121	2.0	***18***	16	0.02	0.002	0.00004	0.0006	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***	0.00007	0.00001	34	13	0.04	**0.07**	87	0.009	0.02	0.0001	0.00069	0.00001	200	0.26	0.03	0.00002	0.0002	**0.006**	0.002	***0.23***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.000001	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	25	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.010	11	*0.00001*	4.6	0.0004	0.000001	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.000001	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.000001	0.0001	0.0004	0.000006	0.89	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.001	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.000001	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.37	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	***14***	***27***	13	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.3	24	7.9	***15***	7.5	0.004	0.0009	0.002	0.01	0.006	7.1	*0.00002*	2.3	0.0001	0.00005	0.0005	0.0002	0.000008	2.6	1.0	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	5.9	11	5.5	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.90	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	122	0.000004	4.5	4.5	0.02	0.002	0.00001	0.0005	0.01	26	0.00004	26	**0.002**	0.0002	***0.09***	0.00006	0.00001	34	14	0.05	**0.07**	88	0.009	0.02	0.0001	0.0007	0.00001	206	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.23***
Process Control Pond	7.2	23	7.1	***14***	6.7	0.003	0.0007	0.001	0.009	0.006	7.1	*0.00002*	2	0.0001	0.00003	0.0004	0.0002	0.000008	2.3	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	122	2.0	***18***	16	0.02	0.002	0.00002	0.0006	0.01	26	0.00004	26	**0.002**	0.0002	***0.09***	0.00006	0.00001	34	14	0.05	**0.07**	88	0.0093	0.02	0.0001	0.0007	0.00001	206	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.23***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.05	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0003	0.000001	0.0004	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.00039	0.000007	1.7	1.9	0.11	0.002	3.9	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.000001	0.0002	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.000001	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.000001	0.00067	0.00003	2.3	0.09	0.001	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.1	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.2	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00192*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	***14***	***27***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	7.9	***15***	7.50	0.002	0.0008	***0.02***	0.02	0.02	7.8	*0.00004*	9.1	0.0002	0.00002	**0.002**	0.0004	0.000008	3.1	2.1	0.06	0.004	6.5	0.0009	0.05	0.00001	*0.00151*	0.00003	2.8	0.24	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	5.9	11	5.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.00171*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	129	0.000005	4.9	4.9	0.01	0.002	0.00009	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***	0.00007	0.00001	38	16	0.06	**0.07**	92	0.01	0.02	0.0002	0.00097	0.00001	225	0.31	0.03	0.00005	0.0002	**0.007**	0.007	***0.23***
Process Control Pond	6.9	31	7.1	***14***	6.7	0.002	0.0009	***0.02***	0.02	0.02	7.9	*0.00004*	8.8	0.0002	0.0002	***0.003***	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.0014*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	129	2.0	***18***	16	0.01	0.002	0.0001	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***	0.0001	0.00001	38	16	0.06	**0.07**	92	0.01	0.02	0.0002	0.001	0.00001	225	0.31	0.03	0.00005	0.0002	**0.007**	0.007	***0.23***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.05	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0003	0.000001	0.0004	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.9	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.000001	0.0002	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.000001	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.000001	0.00067	0.00003	2.3	0.09	0.001	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.1	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.010***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.2	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00192*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	***14***	***27***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	7.9	***15***	7.5	0.002	0.0008	***0.02***	0.02	0.02	7.8	*0.00004*	9.1	0.0002	0.00002	**0.002**	0.0004	0.000008	3.1	2.1	0.06	0.004	6.5	0.0009	0.05	0.00001	*0.00151*	0.00003	2.8	0.24	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.7	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.9	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	5.9	11	5.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.00171*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	133	0.000005	5.6	5.6	0.01	0.002	0.00003	0.001	0.01	34	***0.0002***	57	**0.003**	0.0003	***0.13***	0.00008	0.00001	42	19	0.06	**0.08**	109	0.01	0.03	0.0004	0.00095	0.00001	250	0.35	0.03	0.00002	0.0002	**0.007**	0.007	***0.23***
Process Control Pond	6.9	31	7.1	***14***	6.7	0.002	0.0009	***0.02***	0.02	0.02	7.9	*0.00004*	8.8	0.0002	0.0002	***0.003***	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.00144*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	66	2.0	***18***	16	0.01	0.002	0.000001	0.001	0.01	21	***0.0002***	57	**0.003**	0.00009	***0.13***	0.0001	0.00001	42	11	0.06	**0.08**	109	0.01	0.03	0.0004	0.001	0.00001	250	0.35	0.03	0.00002	0.0002	**0.007**	0.007	***0.23***

0.01	Value Exceeds PWOO Guideline
0.01	Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01	Value Exceeds MISA Regulation

[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 2
Operations Model Results
50 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.95	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00003*	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.96	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	*0.00001*	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.1	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.75	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	***13***	***26***	13	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.0	17	7.6	***15***	7.1	0.002	0.0007	0.0002	0.006	0.004	6.3	*0.00002*	2.0	0.00009	0.00006	0.0003	0.0002	0.000009	0.38	0.68	0.03	0.0002	0.40	0.0004	0.008	0.00002	0.0005	0.00004	0.49	0.02	0.0003	0.0002	0.00005	0.001	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	5.5	11	5.2	0.003	0.0005	0.0003	0.004	0.003	4.9	*0.00001*	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	120	0.000004	4.4	4.4	0.02	0.002	0.00004	0.0006	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***	0.00007	0.00001	33	13	0.04	**0.07**	87	0.009	0.02	0.0001	0.0007	0.00001	198	0.26	0.03	0.00002	0.0002	**0.006**	0.002	***0.22***
Process Control Pond	7.0	17	6.8	***13***	6.4	0.002	0.0007	0.0002	0.007	0.005	6.3	*0.00002*	2.0	0.00009	0.0001	0.0003	0.0003	0.000008	0.46	0.75	0.03	0.0002	0.43	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	119	1.9	***18***	16	0.01	0.002	0.00004	0.0006	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***	0.00007	0.00001	33	13	0.04	**0.07**	86	0.009	0.02	0.0001	0.00069	0.00001	197	0.26	0.03	0.00002	0.0002	**0.006**	0.002	***0.22***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	25	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	*0.00001*	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006	0.0001	0.0004	0.000006	0.89	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	***13***	***26***	13	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.3	24	7.6	***15***	7.1	0.004	0.0009	0.002	0.011	0.006	7.0	*0.00002*	2.3	0.0001	0.00006	0.0005	0.0001	0.000009	2.7	1.0	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	5.5	11	5.2	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.90	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	121	0.000004	4.4	4.4	0.02	0.002	0.00001	0.0006	0.01	26	0.00004	25	**0.002**	0.0002	***0.09***	0.00006	0.00001	34	14	0.05	**0.07**	87	0.009	0.02	0.0001	0.0007	0.00001	203.8	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.22***
Process Control Pond	7.2	23	6.8	***13***	6.4	0.003	0.0007	0.001	0.009	0.006	7.1	*0.00002*	2.4	0.0001	0.00003	0.0004	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.0008	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	121	1.9	***18***	16	0.02	0.002	0.00002	0.0006	0.01	26	0.00004	25	**0.002**	0.0002	***0.09***	0.00006	0.00001	33	14	0.05	**0.07**	87	0.009	0.02	0.0001	0.0007	0.00001	202	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.22***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.78	1.8	0.14	0.001	2.0	0.001	0.006	0.0000006	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	***13***	***26***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	7.6	***15***	7.1	0.002	0.0008	***0.02***	0.02	0.02	7.7	*0.00004*	9.2	0.0002	0.00002	**0.002**	0.0004	0.000009	3.1	2.1	0.06	0.004	6.6	0.0009	0.05	0.00001	*0.00153*	0.00003	2.8	0.25	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	5.5	11	5.2	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	128	0.000005	4.9	4.9	0.01	0.002	0.00008	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***	0.00007	0.00001	37	16	0.06	**0.07**	91	0.01	0.02	0.0002	0.00097	0.00001	224	0.3	0.03	0.00004	0.0002	**0.007**	0.008	***0.22***
Process Control Pond	6.9	31	6.8	***13***	6.4	0.002	0.0009	***0.02***	0.02	0.02	7.8	*0.00004*	8.8	0.0002	0.0002	***0.003***	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.0014*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	128	1.9	***18***	16	0.01	0.002	0.0002	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***	0.00007	0.00001	37	16	0.06	**0.07**	90	0.01	0.02	0.0002	0.001	0.00001	223	0.3	0.03	0.00006	0.0002	**0.007**	0.008	***0.22***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	***13***	***26***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	7.6	***15***	7.1	0.002	0.0008	***0.02***	0.02	0.02	7.7	*0.00004*	9.2	0.0002	0.00002	**0.002**	0.0004	0.000009	3.1	2.1	0.06	0.004	6.6	0.0009	0.05	0.00001	*0.00153*	0.00003	2.8	0.25	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	5.5	11	5.2	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	132	0.000005	5.5	5.5	0.01	0.002	0.00003	0.001	0.01	34	***0.0002***	57	**0.003**	0.0003	***0.13***	0.00008	0.00001	42	19	0.06	**0.08**	108	0.01	0.03	0.0004	0.00095	0.00001	248	0.35	0.03	0.00002	0.0002	**0.007**	0.008	***0.22***
Process Control Pond	6.9	31	6.8	***13***	6.4	0.002	0.0009	***0.02***	0.02	0.02	7.8	*0.00004*	8.8	0.0002	0.0002	***0.003***	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.00145*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.9	***18***	16	0.01	0.002	0.000001	0.001	0.01	21	***0.0002***	56	**0.003**	0.00009	***0.13***	0.00008	0.00001	41	11	0.06	**0.08**	107	0.01	0.03	0.0004	0.001	0.00001	247	0.35	0.03	0.00004	0.0002	**0.007**	0.008	***0.22***

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 3
Operations Model Results
25 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate(a)	Nitrate(b)	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper
		50.04365	14.01	14.01	14.01	26.98154	121.757	74.9216	10.811	137.33	40.078	112.41	35.4527	58.9332	51.996	63.546
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6
Scenario 1 - Steady State																
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.0001	0.0002	0.0003
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.0001	0.0002	0.0003
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	0.00001	1.0	0.00004	0.0003	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004
Pumping Station 14	6.9	22	13	24	12	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003
Open Pit	7.0	16	7.2	14	6.8	0.002	0.0006	0.0002	0.006	0.004	6.1	0.00002	1.9	0.00008	0.00006	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.0	13	5.2	10	4.9	0.003	0.0005	0.0003	0.004	0.003	4.9	0.00001	1.3	0.0001	0.0003	0.0004
TMA Reclaim Pond	7.8	119	0.000004	4.4	4.4	0.01	0.002	0.00004	0.0006	0.01	24	0.00002	25	0.002	0.0002	0.09
Process Control Pond	7.0	17	6.4	12	6.0	0.002	0.0007	0.0002	0.006	0.004	6.2	0.00002	1.9	0.0001	0.0001	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.8	117	1.8	18	16	0.01	0.002	0.00004	0.0007	0.01	24	0.00002	24	0.002	0.0002	0.09
Scenario 2 - First Flush																
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000009	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007
Pumping Station 14	6.8	27	13	24	12	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002
Open Pit	7.3	24	7.2	14	6.8	0.004	0.0009	0.002	0.01	0.006	6.9	0.00002	2.2	0.0001	0.00007	0.0005
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.4	21	5.2	10	4.9	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004
TMA Reclaim Pond	7.8	120	0.000004	4.4	4.4	0.02	0.002	0.00001	0.0006	0.01	26	0.00004	25	0.002	0.0002	0.09
Process Control Pond	7.2	23	6.4	12	6.0	0.003	0.0007	0.001	0.009	0.006	7.0	0.00002	2	0.0001	0.00004	0.0004
WATER TREAMENT FEED - RECLAIM TANK	7.8	118	1.8	18	16	0.01	0.002	0.00004	0.0008	0.01	25	0.00004	25	0.002	0.0002	0.09
Scenario 3 - 75th Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	24	12	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.2	14	6.8	0.002	0.0008	0.02	0.02	0.02	7.6	0.000041	9.3	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.2	10	4.9	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	127	0.000005	4.8	4.8	0.01	0.002	0.00008	0.001	0.02	30	0.0002	29	0.002	0.0002	0.11
Process Control Pond	6.9	31	6.4	12	6.0	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	7.7	126	1.8	18	16	0.01	0.002	0.0004	0.002	0.02	30	0.0002	28	0.002	0.0002	0.11
Scenario 4 - Maximum Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	24	12	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.2	14	6.8	0.002	0.0008	0.02	0.02	0.02	7.6	0.000041	9.3	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.2	10	4.9	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	131	0.000005	5.5	5.5	0.01	0.002	0.00003	0.001	0.01	34	0.0002	56	0.003	0.0003	0.13
Process Control Pond	6.9	31	6.4	12	6.0	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.8	18	16	0.01	0.002	0.0000007	0.002	0.01	21	0.0002	55	0.003	0.00009	0.13

Solution Description	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	55.845	200.59	39.0983	24.305	54.938	95.94	22.98977	58.6934	39.97376	207.2	78.96	107.868	96	87.62	118.71	50.9415	204.383	238.0289	65.39	26.02
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																				
Pumping Station 1	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.97	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.00056	0.001	-
Pumping Station 12	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0002	0.000009	0.38	0.66	0.03	0.0002	0.39	0.0004	0.008	0.00002	0.0005	0.00004	0.48	0.02	0.0003	0.0002	0.00005	0.0009	0.001	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	0.99	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.00007	0.00001	33	13	0.04	0.07	86	0.009	0.02	0.0001	0.0007	0.00001	196	0.26	0.03	0.00002	0.0002	0.006	0.002	0.22
Process Control Pond	0.0003	0.000008	0.74	1.6	0.03	0.0002	0.43	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	32	13	0.04	0.06	84	0.009	0.02	0.0001	0.00068	0.00001	192	0.25	0.03	0.00003	0.0002	0.006	0.002	0.22
Scenario 2 - First Flush																				
Pumping Station 1	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.00001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.00005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0001	0.000009	2.7	0.94	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.0010	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.00006	0.00001	33	13	0.05	0.07	86	0.009	0.02	0.0001	0.0007	0.00001	202	0.27	0.03	0.00001	0.0002	0.006	0.003	0.22
Process Control Pond	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00006	0.00001	33	13	0.05	0.07	85	0.009	0.02	0.0001	0.00069	0.00001	198	0.26	0.03	0.00002	0.0002	0.006	0.003	0.22
Scenario 3 - 75th Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0003	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.2	2.1	0.06	0.004	6.7	0.0009	0.05	0.00001	0.00155	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00007	0.00001	37	16	0.06	0.07	90	0.010	0.02	0.0002	0.00097	0.00001	223	0.30	0.03	0.00004	0.0002	0.007	0.008	0.22
Process Control Pond	0.0003	0.000008	3.1	2.1	0.06	0.004	6.3	0.0008	0.05	0.00005	0.0015	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	37	15	0.06	0.07	88	0.010	0.02	0.0001	0.001	0.00001	218	0.30	0.03	0.0001	0.0002	0.007	0.008	0.22
Scenario 4 - Maximum Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0003	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.2	2.1	0.06	0.004	6.7	0.0009	0.05	0.00001	0.00155	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00008	0.00001	41	19	0.06	0.08	107	0.01	0.03	0.0004	0.00095	0.00001	247	0.35	0.03	0.00002	0.0002	0.007	0.008	0.22
Process Control Pond	0.0003	0.000008	3.1	2.1	0.06	0.004	6.3	0.0008	0.05	0.00005	0.00145	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00008	0.00001	41	11	0.06	0.08	105	0.01	0.03	0.0004	0.001	0.00001	242	0.35	0.03	0.00007	0.0002	0.007	0.008	0.22

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6
Scenario 1 - Steady State																
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002
Pumping Station 2	6.9	25	0.00007	0.04	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	0.00001	1.0	0.00004	0.0003	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004
Pumping Station 14	6.9	22	11	22	11	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003
Open Pit	7.0	16	6.8	13	6.4	0.003	0.0006	0.0002	0.005	0.004	6.0	0.00002	1.8	0.00008	0.00008	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.0	13	4.7	9.2	4.5	0.003	0.0005	0.0003	0.004	0.003	4.9	0.00001	1.3	0.00006	0.0003	0.0004
TMA Reclaim Pond	7.8	117	0.000004	4.3	4.3	0.01	0.002	0.00003	0.0007	0.01	24	0.00002	24	0.002	0.0002	0.09
Process Control Pond	7.0	17	5.9	12	5.6	0.002	0.0007	0.0002	0.006	0.004	6.2	0.00002	1.9	0.00009	0.0002	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.8	113	1.7	18	16	0.01	0.002	0.00004	0.0009	0.01	23	0.00002	23	0.002	0.0002	0.08
Scenario 2 - First Flush																
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000009	0.004	0.010	11	0.00001	4.6	0.0004	0.0000006	0.00008
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.0001	0.000002	0.0002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007
Pumping Station 14	6.8	27	11	22	11	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002
Open Pit	7.3	23	6.8	13	6.4	0.005	0.0009	0.002	0.01	0.006	6.7	0.00002	2.1	0.0001	0.00009	0.0006
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.010	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.4	21	4.7	9.2	4.5	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004
TMA Reclaim Pond	7.8	118	0.000004	4.3	4.3	0.02	0.002	0.00001	0.0006	0.01	25	0.00004	25	0.002	0.0002	0.09
Process Control Pond	7.2	23	5.9	12	5.6	0.003	0.0007	0.001	0.009	0.006	6.9	0.00002	2.3	0.0001	0.00004	0.0004
WATER TREAMENT FEED - RECLAIM TANK	7.8	115	1.7	18	16	0.01	0.002	0.00006	0.001	0.01	25	0.00004	24	0.002	0.0002	0.08
Scenario 3 - 75th Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	11	22	11	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	6.8	13	6.4	0.002	0.0008	0.02	0.03	0.02	7.5	0.000041	9.4	0.0002	0.00003	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	4.7	9.2	4.5	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	126	0.000005	4.7	4.7	0.01	0.002	0.00007	0.001	0.02	30	0.0002	28	0.002	0.0002	0.11
Process Control Pond	6.9	31	5.9	12	5.6	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.9	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	7.7	122	1.7	18	16	0.01	0.002	0.0008	0.002	0.02	29	0.0002	27	0.002	0.0002	0.10
Scenario 4 - Maximum Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	11	22	11	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	6.8	13	6.4	0.002	0.0008	0.02	0.03	0.02	7.5	0.000041	9.4	0.0002	0.00003	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	4.7	9.2	4.5	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	130	0.000005	5.4	5.4	0.01	0.002	0.00003	0.001	0.01	34	0.0002	55	0.003	0.0003	0.13
Process Control Pond	6.9	31	5.9	12	5.6	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.9	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.7	18	16	0.01	0.002	0.0000008	0.002	0.01	21	0.0002	53	0.002	0.00009	0.12

Solution Description	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																				
Pumping Station 1	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.00015	0.00009	0.002	0.002	-
Pumping Station 2	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0003	0.000005	0.74	1.66	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0002	0.000009	0.28	0.5	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0002	0.00001	0.20	0.3	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0002	0.000009	0.37	0.6	0.03	0.0002	0.37	0.0003	0.009	0.00002	0.0005	0.00004	0.47	0.02	0.0002	0.0002	0.00005	0.0009	0.001	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0002	0.000009	0.33	0.6	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.00007	0.00001	32	12.8	0.04	0.06	84	0.009	0.02	0.0001	0.0007	0.00001	192	0.26	0.03	0.00002	0.0002	0.006	0.002	0.22
Process Control Pond	0.0002	0.000009	0.46	0.7	0.03	0.0002	0.42	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	31	12	0.04	0.06	81	0.008	0.02	0.0001	0.00067	0.00001	185	0.25	0.02	0.00003	0.0002	0.006	0.002	0.21
Scenario 2 - First Flush																				
Pumping Station 1	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.0004	0.000006	0.88	1.57	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0001	0.000009	2.6	0.9	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0001	0.000009	2.6	0.9	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0002	0.000009	2.7	0.8	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.000007	1.5	1.38	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0001	0.000009	2.7	0.9	0.03	0.0007	1.6	0.0004	0.03	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0001	0.000009	2.6	0.9	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.00006	0.00001	33	13.3	0.05	0.07	85	0.009	0.02	0.0001	0.0007	0.00001	199	0.26	0.03	0.000009	0.0002	0.006	0.003	0.22
Process Control Pond	0.0002	0.000008	2.4	1	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.0008	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	31	13	0.05	0.06	81	0.009	0.02	0.0001	0.00068	0.00001	191	0.26	0.02	0.00003	0.0002	0.006	0.003	0.21
Scenario 3 - 75th Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	2	0.12	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	2	0.14	0.001	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	2	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	2	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0003	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.03	0.0001	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0002	0.000009	3.2	2	0.06	0.004	6.8	0.0008	0.05	0.00001	0.00158	0.00003	2.9	0.26	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1	0.01	0.000	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	2	0.02	0.001	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00003	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00007	0.00001	37	15	0.06	0.07	88	0.01	0.02	0.0001	0.00096	0.00001	221	0.30	0.03	0.00004	0.0002	0.006	0.008	0.22
Process Control Pond	0.0003	0.000008	3.1	2.1	0.05	0.004	6.3	0.0008	0.05	0.00005	0.0015	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	36	15.0	0.06	0.07	85	0.009	0.02	0.0001	0.001	0.00001	212	0.30	0.03	0.00002	0.0002	0.006	0.008	0.21
Scenario 4 - Maximum Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	2	0.12	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	2	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	2	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	2	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0003	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.03	0.0001	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0002	0.000009	3.2	2	0.06	0.004	6.8	0.0008	0.05	0.00001	0.00158	0.00003	2.9	0.26	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	2	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00008	0.00001	41	19	0.06	0.07	105	0.01	0.03	0.0004	0.00095	0.00001	244	0.34	0.03	0.00002	0.0002	0.007	0.008	0.22
Process Control Pond	0.0003	0.000008	3.1	2	0.05	0.004	6.3	0.0008	0.05	0.00005	0.00146	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00009	0.00001	39	10.7	0.06	0.07	101	0.01	0.03	0.0003	0.001	0.00001	235	0.34	0.03	0.0001	0.0002	0.007	0.008	0.21

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 5
Operations Model Results
Average Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	0.00001	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	9.1	18	8.6	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.0	15	5.7	11	5.40	0.003	0.0006	0.0002	0.005	0.004	5.6	0.00001	1.6	0.00007	0.0001	0.0003	0.0002	0.000009	0.34	0.57	0.03	0.0002	0.32	0.0003	0.009	0.00003	0.0005	0.00003	0.44	0.02	0.0002	0.0002	0.00004	0.0008	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.8	7.4	3.6	0.003	0.0005	0.0002	0.004	0.003	4.9	0.00001	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	112	0.000005	4.1	4.1	0.01	0.002	0.00003	0.0008	0.01	23	0.00002	23	0.002	0.0002	0.08	0.00007	0.000009	31	12	0.04	0.06	80	0.008	0.02	0.0001	0.0007	0.00001	183	0.24	0.02	0.00002	0.0002	0.005	0.002	0.21
Process Control Pond	7.0	16	4.9	10	4.6	0.002	0.0007	0.0002	0.006	0.004	6.0	0.00002	1.8	0.00009	0.0002	0.0003	0.0002	0.000009	0.45	0.71	0.03	0.0002	0.40	0.0004	0.009	0.00004	0.0005	0.00004	0.52	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	104	1.5	17	15	0.01	0.002	0.00004	0.001	0.01	21	0.00002	21	0.002	0.0002	0.08	0.00007	0.000009	28	11	0.04	0.06	73	0.008	0.02	0.0001	0.00065	0.00002	168	0.22	0.02	0.00004	0.0001	0.005	0.002	0.19
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	1.2	0.04	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0007	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	9.1	18	8.6	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	23	5.7	11	5.4	0.005	0.0008	0.002	0.01	0.005	6.4	0.00001	2.0	0.00009	0.0001	0.0006	0.0001	0.000009	2.8	0.87	0.03	0.0008	1.6	0.0004	0.03	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.8	7.4	3.6	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	114	0.000005	4.1	4.1	0.01	0.002	0.00001	0.0008	0.01	25	0.00005	23	0.002	0.0002	0.08	0.00007	0.00001	31	13	0.05	0.06	81	0.009	0.02	0.0001	0.0007	0.00001	191	0.26	0.02	0.00001	0.0002	0.006	0.003	0.21
Process Control Pond	7.2	23	4.9	10	4.6	0.004	0.0007	0.001	0.009	0.006	6.8	0.00001	2.2	0.0001	0.00006	0.0004	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	106	1.5	17	15	0.01	0.002	0.0001	0.001	0.01	23	0.00004	22	0.002	0.0002	0.08	0.00007	0.000009	29	12	0.05	0.06	74	0.008	0.02	0.0001	0.00066	0.00001	174	0.24	0.02	0.00006	0.0001	0.005	0.003	0.19
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.0000	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	9.1	18	8.6	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.7	11	5.4	0.002	0.0009	0.02	0.03	0.02	7.3	0.000043	10	0.0002	0.00005	0.003	0.0004	0.000009	3.4	2.2	0.05	0.005	7.1	0.0008	0.05	0.00002	0.00164	0.00003	2.9	0.27	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.8	7.4	3.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	122	0.000005	4.5	4.5	0.01	0.002	0.00006	0.002	0.02	30	0.0002	27	0.002	0.0002	0.10	0.00007	0.00001	36	15	0.07	0.07	85	0.009	0.02	0.0001	0.00096	0.00001	215	0.29	0.03	0.0000	0.0002	0.006	0.010	0.21
Process Control Pond	6.9	31	4.9	10	4.6	0.002	0.001	0.02	0.03	0.02	7.7	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3.1	2.1	0.05	0.004	6.4	0.0008	0.05	0.00006	0.0015	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	114	1.5	17	15	0.01	0.002	0.002	0.004	0.02	28	0.0002	25	0.002	0.0002	0.10	0.00008	0.000009	33	14	0.06	0.06	78	0.009	0.03	0.0001	0.001	0.00001	197	0.29	0.03	0.0003	0.0001	0.006	0.009	0.19
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	9.1	18	8.6	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.7	11	5.4	0.002	0.0009	0.02	0.03	0.02	7.3	0.000043	10	0.0002	0.00005	0.003	0.0004	0.000009	3.4	2.2	0.05	0.005	7.1	0.0008	0.05	0.00002	0.00164	0.00003	2.9	0.27	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.8	7.4	3.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	126	0.000005	5.1	5.1	0.01	0.002	0.00003	0.002	0.02	33	0.0002	53	0.002	0.0003	0.12	0.00008	0.00001	40	18	0.07	0.07	101	0.01	0.03	0.0003	0.00094	0.00001	238	0.33	0.03	0.00002	0.0002	0.007	0.010	0.21
Process Control Pond	6.9	31	4.9	10	4.6	0.002	0.001	0.02	0.03	0.02	7.7	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3.1	2.1	0.05	0.004	6.4	0.0008	0.05	0.00006	0.00149	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	64	1.5	17	15	0.01	0.002	0.000001	0.004	0.01	20	0.0002	49	0.002	0.00009	0.11	0.00007	0.000009	37	10	0.06	0.07	93	0.009	0.03	0.0003	0.001	0.00001	217	0.33	0.03	0.0003	0.0001	0.007	0.009	0.19

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 6
Operations Model Results
10 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.063	0.00041	0.87	0.0008	0.0039	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.6	1.3	0.058	0.00038	0.8	0.0007	0.0045	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.66	0.076	0.0005	1.06	0.00094	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00004	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.062	0.0004	0.85	0.0008	0.0038	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.00046	0.97	0.0009	0.0034	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.023	0.00013	0.26	0.00027	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.022	0.00012	0.25	0.00026	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	0.00001	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.5	0.019	0.0001	0.2	0.00022	0.011	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	1	1.3	0.06	0.00	1	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0	0.3	0.023	0.00	0	0.0001	0.011	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	7.6	15	7.2	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0	1.0	0.051	0.00	1	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	5.0	10	4.7	0.003	0.0005	0.0003	0.004	0.003	5.3	0.00001	1.5	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.5	0.026	0.00014	0.29	0.0003	0.0096	0.00003	0.0005	0.00003	0.41	0.02	0.0002	0.0002	0.00004	0.0008	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1.3	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	1.7	0.019	0.001	1	0.0012	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.2	6.2	3.0	0.003	0.0005	0.0002	0.004	0.003	4.9	0.00001	1.3	0.0001	0.0003	0.0004	0.0002	0.000009	0	0.6	0.02	0.00	0	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	108	0.000005	3.9	3.9	0.01	0.002	0.00002	0.0009	0.01	22	0.00002	22	0.002	0.0002	0.08	0.00007	0.00001	29	11.9	0.037	0.059	76	0.008	0.019	0.0001	0.0007	0.00001	175	0.23	0.02	0.00002	0.0002	0.005	0.002	0.20
Process Control Pond	7.0	16	4.1	8.0	3.9	0.002	0.0007	0.0002	0.006	0.004	5.9	0.00002	1.8	0.0001	0.0002	0.0003	0.0002	0.000009	0	0.7	0.03	0.00	0	0.0004	0.009	0.00004	0.0005	0.00004	0.52	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	96	1.3	16	15	0.01	0.002	0.00005	0.002	0.01	20	0.00002	19	0.002	0.0002	0.07	0.00007	0.000009	26	10	0.036	0.051	66	0.007	0.018	0.0001	0.00063	0.00002	152	0.21	0.02	0.00004	0.0001	0.005	0.002	0.17
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.09	1.5	0.112	0.00047	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.29	1.4	0.103	0.00051	1.3	0.00084	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.136	0.00039	1.3	0.00108	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.07	1.4	0.109	0.00046	1.2	0.00088	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.9	1.57	0.124	0.00043	1.3	0.00099	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.9	0.035	0.00075	1.4	0.00035	0.027	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.9	0.033	0.00076	1.4	0.00034	0.027	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.00042	0.000005	0.4	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.8	0.027	0.00077	1.4	0.0003	0.029	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.38	0.103	0.00049	1.3	0.00083	0.012	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.021	0.00068	1.4	0.00018	0.029	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	7.6	15	7.2	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.118	0.00042	1.3	0.00093	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	5.0	10	4.7	0.006	0.0008	0.003	0.01	0.005	6.1	0.00001	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	2.93	0.8	0.024	0.00076	1.64	0.0003	0.0279	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.9	1.3	0.014	0.00045	0.7	0.00093	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.019	0.0006	0.93	0.00123	0.0063	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.2	6.2	3.0	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.62	0.9	0.028	0.00076	1.36	0.0004	0.0269	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	110	0.000005	3.9	3.9	0.01	0.002	0.000009	0.0009	0.01	24	0.00005	22	0.002	0.0002	0.08	0.00007	0.00001	29.9	12.5	0.05	0.05953	77.0	0.00821	0.019	0.0001	0.0007	0.00001	183	0.25	0.02	0.00001	0.0001	0.005	0.003	0.20
Process Control Pond	7.2	23	4.1	8.0	3.9	0.004	0.0007	0.001	0.009	0.006	6.7	0.00001	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2	1	0.04	0.001	1	0.0005	0.023	0.00001	0.00049	0.00003	1.3	0.05	0.0008	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	99	1.3	16	15	0.01	0.002	0.0002	0.002	0.01	22	0.00005	20	0.002	0.0002	0.07	0.00007	0.000009	26	11	0.049	0.052	67	0.0072	0.02	0.0001	0.00065	0.00001	160	0.22	0.02	0.00009	0.0001	0.005	0.003	0.17
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1	2	0.115	0.002	3	0.0011	0.015	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.021	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	1	2	0.138	0.001	2	0.0011	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1	2	0.113	0.002	3	0.001	0.015	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1	2	0.127	0.001	3	0.0011	0.011	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	4	2	0.046	0.005	7	0.0008	0.057	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	4	2	0.045	0.005	8	0.0008	0.058	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	4	2	0.039	0.005	8	0.0008	0.061	0.00009	0.00179	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.026	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4	2	0.03	0.005	8	0.0007	0.067	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	7.6	15	7.2	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2	2	0.088	0.003	5	0.0009	0.036	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.0	10	4.7	0.002	0.0009	0.02	0.03	0.02	7.2	0.000044	10	0.0002	0.00009	0.003	0.0003	0.000009	4	2	0.048	0.005	7	0.0008	0.056	0.00004	0.00169	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	2	0.019	0.001	1	0.0012	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.2	6.2	3.0	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	4	2	0.039	0.005	7	0.0008	0.057	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	118	0.000005	4.3	4.3	0.01	0.002	0.00005	0.002	0.02	30	0.0002	26	0.002	0.0003	0.10	0.00007	0.00001	35	15	0.068	0.064	82	0.009	0.022	0.0001	0.00095	0.00001	210	0.29	0.03	0.00003	0.0001	0.006	0.011	0.20
Process Control Pond	6.9	31	4.1	8.0	3.9	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3	2.1	0.051	0.004	7	0.0008	0.049	0.00006	0.0015	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	107	1.3	16	15	0.01	0.002	0.003	0.005	0.02	27	0.0002	24	0.002	0.0002	0.09	0.00008	0.000009	31	13.3	0.066	0.057	72	0.0079	0.026	0.0001	0.001	0.00001	183	0.28	0.02	0.0004	0.0001	0.006	0.01	0.17
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1	2	0.115	0.002	3	0.0011	0.015	0.0000010	0.0008	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.021	0.0000013	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.000001	0.0002	0.0004	0.000005	1	2	0.138	0.001	2	0.0011	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1	2	0.113	0.002	3	0.001	0.015	0.0000010	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1	2	0.127	0.001	3	0.0011	0.011	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	4	2	0.046	0.005	7	0.0008	0.057	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	4	2	0.045	0.005	8	0.0008	0.058	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	4	2	0.039	0.005	8	0.0008	0.061	0.00009	0.00179	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.026	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4	2	0.03	0.005	8	0.0007	0.067	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	7.6	15	7.2	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2	2	0.088	0.003	5	0.0009	0.036	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.0	10	4.7	0.002	0.0009	0.02	0.03	0.02	7.2	0.000044	10	0.0002	0.00009	0.003	0.0003	0.000009	4	2	0.048	0.005	7	0.0008	0.056	0.00004	0.00169	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	2	0.019	0.001	1	0.0012	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.2	6.2	3.0	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	4	2	0.039	0.005	7	0.0008	0.057	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.6	122	0.000006	4.8	4.8	0.01	0.002	0.00003	0.002	0.02	33	0.0002	50	0.002	0.0003	0.11	0.00008	0.00001	39	18	0.068	0.069	97	0.0094	0.027	0.0003	0.00094	0.00001	231	0.33	0.03	0.00002	0.0001	0.007	0.011	0.20
Process Control Pond	6.9	31	4.1	8.0	3.9	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3	2	0.051	0.004	7	0.0008	0.049	0.00006	0.0015	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	64	1.3	16	15	0.009	0.002	0.000001	0.005	0.008	20	0.0002	45	0.002	0.00009	0.10	0.00006	0.000009	34	10.2	0.066	0.06	85	0.0083	0.03	0.0003	0.001	0.00001	202	0.32	0.03	0.0004	0.0001	0.007	0.01	0.17

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 7
Operations Model Results
25 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.96	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00004*	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.00024	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.4	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	*0.00001*	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0.2	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	7.2	***14***	6.7	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	4.7	9.2	4.50	0.003	0.0005	0.0003	0.004	0.003	5.2	*0.00001*	1.4	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.50	0.02	0.0001	0.28	0.0003	0.01	0.00003	0.0005	0.00003	0.4	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.9	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.0	5.8	2.8	0.003	0.0005	0.0002	0.004	0.003	4.9	*0.00001*	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	106	0.000005	3.8	3.8	0.01	0.002	0.00002	0.0009	0.01	22	0.00002	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29	12	0.04	**0.06**	75	0.008	0.02	0.0001	0.0007	0.00001	172	0.23	0.02	0.00002	0.0001	**0.005**	0.002	***0.19***
Process Control Pond	7.0	16	3.9	7.6	3.7	0.002	0.0007	0.0002	0.006	0.004	5.9	*0.00002*	1.8	0.00008	0.0002	0.0003	0.0002	0.000009	0.44	0.69	0.03	0.0002	0.39	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	93	1.2	***16***	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	19	**0.002**	0.0002	***0.07***	0.00007	0.000009	25	10	0.04	**0.05**	64	0.007	0.02	0.0001	0.00062	0.00002	148	0.20	0.02	0.00005	0.0001	0.005	0.002	***0.17***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	*0.00001*	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006	0.0001	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.0010	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	7.2	***14***	6.7	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	4.7	9.2	4.5	0.006	0.0008	0.003	0.01	0.005	6.1	*0.00001*	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	3.0	0.82	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.0	5.8	2.8	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	109	0.000005	3.8	3.8	0.01	0.002	0.00001	0.0009	0.01	24	*0.00005*	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29	12	0.05	**0.06**	76	0.008	0.02	0.0001	0.0007	0.00001	181	0.24	0.02	0.00001	0.0001	**0.005**	0.003	***0.19***
Process Control Pond	7.2	23	3.9	7.6	3.7	0.004	0.0007	0.002	0.009	0.006	6.7	*0.00001*	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2.5	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	96	1.2	***16***	15	0.01	0.002	0.0002	0.002	0.01	22	*0.00005*	19	**0.002**	0.0002	***0.07***	0.00007	0.000009	26	11	0.05	**0.05**	65	0.007	0.02	0.0001	0.00064	0.00001	155	0.22	0.02	0.0001	0.0001	0.005	0.003	***0.17***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.2	***14***	6.7	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.7	9.2	4.5	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.5	2.2	0.05	0.005	7.4	0.0008	0.06	0.00004	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.0	5.8	2.8	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	117	0.000005	4.2	4.2	0.01	0.002	0.00005	0.002	0.02	29	***0.0002***	25	**0.002**	0.0003	***0.10***	0.00008	0.00001	35	15	0.07	**0.06**	80	0.009	0.02	0.0001	0.00095	0.00001	208	0.28	0.03	0.00003	0.0001	**0.006**	0.01	***0.19***
Process Control Pond	6.9	31	3.9	7.6	3.7	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	*0.0015*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	105	1.2	***16***	15	0.01	0.002	0.003	0.005	0.02	26	***0.0002***	23	**0.002**	0.0002	***0.08***	0.00009	0.000009	30	13	0.07	**0.06**	70	0.008	0.03	0.0001	0.001	0.00001	179	0.28	0.02	0.0004	0.0001	**0.006**	0.01	***0.17***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.00099	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.2	***14***	6.7	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.7	9.2	4.5	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.5	2.2	0.05	0.005	7.4	0.0008	0.06	0.00004	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.0	5.8	2.8	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.6	120	0.000006	4.8	4.8	0.01	0.002	0.00003	0.002	0.02	33	***0.0002***	49	**0.002**	0.0003	***0.11***	0.00008	0.00001	39	18	0.07	**0.07**	95	0.009	0.03	0.0003	0.00094	0.00001	229	0.32	0.03	0.00002	0.0001	**0.007**	0.01	***0.19***
Process Control Pond	6.9	31	3.9	7.6	3.7	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	*0.00151*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	***16***	15	0.009	0.002	0.000002	0.005	0.008	20	***0.0002***	44	**0.002**	0.00009	***0.10***	0.00005	0.000009	34	10	0.07	**0.06**	83	0.008	0.03	0.0003	0.001	0.00001	197	0.31	0.03	0.0004	0.0001	**0.007**	0.01	***0.17***

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 8
Operations Model Results
50 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.0001	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00004	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.57	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	0.00001	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	6.9	13	6.5	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	4.6	8.9	4.3	0.003	0.0005	0.0003	0.004	0.003	5.2	0.00001	1.4	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.49	0.02	0.0001	0.27	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	2.9	5.6	2.7	0.003	0.0005	0.0002	0.004	0.003	4.9	0.00001	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	105	0.000005	3.8	3.8	0.01	0.002	0.00002	0.001	0.01	22	0.00002	21	0.002	0.0002	0.08	0.00007	0.000009	29	12	0.04	0.06	74	0.008	0.02	0.0001	0.0006	0.00001	170	0.23	0.02	0.00002	0.0001	0.005	0.002	0.19
Process Control Pond	7.0	16	3.7	7.2	3.5	0.002	0.0007	0.0002	0.006	0.004	5.9	0.00002	1.8	0.00008	0.0002	0.0003	0.0002	0.000009	0.44	0.68	0.03	0.0002	0.39	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	92	1.2	16	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	19	0.002	0.0002	0.06	0.00007	0.000009	24	10	0.04	0.05	63	0.007	0.02	0.0001	0.00062	0.00002	145	0.20	0.02	0.00005	0.0001	0.005	0.002	0.16
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.01	10	0.00001	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	6.9	13	6.5	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	4.6	8.9	4.3	0.006	0.0007	0.003	0.01	0.01	6.0	0.00001	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	3.0	0.81	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	2.9	5.6	2.7	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	108	0.000005	3.8	3.8	0.01	0.002	0.000008	0.0009	0.01	24	0.00005	22	0.002	0.0002	0.08	0.00007	0.000009	29	12	0.05	0.06	75	0.008	0.02	0.0001	0.0007	0.00001	179	0.24	0.02	0.000007	0.0001	0.005	0.003	0.19
Process Control Pond	7.2	23	3.7	7.2	3.5	0.004	0.0007	0.002	0.009	0.006	6.7	0.00001	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2.5	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	95	1.2	16	15	0.01	0.002	0.0002	0.002	0.01	21	0.00005	19	0.002	0.0002	0.07	0.000068	0.000009	25	11	0.05	0.05	64	0.007	0.02	0.0001	0.00064	0.00001	152	0.21	0.02	0.0001	0.0001	0.005	0.003	0.16
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00173	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0003	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	6.9	13	6.5	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.6	8.9	4.30	0.002	0.0009	0.02	0.03	0.02	7.1	0.000044	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	2.9	5.6	2.7	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	116	0.000005	4.1	4.1	0.01	0.002	0.00005	0.002	0.02	29	0.0003	25	0.002	0.0003	0.10	0.00008	0.000009	35	15	0.07	0.06	80	0.009	0.02	0.0001	0.00095	0.00001	207	0.28	0.03	0.00003	0.0001	0.006	0.01	0.19
Process Control Pond	6.9	31	3.7	7.2	3.5	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.1	0.0002	0.0002	0.003	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	0.0015	0.00004	2.7	0.25	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	103	1.2	16	15	0.009	0.002	0.003	0.006	0.02	26	0.0002	23	0.002	0.0002	0.08	0.00009	0.000009	30	13	0.07	0.05	69	0.008	0.03	0.0001	0.001	0.00002	177	0.28	0.02	0.0005	0.0001	0.006	0.01	0.16
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.5715	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.0558	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.6746	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4116	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.1766	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.0772	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.0669	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00173	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.0726	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0003	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.0625	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	6.9	13	6.5	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9375	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.6	8.9	4.3	0.002	0.0009	0.02	0.03	0.02	7.1	0.000044	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1436	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.1533	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	2.9	5.6	2.7	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.6	119	0.000006	4.7	4.7	0.01	0.002	0.00003	0.002	0.02	33	0.0003	49	0.002	0.0003	0.11	0.00008	0.000009	38	18	0.07	0.07	94	0.009	0.03	0.0003	0.00093	0.00001	228	0.32	0.03	0.00002	0.0001	0.007	0.01	0.19
Process Control Pond	6.9	31	3.7	7.2	3.5	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.0518	0.0002	0.0002	0.003	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	0.00151	0.00004	2.7	0.25	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	16	15	0.009	0.002	0.000002	0.006	0.007	20	0.0002	43	0.002	0.00009	0.10	0.00005	0.000009	33	10	0.07	0.06	81	0.008	0.03	0.0003	0.001	0.00002	194	0.31	0.03	0.0005	0.0001	0.006	0.01	0.16

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 9
Operations Model Results
100 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-
Scenario 1 - Steady State																	
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002	0.0003
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002	0.0003
Pumping Station 3	6.9	32	0.00009	0.01	0.01	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002	0.0003
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00004	3.8	0.0002	0.000007	0.0002	0.0003
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002	0.0003
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003	0.0002
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003	0.0002
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	0.00001	1.0	0.00004	0.0003	0.0003	0.0002
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.76	0.00002	0.0004	0.0004	0.0002
Pumping Station 14	6.9	22	6.7	13	6.3	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003	0.0003
Open Pit	7.1	14	4.5	8.7	4.20	0.003	0.0005	0.0003	0.004	0.003	5.1	0.00001	1.4	0.0001	0.0002	0.0003	0.0002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002
Intermediate Collection Pond	7.0	13	2.8	5.4	2.6	0.003	0.0005	0.0002	0.004	0.003	4.9	0.00001	1.3	0.0001	0.0003	0.0004	0.0002
TMA Reclaim Pond	7.8	104	0.000005	3.7	3.7	0.01	0.002	0.00002	0.001	0.01	21	0.00002	21	0.002	0.0002	0.08	0.00007
Process Control Pond	7.0	16	3.6	7.0	3.4	0.002	0.0007	0.0002	0.006	0.004	5.8	0.00002	1.8	0.0001	0.0002	0.0003	0.0002
WATER TREAMENT FEED - RECLAIM TANK	7.7	91	1.2	16	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	18	0.002	0.0002	0.06	0.00007
Scenario 2 - First Flush																	
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.010	11	0.00001	4.6	0.0004	0.0000006	0.00008	0.0004
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009	0.0004
Pumping Station 7	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 8	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.0001
Pumping Station 14	6.8	27	6.7	13	6.3	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004
Open Pit	7.4	22	4.5	8.7	4.2	0.006	0.0007	0.003	0.01	0.005	6.0	0.00001	1.7	0.00008	0.0002	0.0006	0.0001
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002
Intermediate Collection Pond	7.4	21	2.8	5.4	2.6	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004	0.0001
TMA Reclaim Pond	7.8	107	0.000005	3.7	3.7	0.01	0.002	0.000008	0.001	0.01	24	0.00005	22	0.002	0.0002	0.08	0.00007
Process Control Pond	7.2	23	3.6	7.0	3.4	0.004	0.0007	0.002	0.009	0.006	6.7	0.00001	2.2	0.0001	0.00009	0.0005	0.0002
WATER TREAMENT FEED - RECLAIM TANK	7.7	94	1.2	16	15	0.01	0.002	0.00002	0.002	0.01	21	0.00005	19	0.002	0.0002	0.06	0.00007
Scenario 3 - 75th Percentile Process Water																	
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0003	0.004	0.0003
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003
Pumping Station 14	6.8	30	6.7	13	6.3	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004
Open Pit	6.9	31	4.5	8.7	4.2	0.002	0.0009	0.02	0.03	0.02	7.1	0.000045	10	0.0002	0.0001	0.003	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002
Intermediate Collection Pond	6.9	31	2.8	5.4	2.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003
TMA Reclaim Pond	7.7	115	0.000005	4.1	4.1	0.01	0.002	0.00005	0.002	0.02	29	0.0003	25	0.002	0.0003	0.09	0.00008
Process Control Pond	6.9	31	3.6	7.0	3.4	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.1	0.0002	0.0002	0.003	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.6	102	1.2	16	15	0.009	0.002	0.003	0.006	0.02	26	0.0002	22	0.002	0.0003	0.08	0.00009
Scenario 4 - Maximum Percentile Process Water																	
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0003	0.004	0.0003
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003
Pumping Station 14	6.8	30	6.7	13	6.3	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004
Open Pit	6.9	31	4.5	8.7	4.20	0.002	0.0009	0.02	0.03	0.02	7.1	0.000045	10	0.0002	0.0001	0.003	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002
Intermediate Collection Pond	6.9	31	2.8	5.4	2.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003
TMA Reclaim Pond	7.6	119	0.000006	4.7	4.7	0.01	0.002	0.00003	0.002	0.02	33	0.0003	48	0.002	0.0003	0.11	0.00008
Process Control Pond	6.9	31	3.6	7.0	3.4	0.002	0.001	0.02	0.03	0.02	7.6	0.00004	9.1	0.0002	0.0002	0.003	0.0003
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	16	15.00	0.009	0.002	0.000002	0.006	0.007	20	0.0002	42	0.002	0.00009	0.09	0.00005

Solution Description	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide - 5ppm feed
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																			
Pumping Station 1	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.0001	0.002	0.002	-
Pumping Station 2	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	0.96	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.000006	0.69	1.5	0.07	0.0005	0.97	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.000009	0.31	0.57	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	0.000007	0.59	1.3	0.06	0.0005	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.000009	0.31	0.49	0.02	0.0001	0.27	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.000009	28	12	0.04	0.06	73	0.008	0.02	0.0001	0.0006	0.00001	168	0.22	0.02	0.00002	0.0001	0.005	0.002	0.19
Process Control Pond	0.000009	0.44	0.68	0.03	0.0002	0.38	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.000009	25	10	0.04	0.05	63	0.007	0.02	0.0001	0.00062	0.00002	142	0.19	0.02	0.0000	0.0001	0.004	0.002	0.16
Scenario 2 - First Flush																			
Pumping Station 1	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0003	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.000009	3.0	0.80	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0005	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.000009	29	12	0.05	0.06	74	0.008	0.02	0.0001	0.0007	0.00001	177	0.24	0.02	0.00001	0.0001	0.005	0.004	0.19
Process Control Pond	0.000009	2.5	0.98	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.000009	25	10	0.05	0.05	63	0.008	0.02	0.0001	0.00064	0.00001	150	0.21	0.02	0.0001	0.0001	0.005	0.003	0.16
Scenario 3 - 75th Percentile Process Water																			
Pumping Station 1	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00173	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.000009	35	15	0.07	0.06	79	0.009	0.02	0.0001	0.00095	0.00001	206	0.28	0.03	0.00003	0.0001	0.006	0.01	0.19
Process Control Pond	0.000009	3.2	2.1	0.05	0.004	6.6	0.0008	0.05	0.00007	0.0015	0.00004	2.7	0.25	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.000009	30	13	0.07	0.05	68	0.007	0.03	0.0001	0.001	0.00002	174	0.28	0.02	0.0005	0.0001	0.006	0.01	0.16
Scenario 4 - Maximum Percentile Process Water																			
Pumping Station 1	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.00081	0.003	-
Pumping Station 4	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00171	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00173	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	0.00114	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.000009	38	18	0.07	0.07	93	0.009	0.03	0.0003	0.00093	0.00001	227	0.32	0.03	0.00002	0.0001	0.007	0.01	0.19
Process Control Pond	0.000009	3.2	2.1	0.05	0.004	6.6	0.0008	0.05	0.00007	0.00151	0.00004	2.7	0.25	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.000009	33	10	0.07	0.06	80	0.008	0.03	0.0003	0.001	0.00002	192	0.31	0.02	0.0005	0.0001	0.006	0.01	0.16

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

PART C

Site Water Quality Technical Support Document, Version 1

February 2013

HAMMOND REEF GOLD PROJECT

Site Water Quality Technical Support Document

VERSION 1

Submitted to:
Osisko Hammond Reef Gold Ltd.
155 University Avenue, Suite 1440
Toronto, Ontario M5H 3B7

Project Number: 10-1118-0020

Distribution:

Alexandra Drapack, Director Sustainable Development

Cathryn Moffett, Project Manager Sustainable Development

Hammond Reef Gold Project
Site Water Quality Technical Support Document

Prepared by: Brian Andruchow
Mine Waste Specialist
Golder Associates Ltd.

Date: February 19, 2013

Reviewed by: Ken DeVos, M.Sc., P.Geo.
Principal, Senior Reviewer
Golder Associates Ltd.

Date: February 19, 2013

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TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

Osisko Hammond Reef Gold Ltd. (OHRG) proposes the development of an open pit gold mine in north-western Ontario, herein referred to as the Hammond Reef Gold Project (Project). This Technical Support Document (TSD) is one of a series of reports in support of the Project's Environmental Impact Statement/Environmental Assessment Report (EIS/EA Report).

The following reports have been prepared to support the EIS/EA Report:

- Atmospheric Environment TSD.
- Geochemistry, Geology and Soil TSD.
- Hydrogeology TSD.
- Hydrology TSD.
- Water and Sediment Quality TSD.
- **Site Water Quality TSD.**
- Lake Water Quality TSD.
- Aquatic Environment TSD.
- Terrestrial Ecology TSD.
- Aboriginal Interests TSD.
- Cultural Heritage Resources TSD.
- Human Health and Ecological Risk Assessment TSD.
- Socio-economic Environment TSD.
- Alternatives Assessment Report.
- Conceptual Closure and Rehabilitation Plan.

The EIS/EA Report will summarize the findings of this TSD and of the above-listed supporting reports.

1.1 Purpose and Scope

The purpose of this TSD is to fulfill the assessment scope outlined in the Project's Terms of Reference (ToR) approved by the Ontario Minister of the Environment (2009), and in the Environmental Impact Statement Guidelines (EIS Guidelines) published by the Canadian Environmental Assessment Agency (CEA Agency 2011).

As part of the requirements predictions of site water quality related to the Osisko Hammond Reef Gold Project (Project) area were developed based on an understanding of natural processes and water quality observed, and processes related to mining that could change site water quality during the key stages of a project. Specifically, the site water quality predictions focused on and within the mine study area provide:

- A description of the mine plan and water management plan as it relates to potential for changes to flow and water quality.
- A description of the methods used to predict flow and water quality from various project aspects through the life of mine.
- Predicted site water discharge and water quality values.
- Predicted values for possible variability in flows and water quality due to mining operations.

The predicted water flow and water quality values are summarized for the following main locations.

- Water taking and discharge requirements for processing.
- Water quality for primary discharge location.

The overall objective of the programs completed and described in this TSD is to provide specific information at a level sufficient for inclusion in the EIS/EA Report in order to guide decision making regarding the potential for environmental effects of the Project, or to allow for further analyses as part of other TSDs or work related to the environmental assessment. The information and findings developed from this assessment of site water requirements and site water quality will be considered in other TSDs including the Lake Water Quality TSD and the Aquatic Environment TSD. This TSD provides the information on site discharge volumes and predicted site water quality only. The assessment of environmental effects, the determination of significance of these effects, and the proposed mitigation measures will be addressed in the EIS/EA Report and the Human Health and Ecological Risk Assessment TSD. An explanation of this approach is provided in Section 1.4 of this report.

1.1.1 Study Objectives

The site water quality model was used to determine the range of site water quality that could be realized from the key site facilities, based on the expected water balance, existing water quality and geochemical studies for the Hammond Reef Project. Site water quality predictions were completed for peak operations and post-closure conditions for proposed Hammond Reef Project. This document includes the results of the site water quality model.

1.2 Report Organization

This TSD is structured as follows:

- Section 1 presents the purpose and scope of the TSD, an overview of the Project, the general assessment approach, incorporation of traditional knowledge, Valued Ecosystem Components, and assessment boundaries of the TSD.
- Section 2 describes the methods used to model and predict water quantity and quality on site.
- Section 3 provides the flow results and calculations for the site discharge and flows during operations and post-closure.
- Section 4 provides site water quality prediction methods and results during operations and post-closure.

- Section 5 summarizes the findings of this report.

1.3 Project Overview

The Project overview and Project description is provided in Chapter 5 of the EIS/EA Report. Project aspects that influence the site water quantity and quality predictions and evaluation are described in Sections 1.3 to 1.8.

1.3.1 Project Location

The Project is set within the Thunder Bay Mining District in north-western Ontario, approximately 170 kilometres (km) west of Thunder Bay and 23 km northeast of the town of Atikokan (Figure 1-1).

Access to the Hammond Reef property is presently via two routes: the Premier Lake Road, a gravel road that intersects Highway 623 near Sapawe and the Hardtack-Sawbill Road, a gravel road that intersects Highway 622 northwest of the Town of Atikokan. The property is also accessible by water from the southwest end of the Upper Marmion Reservoir at its access point from Highway 622. The existing Hardtack-Sawbill road located to the north of Finlayson Lake has been upgraded to provide an improved and more direct linkage to the Project Site in support of the expanded exploration program.

The Hammond Reef deposit is located mainly on a peninsula of land extending into the north end of the Upper Marmion Reservoir. The peninsula containing the deposit is surrounded by the Upper Marmion Reservoir on three sides with Sawbill Bay to the northwest and Lynxhead Bay to the southeast. The property also contains a number of smaller lakes. Mitta Lake is a small, steep-sided water body located atop mineralized zones of the deposit. Due to its location, the open pit mining activities require the draining of Mitta Lake. Lizard Lake is located immediately to the east of the proposed project site and drains into Upper Marmion Reservoir.

1.3.2 Climate

The Project is located in a typical boreal climate region, which is characterized by long, usually very cold winters, and short, cool to mild summers. The annual temperature average is 1.6 degrees Celsius (°C) for Atikokan with a seasonal maximum of 16.2°C (average) for summer and a minimum of minus 15.4°C (average) for winter. Temperatures lower than minus 37°C have been recorded during the fall and winter. The annual normal total for precipitation is 788 millimetres (mm) (568 mm of rainfall and 220 mm of snowfall) for Atikokan with a seasonal maximum of 299 mm for the summer period.

1.3.3 Project Phases

The Project comprises four phases: construction, operations, closure and post-closure. Additional details regarding activities expected to take place in each phase of the Project are provided in Chapter 5 of the EIS/EA Report. Substantial detail and understanding of these project phases are required in order to properly understand predictions of site water quality and it is recommended that Chapter 5 of the EIS/EA Report be read in conjunction with this TSD.

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.;
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

100 0 100 200 300 400

SCALE 1:10,000,000 KILOMETRES

Golder Associates
Mississauga, Ontario

PROJECT No. 10-1118-0020		DATE February, 2013	TITLE
		DESIGN CGE	**PROJECT LOCATION**
		GIS JO	
		CHECK REJ	PROJECT HAMMOND REEF GOLD PROJECT ATIKOKAN, ONTARIO, CANADA
SCALE AS SHOWN	VERSION 1	REVIEW KJD	**FIGURE: 1-1**

G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\Draft\WaterQuality\TSD\SiteWaterQuality\ProjectLocation.mxd

The water quality model and supporting water balances have been developed based on the latest available Project Description described in Chapter 5 of the EIS/EA Report. For the purposes of this assessment the Project includes an Ore Processing Facility with a nominal throughput of 60,000 tonnes per day (tpd), and will generate a total of 165 Mm^3 of tailings and 232 Mt of waste rock.

The life of mine is estimated at approximately 11 years at the nominal production rate of 60,000 tpd. At the end of operations, the wet pit will measure approximately 1,500 m x 900 m x 328 m deep and the east pit 1,100 m x 750 m x 240 m deep.

1.3.4 Project Components

Project components are identified in Chapter 5 (Project Description) of the EIS/EA Report. A summary of relevant project components as related to the site water balance and site water quality model is provided.

1.3.4.1 Construction

During construction road upgrading, site facility laydown areas and site facilities will be constructed. It is considered that evaluation of the impacts to water during operations will encompass and capture a "conservative" construction case therefore this component is not addressed in detail in this TSD.

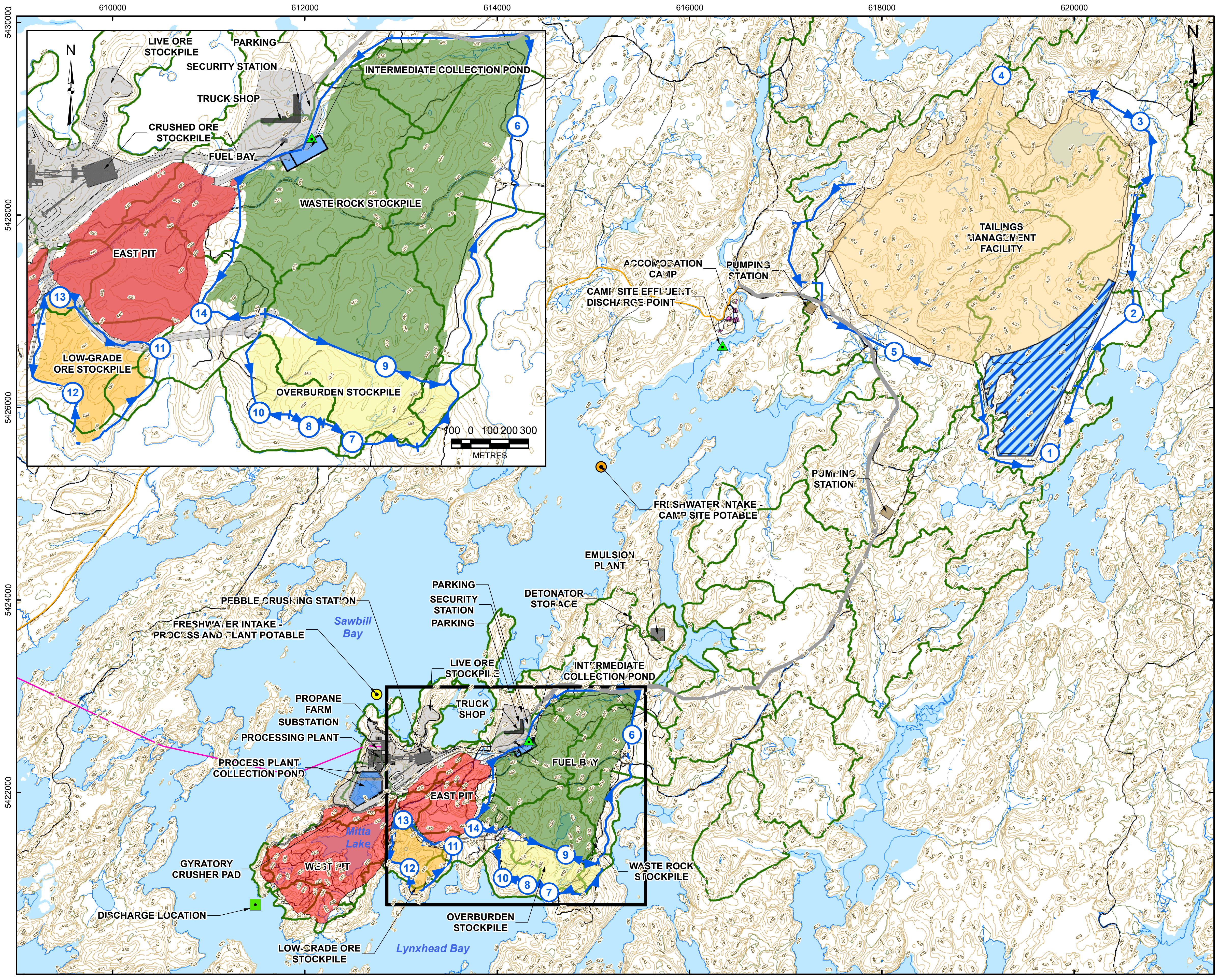
1.3.4.2 Operations

Open pit mining methods will be used to mine ore from the host deposit. An understanding of the project components and proposed locations is also necessary to ensure adequate spatial coverage of existing information is obtained. The Project consists of eight main components:

- Mine, including two open pits (east pit and west pit).
- Waste Rock Management Facility (WRMF).
- Ore Processing Facility.
- Tailings Management Facility (TMF).
- Support and Ancillary Infrastructure.
- Water Management System.
- Linear Infrastructure.
- Borrow Sites.

1.3.4.2.1 Site Layout

Within the main components identified above are several interrelated aspects that influence water quality. The water quality modelling uses the overall site layout as shown in Figure 1-2 with components as listed:



G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\Draft\WaterQualityTSD\SiteWaterQualitySite_Plan_11x17.mxd

LEGEND

- Discharge Location
- Freshwater Intake - Camp Site Potable
- Freshwater Intake - Process and Plant Potable
- Effluent Discharge Point
- 2 Pumping Station
- Proposed Ditch
- Index Contour (5m interval)
- Ditch
- Marsh/Swamp
- River/Stream
- Road
- Trail
- Intermediate Collection Pond
- Watershed Boundary
- Lake
- Mine Site Road
- Access Road (Hardtack / Sawbill)
- Project Transmission Line
- Tailings Management Facility
- Pumping Station
- Processing Plant Collection Pond
- Office and Truck Shop, Explosives Storage and Processing Plant
- Accommodation Camp
- Open Pits
- Waste Rock Stockpile
- Overburden Stockpile
- Low-Grade Ore Stockpile
- Tailings Management Facility Reclaim Pond
- Laydown Area

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd
Base Data - MNR NRVIS, obtained 2004
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

500 0 500 1,000 1,500 2,000 2,500

SCALE 1:40,000 METRES

PROJECT

HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE

SITE PLAN AND PRELIMINARY SURFACE WATER DRAINAGE PLAN

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	VERSION 1
DESIGN	CGE	14 Nov. 2008		
GIS	JO	5 Feb. 2013		
CHECK	REJ	5 Feb. 2013		
REVIEW	KJD	5 Feb. 2013		

Golder Associates
Mississauga, Ontario

FIGURE: 1-2

- Open pit mine (two pits are proposed, an east pit and west pit).
- Low-grade ore stockpile.
- Overburden stockpile.
- Ore Processing Facility (process plant and ancillary structures).
- Waste rock stockpile.
- Tailings Management Facility (TMF).
- Detonator storage area.
- Emulsion plant.
- Accommodation camp.
- Prepared area for office, fuel storage, truck shop, and site security.
- System of surface drainage ditches and pumping stations.
- Access and haul roads.
- Sewage treatment facilities.
- Effluent treatment plant (ETP).

As the design and development of the Project advances, the geometry of the various site components may be further optimized.

1.3.4.3 Closure

The following closure activities are anticipated to occur and are considered in development of the site water quality model:

- On-site access and haul roads not required for post-closure monitoring and maintenance will be scarified and their associated culverts removed to restore natural drainage conditions.
- Borrow sites will be closed out according to their license under the Aggregate Resource Act (ARA).
- Project facilities (Ore Processing Facility, maintenance buildings, and other ancillary structures) will be demolished.
- The ETP and Process Plant Collection Pond (PPCP) will be decommissioned and removed once run-off and seepage water quality from the various site components (i.e. TMF, stockpiles, and processing plant watershed) have been deemed suitable for direct discharge to the environment.
- The TMF will be re-vegetated and the reclaim pond decommissioned (once suitable water quality is achieved) and run-off will be directed via a drainage channel towards Sawbill Bay.
- The tailings pipeline system will be dismantled and removed off-site.

- The top surface of the waste rock stockpile will be graded to help shed runoff and reduce infiltration. Drainage measures (i.e., chute drains and grading of benches) will be put in place to safely convey runoff to the toe of the waste rock stockpile, and suitable erosion protection will be provided. The seepage collection ponds will be decommissioned once water quality is deemed suitable for direct discharge to the environment.
- The top surface of the overburden stockpile will be re-graded to shed run-off and reduce infiltration. Drainage measures (i.e., chute drains and grading of benches) will be put in place to safely convey runoff to the toe of the overburden stockpile, and suitable erosion protection will be provided. The overburden stockpile will be seeded and re-vegetated. The seepage collection ponds will be decommissioned once water quality is deemed suitable for direct discharge to the environment.
- The low-grade ore stockpile will be processed before decommissioning and demolition of the Ore Processing Facility. The area will be allowed to naturally re-vegetate and the seepage collection ponds will be decommissioned once water quality is deemed suitable for direct discharge to the environment.
- The open pit sumps will be removed and the pits will be allowed to flood. A rock barrier will be constructed around the pit perimeter to prevent inadvertent access.
- A channel will be constructed between the east and west pits to hydraulically connect both pits.
- All fuels, oils, reagents, explosives, and hazardous substances will be removed off site and their containment structures / facilities decommissioned or demolished.
- Any unsalvageable / un-recyclable non-hazardous waste will be disposed of in a licensed landfill within the TMF.
- On site project transmission lines will be removed once treatment of water is no longer required (i.e. upon decommissioning of the ETP).

1.3.4.4 Post-closure

At final closure, relative to the pre-development conditions, the principal topographic changes to the Project Site as considered for the site water quality model are as follows:

- The TMF, raised in a conical shape formation approximately 63 m in elevation from the central discharge point to the lowest existing elevation surrounding the facility, with the tailings sloped at 3%.
- A waste rock stockpile rising about 120 m above existing ground and with an overall slope of 2.5H:1V.
- A revegetated overburden stockpile rising about 60 m above existing ground and an overall slope of 3H:1V.
- Two open pits, flooded to an elevation of 420 m, with the spillover point at the west end of the west pit (near to the operational discharge point).
- Runoff and seepage collection ponds (to be decommissioned once water quality is acceptable for environmental discharge).
- A few on-site roads to allow access for post-closure monitoring.

- Aside from a few buildings and infrastructure elements which will remain temporarily after closure for water management and treatment purposes, most of the Project Site (excluding the waste rock stockpile and the open pits) will largely be reclaimed.

1.4 General Assessment Approach

The Project has the potential to affect the lake water environment. The approach for this TSD follows the six key steps provided below:

- Step 1: Screening of Project activities to determine which activities have the potential to produce changes to the site water discharge.
- Step 2: Identify temporal and spatial boundaries within which potential changes to site water quantity and quality may occur.
- Step 3: Identify parameters used to characterize these potential changes.
- Step 4: Design and carry out field studies and/or background research to characterize the relevant existing conditions, characterize potential site changes, and to support the prediction of changes to site water.
- Step 5: Carry out predictive modelling of potential changes to the site water environment during Project phases identified as bounding scenarios.
- Step 6: Outline the monitoring requirements for each Project phase to confirm predicted changes to the environment and to ensure that requirements are being met for identified parameters.

Steps 1 through 4 were completed in conjunction with the Geochemistry Geology and Soil TSD, Hydrogeology TSD, Hydrology TSD, and the Water and Sediment Quality TSD. This TSD describes the predictive modelling as identified in Step 5. Monitoring (Step 6) is described in the EIS/EA document and will be further developed throughout the Project permitting process. This TSD is intended to support the EIS/EA Report and as such does not assess the significance of potential effects on site water, nor does it identify mitigation measures. These topics are addressed in the EIS/EA Report and in other TSDs.

1.5 Incorporation of Traditional Knowledge

Traditional knowledge in combination with other information sources is valuable in achieving a better understanding of the Project's potential effects on the biophysical and socio-economic environment. It also contributes to the description of the existing biophysical and human environment, natural cycles, resource distribution and abundance, and the use of land and water resources. Those aspects of traditional knowledge related to water quantity and water quality are important when considering the results of the lake water quality assessment, in particularly as it relates to use of the resources as defined in the Aquatic Environment TSD; Terrestrial Ecology TSD; and Human Health and Ecological Risk Assessment (HHERA) TSD. A detailed discussion on traditional knowledge is included in the Aboriginal Interests TSD.

1.6 Selection of Valued Ecosystem Components

The Valued Ecosystem Components (VECs) selected for this TSD are water quantity and quality. Table 1-1 provides the rationale for selection of these VECs along with proposed indicators and measures.

Table 1-1: Valued Ecosystem Components Selected for the Site Water Quantity and Quality Environment

VEC	Rationale for Selection	Indicators	Measures
Site Water Quantity and Quality	Potential for change to overall site water quantity and quality as result of Project activities	Changes in flow or concentrations of key parameters at key locations	Predictions and Analytical data for flows and key parameters at key locations

1.7 Effects Assessment

Changes to site water quantity and quality may lead to or influence the assessment of effects of the Project, but are not in and of themselves the endpoints of the assessment. Therefore, potential effects of the Project on the VECs selected are not discussed in this TSD. The effects assessment on the endpoints of changes to water quality is presented in the EIS/EA Report and in the following TSDs:

- Aquatic Environment TSD.
- Terrestrial Ecology TSD.
- Socio-economic Environment TSD.

1.8 Temporal and Spatial Boundaries

1.8.1 Temporal Boundaries

Temporal boundaries define the temporal extents within which changes to the environment resulting from Project activities are considered. Temporal boundaries for Project phases and the duration of these phases as used in the site water quality model are:

- Construction phase: 30 months.
- Operations phase: 11 years.
- Closure phase: 2 years.
- Post-closure phase: 10 years.

Minor adjustments to these temporal boundaries have occurred during feasibility planning as indicated in Chapter 5 of the EIS/EA report; however the changes are not expected to materially affect the conclusions of the modelling. The Changes in water quantity and quality that may occur during the construction phase will be associated with development of infrastructure. These changes, if any, will be minor and encompassed by changes expected during operations. As such, a temporal boundary for the construction phase has not been established for site water quantity and quality.

At closure, pumping from the open pits will cease and there will be active discharge from the site. As discussed in the Conceptual Closure and Rehabilitation Plan in the EIS/EA Report, it is expected that site runoff will be directed to the open pits and it will take approximately 78 years for pit water levels to rise to an elevation of 420.0 metres above sea level (masl), the proposed spill over elevation from the pits to the environment, assuming no diversion of water from the TMF to the open pits. Once the water reaches the spill over elevation there will be discharge from the flooded open pit to the environment. The associated flow from the pit, accounting for seepage and runoff from former site facilities is discussed in this TSD.

1.8.2 Spatial Boundaries

Spatial boundaries define the geographical extents within which potential environmental changes may occur. As such, spatial boundaries become the Project's study area for the purposes of site water quantity and quality evaluation. The study areas for the evaluation and prediction of site water quantity and quality were selected based on the following factors:

- The Project footprint.
- The proposed locations for water intakes and effluent discharges.
- Location of lakes, streams and watershed divides within the Local and Mine Site Area.

This TSD is focused on project activities in the vicinity of the mine; as such the primary study area is the Mine Study Area (MSA). The Regional Study Area (RSA) and Local Study Area (LSA) are also defined below and are addressed in the Lake Water Quality TSD.

1.8.2.1 Regional Study Area

The lake water quality RSA is delineated in Figure 1-3. The project site is located in Ontario at approximately 150 km west of Thunder Bay and 25 km northeast of the Town of Atikokan. RSA includes Upper and Lower Marmion Reservoir and the upstream catchment of the Seine River. The RSA extends downstream as far as the Raft Lake Dam.

1.8.2.2 Local Study Area

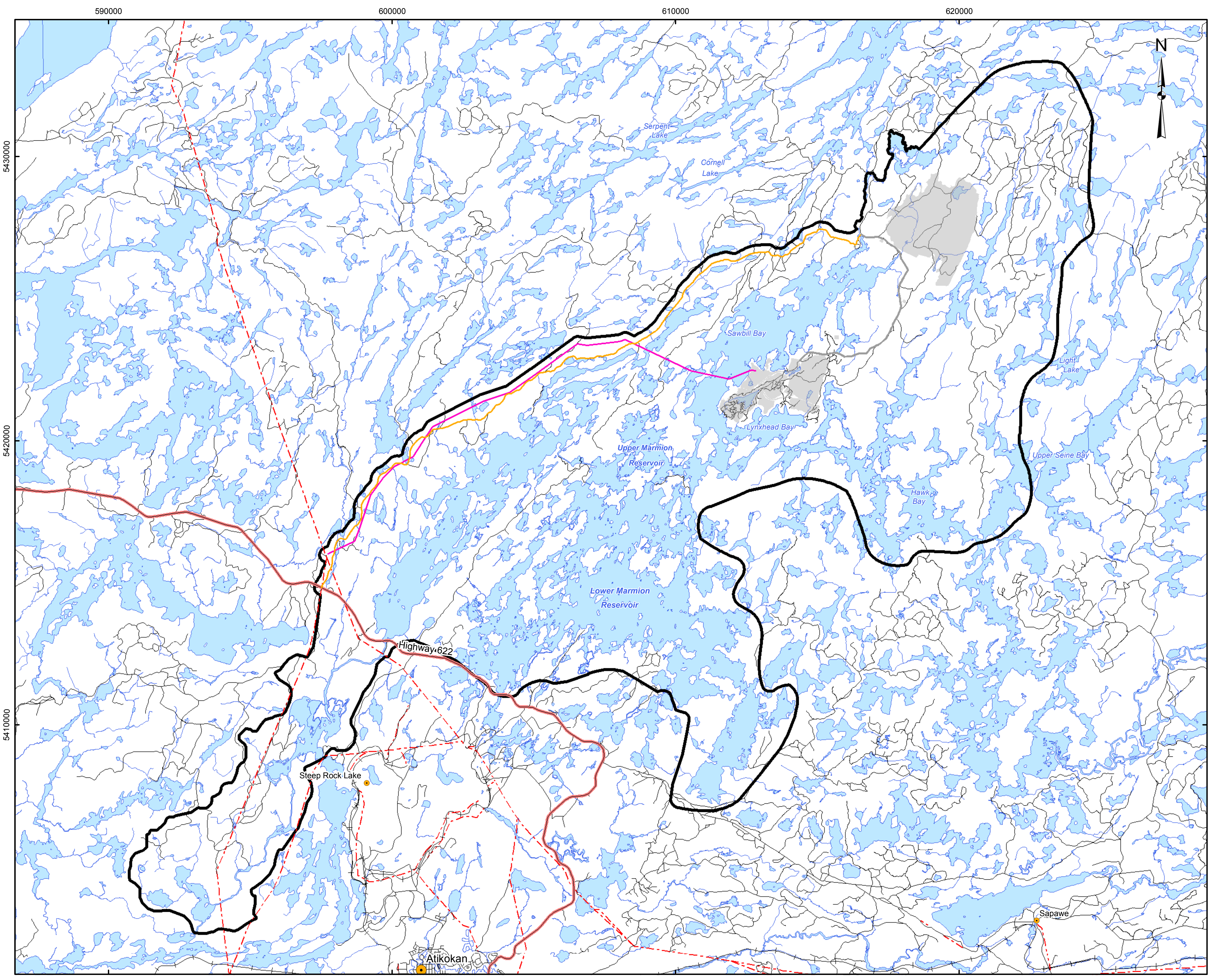
The lake water quality LSA is delineated in Figure 1-4. The proposed mine site at the Hammond Reef property is located on the south-west corner of Sawbill Bay. The mine site is surrounded by Sawbill Bay on the north side and Seine River on the south side. The LSA extends generally to the middle of Sawbill and Lynxhead Bays of Upper Marmion Reservoir on the west and south sides respectively; the Lizard Lake catchment area to the east is also included.

1.8.2.3 Mine Study Area

The primary study area associated with site water quality predictions is the Mine Study Area. The Mine Study Area encompasses the footprints of the Mine, the Waste Rock Management Facility, the Ore Processing Facility, the Tailings Management Facility, and the Support and Ancillary Infrastructure (Figure 1-2). Borrow Pits are not included, as they are subject to a separate permitting process.

The property currently contains a number of smaller inland lakes. Mitta Lake is a small, steep-sided water body located atop mineralized zones of the deposit. Due to its location, the planned open pit mine areas will encompass Mitta Lake.

The components of the mine which are relevant to the site water balance and water quality model are described in Section 1.3.4.



LEGEND

- City/Town
- Small Community
- Provincial Highway
- Road
- Existing Railway
- Power Transmission Line
- River/Stream
- Lake
- Mine Site Road
- Access Road (Hardtack / Sawbill)
- Project Transmission Line
- Project Facilities
- Water Quality Regional Study Area

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd
Base Data - MNR NRVIS, obtained 2004
Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

2 1 0 2 4 6 8
KILOMETRES

PROJECT

HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE

WATER QUALITY REGIONAL STUDY AREA

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	VERSION 1
DESIGN	CGE	14 Nov. 2008	FIGURE: 1-3	
GIS	JO	5 Feb. 2013		
CHECK	REJ	5 Feb. 2013		
REVIEW	KJD	5 Feb. 2013		

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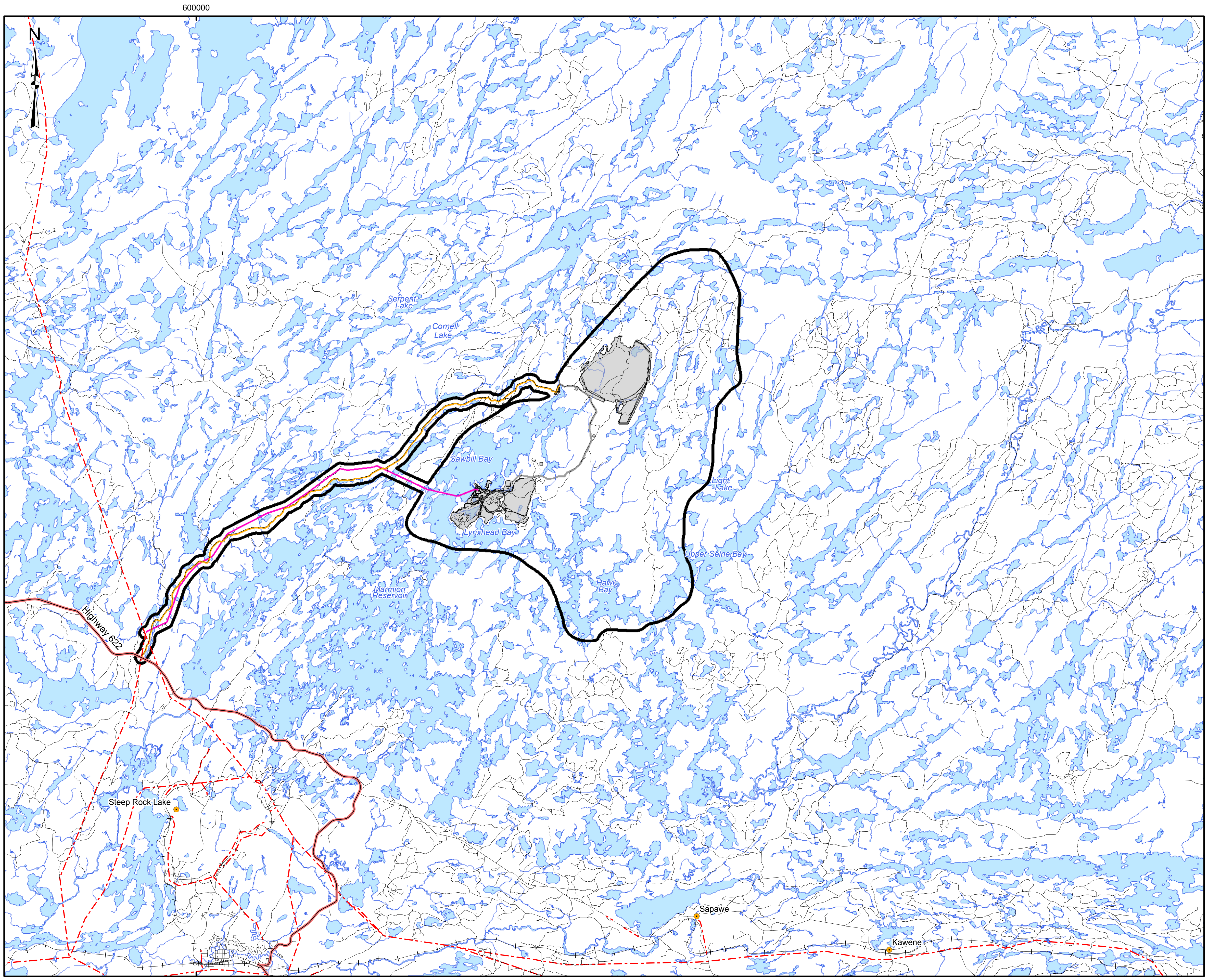

LEGEND

- Small Community
- Provincial Highway
- Road
- Existing Railway
- River/Stream
- Lake
- Mine Site Road
- Access Road (Hardtack / Sawbill)
- Project Transmission Line
- Project Facilities
- Water Quality Local Study Area

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd
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Produced by Golder Associates Ltd under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

2.5 1.25 0 2.5 5 7.5
KILOMETRES

PROJECT

HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE

WATER QUALITY LOCAL STUDY AREA

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	VERSION 1
DESIGN	CGE	27 Jun. 2012	FIGURE: 1-4	
GIS	JO	5 Feb. 2013		
CHECK	REJ	5 Feb. 2013		
REVIEW	KJD	5 Feb. 2013		

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2.0 METHODS

A summary of methods is as follows:

1) Review and compile Secondary Data.

2) Review and compile relevant information on Project and Project Design.

3) Develop Surface Water Drainage Plan and Site Water Balance.

4) Develop predictive model for site flows.

5) Compile and summarize results of site water balance modelling for key project stages.

6) Compile information on Site Water Quality Input values.

7) Develop predictive model for Site Water Quality for key project stages.

8) Compile and summarize results of site water quality model.

2.1 Primary and Secondary Data Review

No historical site water quantity or quality predictions have been completed for the site. This TSD compiles relevant information for use in water quantity and quality predictions (Section 3; Section 4). Relevant TSDs and engineering reports and plans used in defining the input data for the predictive modelling are:

- Hydrology TSD – provides meteorology, runoff and flow data for various site aspects.
- Water and Sediment Quality TSD – provides surface water quality values.
- Hydrogeology TSD – provides groundwater inflow and groundwater quality values.
- Geology, Geochemistry and Soil TSD – provides input chemistry values.
- EIS/EA Report –
  - Chapter 5 (Project Description) of the EIS/EA document.
- Conceptual Closure and Rehabilitation Plan.

2.2 Guidelines and Indicators

The following describes the guidelines used to compare the modeled site water quality results.

The results of the existing water quality program are compared to:

- Ontario Provincial Water Quality Objectives (PWQO) (MOEE 1999).
- Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines (CCME CWQG) for the protection of aquatic life (CCME 2007).

- Municipal/Industrial Strategy for Abatement (MISA) Effluent Monitoring and Effluent Limits for the Metal Mining Sector Ontario Regulation 560/94.

It should be noted that indicators will be developed as the impact assessment proceeds. The use of CCME CWQG and PWQO guidelines are only for comparative purpose as the site water quality is not a direct reflection of receiving water quality. Additional evaluation in the context of the receiving water quality and lake water quality is warranted where the discharge has the potential to exceed the CCME CWQG or PWQO guidelines and is provided in the Lake Water Quality TSD.

3.0 WATER BALANCE

Golder developed a series of water balance scenarios to evaluate the potential influence of the Project on the volume of water reporting to the downstream watershed. Construction and operation of the mine will influence the downstream watershed due to changes to the area's overall runoff coefficient and due to water consumption during operation. Water balances were created to model the end of operations phase, as well as the existing, closure, and post – closure phases.

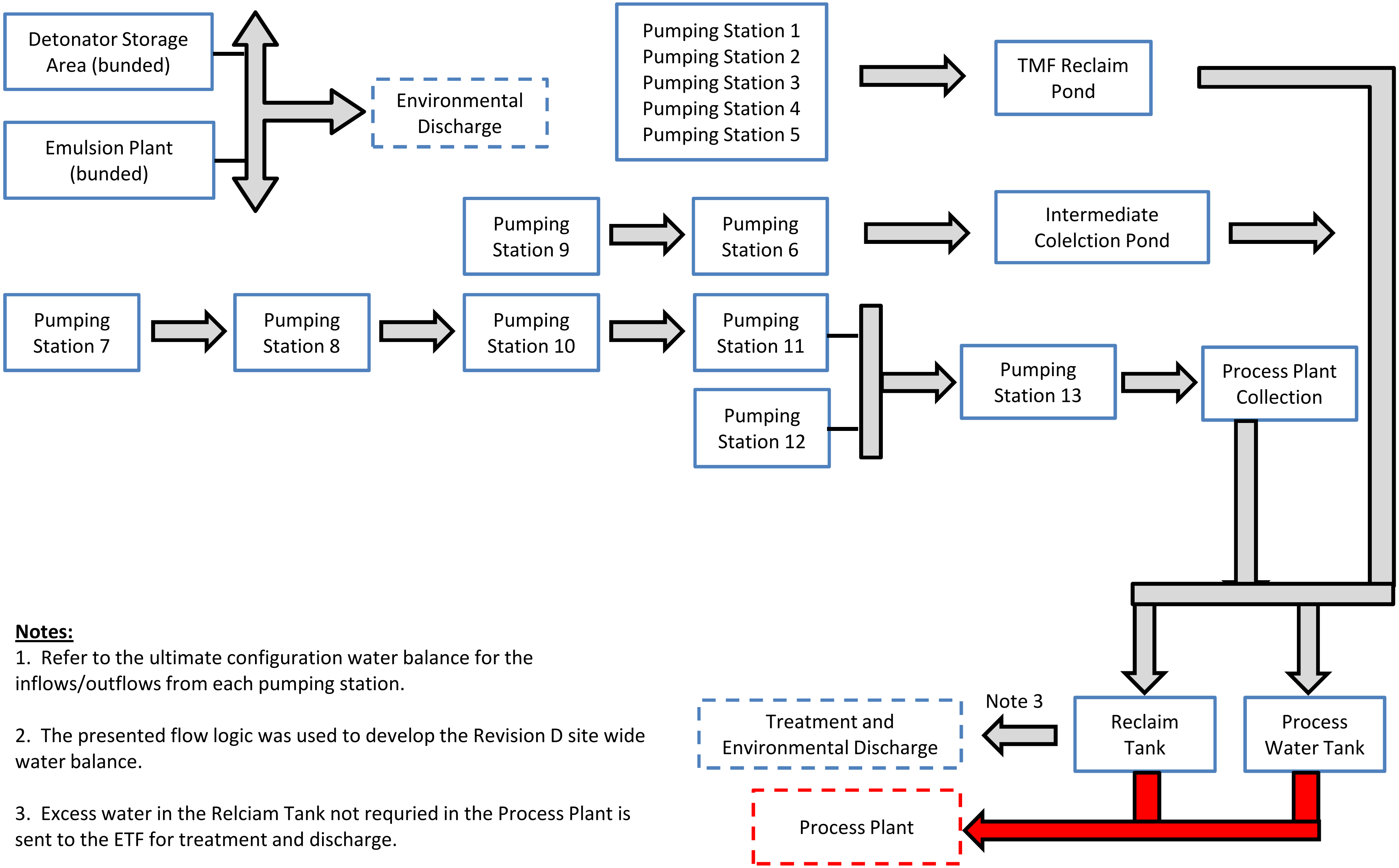
3.1 Surface Water Drainage Plan

A preliminary surface water drainage plan, shown in Figure 1-2**,** was developed to collect and direct all site contact runoff to a central location (PPCP) for use in the Ore Processing Facility or environmental discharge via the ETP. Surface flows will be directed to pumping stations situated in local topographic low areas via a series of excavated ditches, with the pumping stations ultimately discharging to the PPCP. The design of the pumping stations will give consideration to the predicted quality of the collected runoff, and will be sized to contain the design storm event.

The proposed surface water drainage plan is divided into two circuits; one which deals with the TMF and the other which handles the remaining mine facilities. Refer to Figure 3-1 for the surface water drainage plan flow logic.

Ditches excavated along the downstream toe of the proposed TMF dams will collect seepage and contact runoff in a series of pumping stations, where the collected water will be pumped back into the TMF reclaim pond. Water in the TMF reclaim pond will in turn be pumped to the reclaim tank at a rate dictated by water requirements in the Ore Processing Facility and the TMF reclaim pond water management strategy. While the water quality of pumping stations surrounding the TMF are predicted to reflect that of the process water (Section 4.0), seepage losses to groundwater and the associated impacts are expected to be negligible, as the pumping stations are to be operated at the minimum practical water level and should never accumulate significant pressure head (i.e. all inflow is immediately pumped back to the TMF reclaim pond).

The drainage system surrounding the remaining mine facilities follows the same design principal as the TMF, where all contact water reports to a series of pumping stations located in topographic lows, via a series of ditches excavated in native soil. The pumping stations not associated with the TMF are proposed to report to the PPCP, as per the flow logic shown in Figure 3-1. Water collected in the PPCP will be used directly by the Ore Processing Facility, with excess water being discharged to the environment after treatment at the ETP.



Notes:

1. Refer to the ultimate configuration water balance for the inflows/outflows from each pumping station.

2. The presented flow logic was used to develop the Revision D site wide water balance.

3. Excess water in the Relciam Tank not requried in the Process Plant is sent to the ETF for treatment and discharge.

Golder Associates

FLOW LOGIC DIAGRAM
PRELIMINARY SURFACE WATER DRAINAGE PLAN

PROJECT NO: 10-1118-0020		DATE:	Nov-2012
BY:	BA	CHECK:	KD

HAMMOND REEF GOLD PROJECT

FIGURE 3-1

3.2 Major Flow Components

The water balances for the Project site were developed based on climatic conditions inferred from historic site records, with conservative assumptions used to supplement available data where required. Figure 3-1 provides a high-level site flow diagram, showing where the flows from a specific facility will ultimately report. Table 3-1 provides a summary of the major flow components and sources of relevant background information.

Table 3-1: Summary of Major Site Flow Components

Description	Section	Information Source
Water Sources		
Surface Runoff and Stockpile Interflow	3.4.1	Golder – Calculated
Seepage into the Open Pit	3.4.3	Golder – Calculated
Water Sinks		
Seepage to environment	3.4.3	Golder – Assumed
Evaporation from pond surfaces	3.4.2	Golder – Calculated
Water retained in deposited tailings	3.4.4	Golder/Osisko – Calculated
Ore Processing Facility Flows	3.4.5	Osisko

The main sources of water to the site are net precipitation and freshwater intake from Upper Marmion Reservoir, followed by a predicted small component of groundwater seepage into the open pits. These inputs either flow directly to treatment, indirectly to treatment through the Ore Processing Facility, or remain as pore water within the tailings deposited in the TMF. Some water, however, is lost to evaporation and seepage to groundwater. The information source and calculation of the flow components in Table 3-1 are further discussed in the following sections.

The water balances have a resolution of one month, allowing for the prediction of seasonal fluctuations on the impacts to the downstream watershed. The water balances model the 2, 25, 50, and 100-year wet and dry return periods, with the probability of each occurring at least once during the mine life summarized in Table 3-2 below.

Table 3-2: Probability of Climatic Condition Occurrence over the Mine Life

Return Period (Years)	Probability of occurrence at least once during Operations Phase (%)
2	99.99
25	42
50	21
100	11

3.3 Input Data (Water Balance)

The water balance combines site hydrological conditions, Ore Processing Facility requirements, site hydrogeological conditions, and geotechnical characterization of the subsurface to estimate the flow into and out of a given mine facility. The following section discusses the water balance inputs and information sources used to estimate the major flow components outlined in Table 3-1**.** All site hydrological data was sourced from Environment Canada station Atikokan 6020379, which will be referred to as the 'Met Station' from herein, located at 48° 45' N 91°37' W and elevation 395.30 m. Historical records for the Met Station were retrieved from the National Climate Data and Information Archive.

3.3.1 Total Precipitation

The total precipitation values were used to estimate the amount of runoff generated from the mine facilities' catchment areas. The monthly resolution of the water balance allows for the seasonal fluctuations in runoff flows to be accounted for. Monthly fluctuations in available site runoff dictate the required storage volume of the TMF reclaim pond, as well as influence the monthly distribution of treated effluent discharge from the ETP to the environment and freshwater intake to support the Ore Processing Facility. Table 3-3 presents precipitation normals for the Met Station as used in the site water balances.

Table 3-3: Met Station Precipitation Normals (1971-2000)

Period	Total Precipitation (mm)	Seasonal Distribution (%)
Jan	28.8	3.9%
Feb	24.7	3.3%
Mar	37.4	5.1%
Apr	42.9	5.8%
May	70.8	9.6%
Jun	103.3	14.0%
Jul	97.9	13.2%
Aug	97.8	13.2%
Sep	91.6	12.4%
Oct	68.4	9.2%
Nov	48.2	6.5%
Dec	27.9	3.8%
Year	739.6	100.0%

A frequency analysis was carried out to determine the probability distribution which best fit the available data, allowing for the prediction of annual precipitation values for defined return periods. Monthly data from the Met Station was used to carry out the frequency analysis, the results of which are presented below in Table 3-4. The return periods selected exceed the expected mine life, and are consistent with standard industry practice. Refer to Appendix 3.I for more detailed results on the probability distributions considered for the frequency analysis.

Table 3-4: Predicted Hammond Reef Annual Total Precipitation

Wet Years		Dry Years	
Return Period (years)	**Annual Total Precipitation (mm)**	**Return Period (years)**	**Annual Total Precipitation (mm)**
100	1,017	2	758
50	986	5	667
25	951	10	620
10	899	25	571
5	850	50	539
2	758	100	511

3.3.2 Evaporation and Sublimation

Evaporation is the transition of water in its liquid phase to a vapour, mainly occurring during the open water season (May to October). Sublimation is the transition of water in its solid phase to the gas phase, without passing through an intermediate liquid phase, and occurs during the winter months (November to April).

Table 3-5 presents mean monthly pan and lake evaporation at the Met Station as used in the site water balance. Data were sourced from the National Climate Data and Information Archive in October 2010, and reflect measured values from 1971 - 1988. Refer to Appendix 3.I for the raw data obtained from Environment Canada.

Table 3-5: Atikokan Pan and Lake Evaporation

Period	Pan Evaporation (mm)	Lake Evaporation (mm)
May	135.7	107.4
Jun	147.3	116.1
Jul	167.1	129.2
Aug	133.9	104.8
Sep	81.1	64.6
Oct	41.0	34.1
Year	706.1	556.2

Water loss at a rate of 0.3 mm/m^2/day due to sublimation over the winter months was input into the water balance (Williams 1959).

3.3.3 Watershed Areas

Table 3-6 presents watershed areas associated with the various mine facilities, and drainage areas for the different types of surfaces within each watershed. These watershed areas are based on the site drainage plan as presented in Figure 1-2.

Table 3-6: Watershed Areas by Mine Facility

Facility	Watershed Area (ha)	Type of Surface	Percentage of Watershed Area (%)
Open pits	153.2	Open pit walls	100
		Natural ground	0
Waste Rock Stockpile	192.4	Natural Ground	10
		Waste Rock	90
		Direct Precipitation	<1
Low Grade Ore Stockpile	27.5	Natural Ground	19
		Ore	81
		Direct Precipitation	<1
Ore Processing Facility	52.2	Prepared ground	91
		Direct Precipitation	9
Tailings Management Facility	957.2	Natural ground	15
		Tailings/Pond	6
		Unsaturated Tailings	70
		Rock Dams	8
Overburden Stockpile	39.3	Natural Ground	5
		Overburden	95
		Pond	<1
Detonator Storage Area	0.2	Pond	21
		Prepared Ground	79
Emulsion Plant	2	Pond	2
		Prepared Ground	98

3.3.4 Runoff Coefficients and Stockpile Interflow

Runoff coefficients for the calculation of monthly runoff volumes from the various surfaces considered in the water balance are shown in Table 3-7 below. Values for natural ground were based on monthly flow data from Environment Canada's hydrometric stations in the region. Values for all other surfaces were selected based on professional experience, estimated from the expected physical characteristics of the designed facilities. The runoff coefficients for "Remediated Prepared Ground" have been estimated as the average of natural ground and estimated prepared ground.

Table 3-7: Monthly Runoff Coefficients

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Natural Ground	0.8	0.8	0.8	0.8	0.8	0.3	0.25	0.4	0.5	0.3	0.8	0.8
Overburden	0.8	0.8	0.8	0.8	0.8	0.3	0.25	0.4	0.5	0.3	0.8	0.8
Prepared Ground	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
Open Pit Walls	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95
Waste Rock	0.25	0.25	0.25	0.25	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.25
Low Grade Ore Stockpile	0.25	0.25	0.25	0.25	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.25
Tailings	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ponds	1	1	1	1	1	1	1	1	1	1	1	1
Remediated Prepared Ground	0.8	0.8	0.8	0.8	0.8	0.3	0.25	0.4	0.5	0.3	0.8	0.8
Vegetated Tailings	0.55	0.55	0.55	0.55	0.55	0.30	0.25	0.40	0.50	0.30	0.55	0.5

When precipitation contacts and flows over the waste rock, overburden, and low grade ore stockpiles, the resulting surface flow can report downstream as surface runoff, seepage out of the stack (interflow), or is lost to groundwater. The preliminary water balance for the end of operations phase assumes that ground conditions are of relatively low permeability, and that 15% of the total precipitation in contact with a stockpile would report to groundwater. The theory behind this assumption is that the groundwater table will mound within the stockpiles, producing a pressure head which will drive water into the subsurface. The remaining 85% of the precipitation would report as either surface flow, or as seepage out of the stockpile toe; the majority of which would be captured in the surface water drainage system. The volume of water resulting from precipitation was divided between interflow (seepage out of the stockpile) and surface runoff to allow different water qualities to be assigned in the geochemical model. Table 3-8 summarizes the proportion of the total precipitation which reports as surface runoff, interflow, or lost to groundwater, for the various stockpiles on site.

Table 3-8: Runoff Coefficients for Stockpiles

Month	Waste Rock and Ore Stockpiles		Overburden Stockpile		Lost to Ground Water
	Runoff	Interflow	Runoff	Interflow	
Jan	0.25	0.6	0.8	0.05	0.15
Feb	0.25	0.6	0.8	0.05	0.15
Mar	0.25	0.6	0.8	0.05	0.15
Apr	0.25	0.6	0.8	0.05	0.15
May	0.2	0.65	0.8	0.05	0.15
Jun	0.2	0.65	0.3	0.55	0.15

Table 3-8: Runoff Coefficients for Stockpiles (Continued)

Month	Waste Rock and Ore Stockpiles		Overburden Stockpile		Lost to Ground Water
	Runoff	Interflow	Runoff	Interflow	
Jul	0.2	0.65	0.25	0.6	0.15
Aug	0.2	0.65	0.4	0.45	0.15
Sep	0.2	0.65	0.5	0.35	0.15
Oct	0.2	0.65	0.3	0.55	0.15
Nov	0.25	0.6	0.8	0.05	0.15
Dec	0.25	0.6	0.8	0.05	0.15

During the winter months, precipitation accumulates as snow pack and is not immediately released to the downstream environment. The water balances allow for the input of the proportion of the monthly precipitation which is released to the environment, accumulating the remaining volume for release when appropriate. Table 3-9 presents the percentage of the total runoff which is released to the environment on a monthly basis.

Table 3-9: Percentage of Precipitation Released by Month

Month	Percentage of Precipitation Released
Jan	0.1
Feb	0
Mar	0.1
Apr	1
May	1
Jun	1
Jul	1
Aug	1
Sep	1
Oct	1
Nov	0.6
Dec	0.3

In April, all precipitation accumulated from November through March is released. The values presented in Table 3-9 have been calculated based on meteorological data from the Met Station, reconciling precipitation records with measured runoff.

3.3.5 Seepage

Seepage rates out of any facility collecting water will be controlled, either by using low permeability containment or relocating a pumping station to nearby area with more favourable subsurface conditions. For the estimation of total site water discharge and overall site water assessment, seepage rates out of all pumping stations have been set to 0 m^3/h, under the assumption that all surface runoff collected in the pumping stations would be immediately pumped to the PPCP. Seepage loses from the TMF have also been assumed as 0 m^3/h, under the similar logic that all collected seepage reporting to the collection system will be pumped back into the TMF reclaim pond. Seepage rates out of the PPCP have been set at 0 m^3/h, to conservatively estimate the volumes of water required for treatment and discharge from the ETP.

To be conservative in the evaluation of Lizard Lake, it was assumed that 10% of the seepage reporting to the collection system along the east side of the TMF would ultimately report to Lizard Lake. This seepage loss to Lizard Lake is estimated at 227 m^3/day. Calculation of the seepage loss to Lizard Lake is discussed under Section 3.4.3.

Seepage rates into the open pit have been estimated from a MODFLOW 3-Dimensional groundwater flow model. Preliminary model results estimate a combined seepage rate into the east and west pits of 235 m^3/day and 505 m^3/day, respectively, for a combined total of 740 m^3/day. Detailed information regarding the MODFLOW model input data and assumptions are provided in the Hydrogeology TSD.

3.3.6 Mine Operating Data

Flow components into and out of the Ore Processing Facility were calculated from operating data provided by Osisko at the time of model development and are considered reasonable and relevant at the time of reporting. The flow components relevant to the water balance include the following:

- Water requirements in the Ore Processing Facility (either reclaim from the site or freshwater).
- Volume of water discharged to the TMF in the thickened tailings.
- Volume of water locked in the deposited tailings void space.
- Volume of water released from the deposited tailings, which is available for re-use by the Ore Processing Facility.

Table 3-10 summarizes the inputs required to carry out the Ore Processing Facility flow calculations, as well as the source of information. The formulas used to calculate the flow components associated with the Ore Processing Facility are discussed in detail under Section 3.4.5.

Table 3-10: Mine Operating Data

	Units	Value	Information Source
Specific Gravity of tailings solids	n/a	2.73	Laroche, 2012a
Nominal mill production rate	Metric tons per day	60,000	Laroche, 2012b
Water content of ore	n/a	2.0	Laroche, 2012a
Water lost in the mill to evaporation	m^3/day	2,640	Assumed
Nominal freshwater requirement	m^3/day	7,200	Laroche, 2012a
Tailings/Ore ratio	n/a	1.0	Assumed
Void ratio of deposited tailings	n/a	0.95	Assumed
Water for dust control	m^3/day	3,320	Assumed
Potable water requirements	m^3/day	35	Assumed
Sewage	m^3/day	28	Assumed
Cyanide (CN) circuit production rate	Metric tons per day	4,250	Ounpuu, 2012
CN slurry thickener feed density	% Solids	50	Ounpuu, 2012
Main tailings slurry thickener feed density	% Solids	~45	Ounpuu, 2012
Thickener underflow density	% Solids	64	Ounpuu, 2012

Notes:
n/a = Not applicable.

Assumed values have been used where information is not yet available. Assumptions are conservative in nature, and should be verified upon finalization of the feasibility study report. The deposited tailings void ratio should be confirmed during operations.

3.4 Flow Calculations

3.4.1 Net Precipitation

Precipitation at the Site occurs as rainfall in the summer months and snowfall in the fall and winter. Precipitation accumulates during freezing periods and is released over a short period during spring freshet in April. The water balance models use historical weather records to predict future events. Inflows due to runoff and direct precipitation were estimated based on the surface areas of each facility and the upstream catchment. The surface water flow components in the water balances were estimated based on the contact surfaces, which include:

- Prepared ground.
- Stockpiled waste rock or low grade ore.
- Natural ground.
- Saturated/unsaturated tailings surface.
- Pond.

The volume of surface runoff resulting from precipitation was calculated on a monthly basis as follows:

$$Q_m^* = (P - S) \times C \times A \quad \textbf{Equation 1}$$

Where:

Q^*_m = Maximum available runoff for month *m*, in m^3/month.

P = Monthly precipitation, in m.

S = Monthly sublimation loss, in m.

A = surface area receiving the precipitation, in m^2.

C = Runoff coefficient (Section 3.3.4).

The actual volume of runoff collected downstream of a given catchment was adjusted to account for the monthly precipitation distribution (see Section 3.3.1) as follows:

$$Q_m = [Q_{m-1}^* * (1 - R_{m-1}) + Q_m^*] \times R_m \quad \textbf{Equation 2}$$

Where:

Q_m = the actual volume of runoff from a given area for month *m*, in m^3/month.

R_m = the percentage of precipitation released during a given month *m*, as per Table 3-9.

3.4.2 Evaporation

The water balance accounts for evaporative losses from the surface of ponding water. The volume of water lost due to evaporation, from a given pond, is calculated as follows;

$$Evaporation\ Loss = Pond\ Area \times Lake\ Evaporation\ Rate$$ **Equation 3**

Where the lake evaporation rate is as discussed under Section 3.3.2.

3.4.3 Seepage

Seepage losses out of facilities which collect water will be estimated through the use of a SEEP/W finite element model. At this point in the Project development, only seepage losses through the TMF dams have been estimated. Seepage losses from the PPCP will be calculated by similar means when the operating pond levels have been determined. Seepage losses from the pumping stations will not be calculated, as these facilities are to be perpetually pumped such that water does not accumulate with any significant pressure head.

The SEEP/W model was developed in support of the Project Feasibility Study, and is beyond the scope of the EIS/EA.

3.4.4 TMF Flows

The tailings slurry flows through a thickener prior to discharge to the TMF at a solids content of 64% by mass. The deposited tailings will settle and consolidate, with a portion of the total water discharged with the slurry to the TMF being reclaimed to the Ore Processing Facility, and the other portion remaining locked in the tailings void space indefinitely. Based on experience, it has been assumed that the deposited tailings will have a void ratio of 0.95. From the nominal milling rate and the deposited void ratio, the volume of water locked in the tailings void space is calculated as follows:

$$V_R = \frac{e}{G_s} \times P_{Total}$$ **Equation 4**

Where:

V_R = the daily volume of water retained in the tailings void space, in m^3.

e = the deposited void ratio of the tailings.

G_s = the specific gravity of the tailing's solid particles.

P_{Total} = the amount of ore sent through the mill, in metric tons per day.

The total volume of water discharged to the TMF is given by the following formula:

$$V_{TMF} = P_{Total}\left(\frac{1}{\%\ Solids_{UF}} - 1\right)$$ **Equation 5**

Where:

V_{TMF} = the total volume of water discharged to the TMF from the thickener, in m^3/day.

% $Solids_{UF}$ = the solids content of the thickener underflow by mass.

The volume of water available for reclaim from the TMF reclaim pond, $V_{Reclaim}$, is given by the following formula:

$$V_{Reclaim} = V_{TMF} - V_R$$ **Equation 6**

3.4.5 Ore Processing Facility Flows

Intake of freshwater to the Ore Processing Facility will be required for mixing reagents required for the milling process. The freshwater requirements for the Ore Processing Facility for the purposes of the site water quality model are estimated at 300 m^3/h by Osisko. All other water requirements in the Ore Processing Facility will primarily come from water sourced from either the PPCP or the TMF reclaim pond. When insufficient water is stored on site to run the Ore Processing Facility, freshwater intake from Upper Marmion Reservoir will be required. The availability of reclaim water to run the Ore Processing Facility is a function of the climatic conditions and catchment areas upstream of the surface water management system, and is calculated on a monthly basis in the water balance.

The volume of make-up water required in the mill is calculated as follows:

$$V_{make\ up} = V_{Thickener} + V_{ore} + V_{Fresh\ Water} - V_{TMA} - V_{Mill\ Loss}$$ **Equation 7**

Where:

$V_{Thickener}$ = Overflow from the thickener back to the Ore Processing Facility.

V_{ore} = Volume of water in the ore going through the mill.

$V_{Fresh\ Water}$ = the volume of freshwater required in the mill for reagent mixing, see Table 3-10.

$V_{Mill\ Loss}$ = the volume of water lost in the mill due to spillage and evaporation, see Table 3-10.

$$V_{thickener} = P_{flotation}\left(\frac{1}{\%\ Solids_{Flotation}} - 1\right) + P_{CN}\left(\frac{1}{\%\ Solids_{CN}} - 1\right) - P_{Total}\left(\frac{1}{\%\ Solids_{UF}} - 1\right)$$ **Equation 8**

$$V_{ore} = P_{Total}\left(\frac{1}{1-\omega_{ore}} - 1\right)$$ **Equation 9**

Where:

$P_{Flotation}$ = Mass of ore through the flotation circuit.

P_{CN} = Mass of ore through the CN leach circuit.

% $Solids_{Flotation}$ = Solids content by mass of flotation tailings.

% $Solids_{CN}$ = Solids content by mass of the CN leach circuit tailings.

ω_{ore} = Moisture content of ore going into the mill.

When available, $V_{make\ up}$ will be comprised of reclaim water sourced from the TMF reclaim pond as well as the PPCP. When insufficient reclaim water is available, the flow must be supplemented with freshwater drawn from Upper Marmion Reservoir.

3.4.6 Miscellaneous Flows

Miscellaneous flows are those which are required to support operations, but are not affected by hydrological conditions or the Ore Processing Facility requirements.

Dust Control

It is anticipated that active spraying of water for dust control will be required for the months of April to October. An application rate of 2.5mm/day has been assumed, over a surface area of 133 ha, equating to a daily water requirement of 3,320 m^3/day. The surface area of 133 ha includes an allotment for the active area of waste rock disposal, the low grade ore stockpile, floors of the open pits, and haul roads. Dust control water will be sourced from the PPCP.

Potable Water

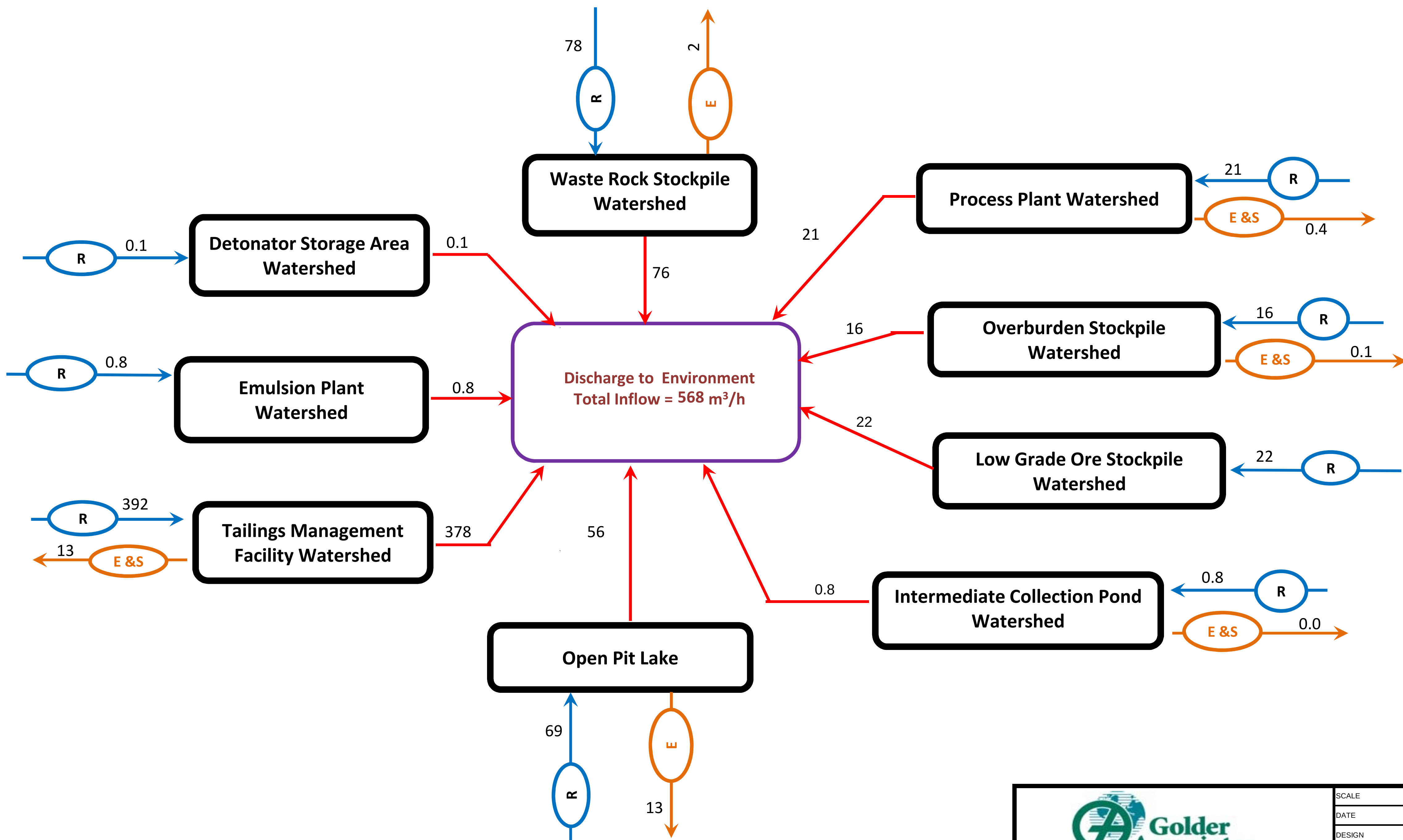
The number of employees hosted in the accommodation camp dictates site potable water requirements. It is understood that the final number of people may be adjusted during the feasibility study, however for the purposes of water quality evaluation it is assumed that the accommodation camp will host 650 people, on average, consuming freshwater at a rate of 300 m^3/day.

Sewage Water

The volume of effluent discharge from the sewage treatment facilities to the PPCP has been assumed as 80% of the potable water intake requirements.

3.5 Model Results

A water balance was created for the existing conditions, end of operation, closure, and post-closure phases, to assess the impacts the Project could have on the local aquatic environment. The following section discusses the results of each water balance (closure water balance discussed under Section 3.8). Refer to Appendix 3.II for the existing conditions, ultimate mine configuration, closure, and post-closure water balances, for the average climatic year. Figures 3-2, 3-3, and 3-4 provide “string” diagrams (or flow logic diagrams) for the existing conditions, ultimate mine configuration, and post-closure water balances, presenting the average annual flows between each facility.



NOTES:

1. All flows are nominal values in m^3/hour

2. Flows shown correspond to the average hydrological condition (annual precipitation with a 2-year return period)

3. The ability to discharge water directly to the environment will be contingent on the runoff water quality satisfying discharge requirements.

LEGEND

Symbol	Meaning
R	Rainfall, Runoff
E &S	Evaporation, seepage & spillage losses
	Other losses
	Other Inflows
	Internal flows

Golder Associates

SCALE	NTS	TITLE	STRING DIAGRAM EXISTING CONDITIONS
DATE	27-Nov-12		
DESIGN	BA		
FILE No		CHECK	KAB
PROJECT No	11-1118-0117	REV.	D
REVIEW	KD		

HAMMOND REEF GOLD PROJECT

FIGURE 3-2

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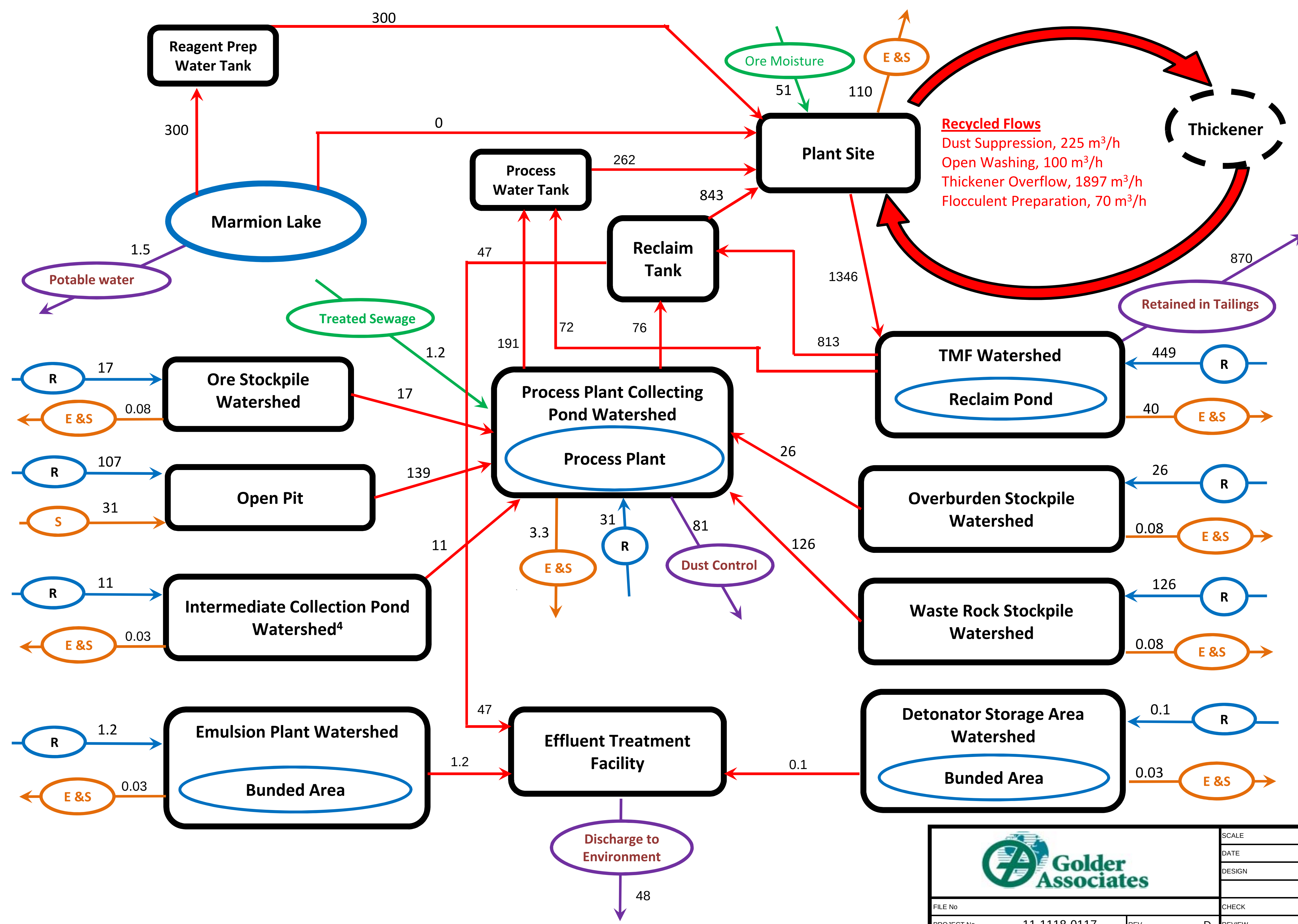
11/27/2012



NOTES:

1. All flows are nominal values in m^3/hour
2. Flows shown correspond to the average hydrological condition (annual precipitation with a 2-year return period)
3. The presented flow logic has been simplified to show the flow source and final collection point. Intermediary flows between major facilities (ex. TMA, waste rock area, stockpiles, etc.) are not presented.
4. Runoff and infiltration through the waste rock stockpile, which collects in the Intermediate Collection Pond, has been included in the waste rock stockpile watershed flows. Therefore, the ICP watershed flows presented here do not represent the full flow in and out of the ICP.

LEGEND

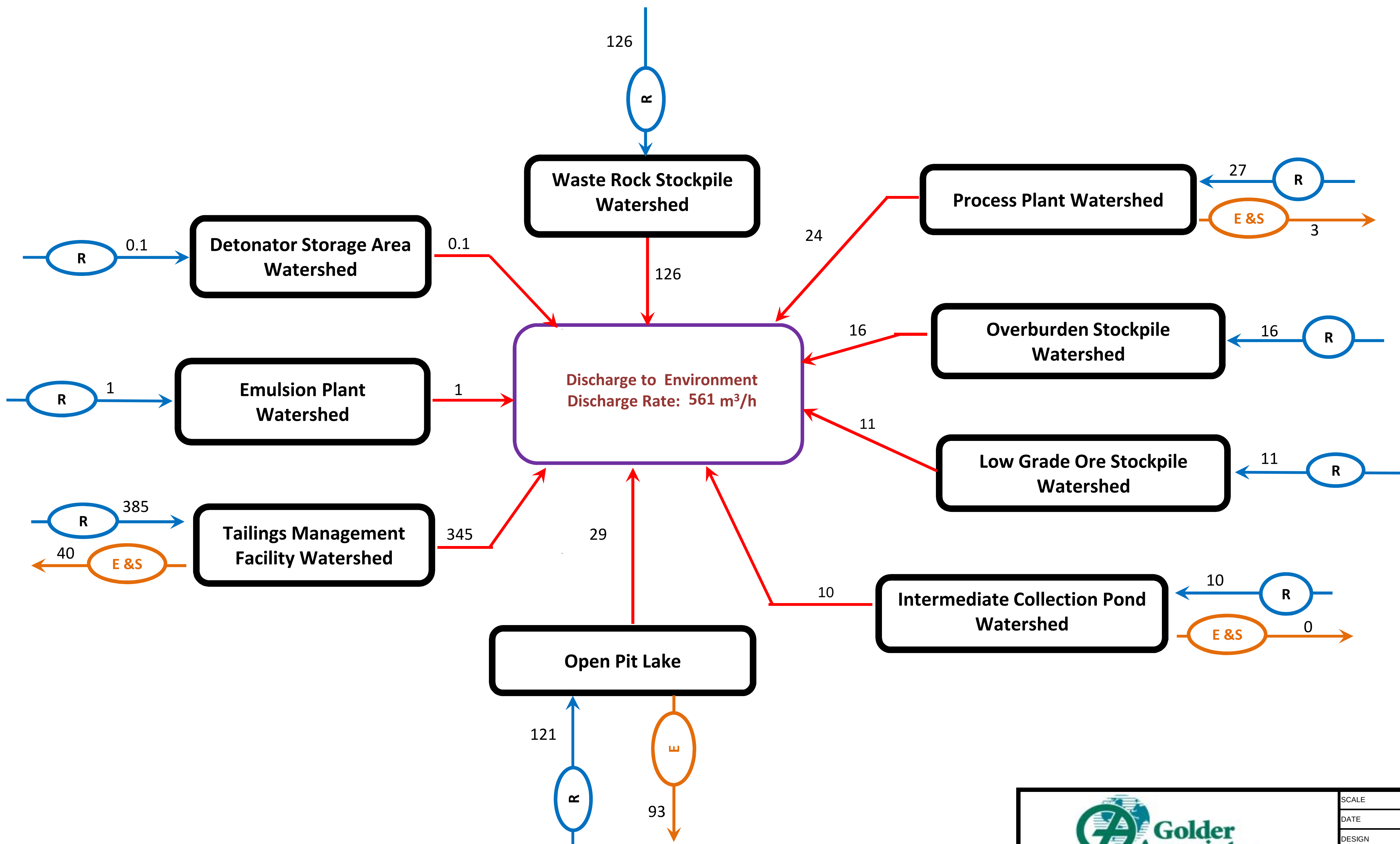
- R — Rainfall, Runoff
- E &S — Evaporation, seepage & spillage losses
- Other losses
- Other Inflows
- Internal flows

Golder Associates	SCALE NTS DATE 27-Nov-12 DESIGN BA	TITLE	STRING DIAGRAM ULTIMATE MINE CONFIGURATION
FILE No	CHECK	HAMMOND REEF GOLD PROJECT	FIGURE 3-3
PROJECT No 11-1118-0117 REV. D	REVIEW KAB		

N:\Active\2010\1118\10-1118-0020 Brett Resources-Hammond Reef\005 Environmental\1000 SEIA Report\01 TSDs\Water - Site Water TSD\01 Figures\Seed Files\Figure 3-3.xlsx
11/27/2012

NOTES:

1. All flows are nominal values in m^3/hour
2. Flows shown correspond to the average hydrological condition (annual precipitation with a 2-year return period)
3. The ability to discharge water directly to the environment will be dependent on the water runoff water quality satisfying discharge requirements.



LEGEND

- R — Rainfall, Runoff
- E &S — Evaporation, seepage & spillage losses
- Other losses
- Other Inflows
- Internal flows

Golder Associates	SCALE NTS DATE 27-Nov-12 DESIGN BA	TITLE	STRING DIAGRAM POST - CLOSURE CONDTIONS
FILE No PROJECT No 11-1118-0117 REV. D	CHECK KAB REVIEW KD	HAMMOND REEF GOLD PROJECT	FIGURE 3-4

3.5.1 Existing Conditions

The existing conditions site water balance serves as a baseline to compare with the end of operations phase water balance and post-closure water balance. The existing conditions water balance was run for the average year, as well as the 10, 25, 50, and 100-year wet and dry return periods. The amount of runoff reporting to Mitta Lake, from the mine footprint, is provided below in Table 3-11.

Table 3-11: Runoff to Upper Marmion Reservoir under Existing Conditions

Month	Runoff Reporting to Upper Marmion Reservoir (m^3/h)								
	Average	Wet Return Period				Dry Return Period			
		10	25	50	100	10	25	50	100
August	762	915	972	1,010	1,043	611	558	523	493
September	935	1,117	1,183	1,228	1,268	757	694	653	617
October	428	512	543	564	582	347	318	299	282
November	389	477	510	532	551	302	272	252	234
December	193	242	260	272	282	145	128	117	107
January	67	85	91	96	100	50	44	40	36
February	0	0	0	0	0	0	0	0	0
March	132	166	179	187	195	98	86	79	72
April	1,749	2,199	2,365	2,476	2,575	1,309	1,153	1,051	962
May	1,062	1,271	1,349	1,401	1,447	857	784	736	695
June	628	759	807	839	868	501	455	426	400
July	473	576	613	639	661	373	337	314	293
Average Annual	**569**	**694**	**740**	**771**	**799**	**447**	**403**	**375**	**350**

The complete water balance for the average year is provided in Appendix 3.II. For the average climatic conditions, an estimated 569 m^3/day reports to Upper Marmion Reservoir from the proposed mine footprint under existing conditions.

3.5.2 End of Operations Phase

The water balance was run for the average year as well as the 10, 25, 50, and 100-year wet and dry return periods. The complete water balance for the average year is provided in Appendix 3.II, along with the complete model results for all of the aforementioned climatic conditions. The end of operations water balance provides detailed flows which correspond to the surface water management plan, as well as the water balance by Project component.

Tables 3-12 and 3-13 provide the results for the monthly rate of freshwater intake and treated environmental discharge respectively. The water balance uses March as the control month, meaning the TMF reclaim pond volume was set to the minimum value at the end of March and calculated for all other months. March was selected as the control month to reflect that the TMF reclaim pond would be drawn down during the winter months such that sufficient freeboard exists in April to safely contain the freshet release.

Table 3-12: Freshwater Intake Requirements from Upper Marmion Reservoir

Month	Freshwater Intake from Upper Marmion Reservoir (m^3/h)								
	Average	Wet Return Period				Dry Return Period			
		10	25	50	100	10	25	50	100
August	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5
September	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5
October	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	397.3
November	301.5	301.5	301.5	301.5	301.5	301.5	301.5	477.6	684.3
December	301.5	301.5	301.5	301.5	301.5	301.5	558.1	791.4	800.2
January	301.5	301.5	301.5	301.5	301.5	490.9	858.0	861.6	864.8
February	301.5	301.5	301.5	301.5	301.5	898.0	898.0	898.0	898.0
March	301.5	301.5	301.5	301.5	301.5	808.2	819.1	826.2	832.4
April	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5
May	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	349.9
June	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5
July	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5	301.5
Average Annual	**301.5**	**301.5**	**301.5**	**301.5**	**301.5**	**406.4**	**460.2**	**495.4**	**526.2**

Table 3-13: Treated Effluent Discharge Rates to Sawbill Bay

Month	Environmental Discharge to Sawbill Bay (m^3/h)								
	Average	Wet Return Period				Dry Return Period			
		10	25	50	100	10	25	50	100
August	46.9	235.6	322.6	389.8	452.8	0.0	0.0	0.0	0.0
September	46.9	230.5	339.6	386.4	467.2	0.0	0.0	0.0	0.0
October	46.9	250.9	309.6	349.1	384.1	0.0	0.0	0.0	0.0
November	46.9	202.0	259.2	297.7	331.8	0.0	0.0	0.0	0.0
December	46.9	202.0	259.2	297.7	331.8	0.0	0.0	0.0	0.0
January	46.9	202.0	259.2	255.4	228.5	0.0	0.0	0.0	0.0
February	46.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
March	46.9	139.9	32.9	3.2	0.4	0.0	0.0	0.0	0.0
April	46.9	236.7	328.6	394.9	442.9	0.0	0.0	0.0	0.0
May	46.9	235.6	326.4	391.8	439.3	0.0	0.0	0.0	0.0
June	46.9	236.7	328.6	394.9	442.9	0.0	0.0	0.0	0.0
July	46.9	235.6	326.4	391.8	439.3	0.0	0.0	0.0	0.0
Average Annual	**46.9**	**202.0**	**259.2**	**297.7**	**331.8**	**0.0**	**0.0**	**0.0**	**0.0**

Results of the water balance predict that during the average year, discharge of treated effluent will occur year-round at a constant rate of 47 m^3/h. For the 10, 25, 50, and 100-year wet return periods, higher average annual discharge rates are expected, however, discharge rates during March are expected to be near negligible with no flow expected during February. The average annual discharge rates are controlled by hydrologic conditions and water requirements in the Ore Processing Facility, while the monthly flow distribution is controlled by the TMF reclaim pond size and desired ETP feed rate.

The TMF reclaim pond has been sized to allow sufficient runoff to be captured on the average year, such that the Ore Processing Facility can be operated year-round without the need for additional freshwater intake from Upper Marmion Reservoir, apart from the base requirements for reagent mixing and potable water. During dryer than average years, it is anticipated that insufficient reclaim water (from either the TMF reclaim pond or the PPCP) will be available to run the Ore Processing Facility year-round, requiring that processes in the Ore Processing Facility which would normally use reclaim water from the TMF or PPCP be supplemented with freshwater from Upper Marmion Reservoir. During the dry return periods, all site contact water will be required in the Ore Processing Facility, and no environmental discharge during any time of the year is expected.

3.5.3 Post–closure Conditions

During closure, the Ore Processing Facility and ancillary structures will be demolished, and all mine facilities rehabilitated to a condition where they can be returned to the natural environment (i.e., surface runoff no longer requires treatment and can be discharged directly to the environment). The post-closure water balance estimates the flows from the mine facilities after they have been rehabilitated and returned to the environment.

The post-closure water balance is related to the end of operations water balance in that the catchment areas are similar; however, the flow logic and runoff coefficients have been revised to reflect the post-closure conditions. Refer to Section 3.8 for a brief description of the remediation activities which will take place at closure.

The monthly runoff flow from the mine facilities to the environment for the post-closure condition is summarized in Table 3-14.

Table 3-14: Runoff to Upper Marmion Reservoir under Post–closure Conditions

Month	Runoff into Upper Marmion Reservoir (m^3/h)								
	Average	Wet return period				Dry Return Period			
		10	25	50	100	10	25	50	100
August	842	1,049	1,126	1,177	1,223	638	566	519	478
September	1,029	1,253	1,335	1,391	1,440	810	732	681	637
October	603	732	779	811	840	477	433	403	378
November	352	432	461	481	499	274	246	228	212
December	175	219	235	246	256	132	117	107	98
January	62	78	84	88	91	46	41	37	34
February	1	1	1	1	1	1	1	1	1
March	120	151	162	170	177	90	79	72	66
April	1,451	1,856	2,006	2,106	2,196	1,054	913	821	740
May	730	918	988	1,034	1,076	546	481	438	400

Table 3-14: Runoff to Upper Marmion Reservoir under Post–closure Conditions (Continued)

Month	Runoff into Upper Marmion Reservoir (m^3/h)								
	Average	Wet return period				Dry Return Period			
		10	25	50	100	10	25	50	100
June	765	966	1,040	1,090	1,134	569	499	453	413
July	588	760	824	867	904	419	359	320	286
Average Annual	**561**	**702**	**755**	**790**	**821**	**422**	**373**	**341**	**312**

3.6 Discussion (Water Balance)

Table 3-15 below summarizes the average annual volume of water discharged from the Site to the environment for the existing conditions, operations phase (end of operations used to represent bounding case), and the post-closure conditions, for the average climatic year.

Table 3-15: Average Annual Discharge Rates to the Environment

Water Balance	Average Annual Net Environmental Discharge (m^3/h)
Existing Conditions	569
Operations (end of operations used as bounding case)	-254.5
Post-closure Conditions	561

During operations, milling of ore is predicted to require a supply of water in excess of the available runoff collected within the mine facility footprints, for the average climatic year. Results of the water balance predict an average annual net intake of freshwater from Upper Marmion Reservoir at a rate of 254.5 m^3/h, resulting in a decrease in the average annual rate of water flow into Upper Marmion Reservoir, compared to existing conditions, of 823.5 m^3/h. This predicted net intake of water is a result of the loss of water in the deposited tailings pore space, and to a lesser degree consumption of potable water and evaporation of water (from ponds and that used for dust control).

A marginal net decrease in water reporting to Upper Marmion Reservoir is predicted when comparing existing conditions to post-closure conditions. The overall site runoff coefficient is anticipated to increase as a result of the waste rock and mineralized rock stockpiles, as well as the plant and office sites. These facilities are expected to generate larger runoff flows post – closure compared to existing conditions due to decreased infiltration and evapotranspiration, which result from widespread placement of waste rock and decreased vegetation density. However, the evaporation rates are significantly higher post-closure as a result of the remnant TMF reclaim pond, and more significantly the pit lake. Evaporation rates post-closure are estimated to be four times higher than under existing conditions.

The flows provided in the water balance models are estimates of expected conditions. While the natural ground runoff coefficients are based on measurements made by Environment Canada, the remaining runoff coefficients have been estimated based on expected operating and environmental conditions. While the observed climatic conditions will undoubtedly vary from the long term predicted averaged, the data set obtained from the Met Station is sufficient to provide a reasonable prediction of the expected long-term average climatic conditions.

3.7 Water Balance Model Assumptions and Limitations

Evaporation Rates from Pumping Stations

The pumping stations, which collect surface runoff flows, will be sized as part of the Project Feasibility Study. As such, a surface area of 402 m^2 was assigned to each pumping station for the purpose of the water balance. The expected operating procedure for the pumping stations is such that following a precipitation event all collected runoff would be immediately pumped downstream to the PPCP, and therefore evaporation rates from the pumping stations has negligible effect on the water balance results.

Seepage Rates from PPCP and TMF

As discussed under Section 3.3.5, seepage losses from all points of water collection have been set to 0 m^3/h. As the Project develops and the seepage losses are quantified, action will be taken to reduce the seepage losses to groundwater. For instance, pumping stations are expected to be operated such that all inflow is immediately pumped to the PPCP, resulting in negligible seepage losses from these facilities. The PPCP will contain water for the duration of the Project life, and the seepage rate out of the facility will likely increase with time as the pit and groundwater draw-down cone develop. While seepage losses will be reduced to acceptable levels through the use of low permeability containment, the PPCP will be situated within the pit draw down cone and therefore all seepage losses from the PPCP will likely report to the pit.

Seepage losses from the TMF to the environment will occur. Seepage through the dam will be recovered downstream in the surface water drainage system, and will be pumped back into the TMF reclaim pond. For the purposes of evaluating potential impact to Lizard Lake a seepage loss of 10% of the seepage reporting to the collection ditch was assigned. Monitoring of seepage rates will take place during operations and localized mitigation strategies will be considered if necessary.

Deposited Void Ratio of Tailings

The void ratio of the deposited tailings has a significant influence not only on the size of the TMF, but also on the volume of water which will be released from the tailings during initial settling and consolidation. The selection of 0.95 for the tailings deposited void ratio has been assumed based on Golder's experience with similar mining projects. The incremental change in the volume of water released from the deposited slurry is negatively proportional to the change in the deposited void ratio (i.e. if the void ratio increased by 10% the volume of water released from the deposited tailings would decrease by 10%). Assumptions regarding the deposited tailings void ratio will be reviewed upon reconciliation of laboratory test data.

3.8 Closure – Pit Flooding Model

At closure, the Ore Processing Facility and ancillary structures will be demolished, and all mine facilities remediated to a condition where they can be returned to the natural environment (i.e., runoff can be directly discharged to the environment without treatment). Table 3-16 provides a summary of the remediation activities which have been proposed for closure.

Table 3-16: Remediation Activities at Closure

Facility	Remediation Activity	Runoff Collection Point	
		Closure	**Post-closure**
Open pit	Both pits allowed to flood	Retained in Pit	Overflow to Upper Marmion Reservoir
Low Grade Ore Stockpile	Stockpile will be processed prior to closure, footprint to be vegetated.	To Open Pit	Discharge to environment
Waste Rock Stockpile	Re-grade to improve drainage	To Open Pit	Discharge to environment
Overburden Stockpile	Re-grade to improve drainage and vegetate	To Open Pit	Discharge to environment
Tailings Management Facility	Tailings stack to be vegetated	To Open Pit	Discharge to environment
Ore Processing Facility and Office Area	Demolish all structures, scarify the area and vegetate	To Open Pit	Discharge to environment

As part of the closure plan, the open pits will be flooded once mining operations cease. An excel model, integrated with the water balance for the ultimate mine configuration was created to estimate the water elevation of the pit lake on a monthly basis.

A more detailed explanation of the proposed closure and rehabilitation activities is provided in the Conceptual Closure and Rehabilitation Plan.

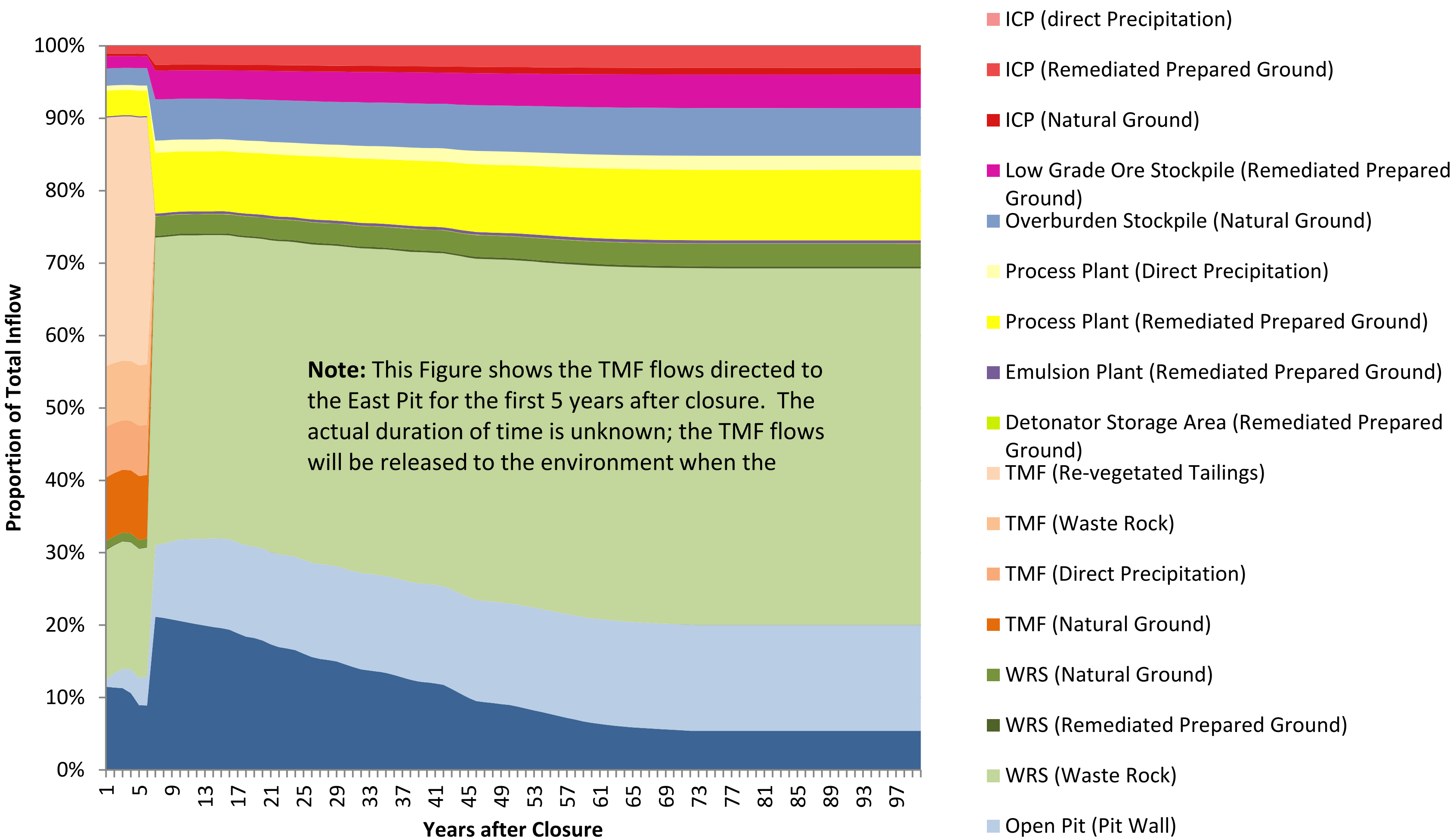
3.8.1 Input Data

The following section discusses the raw data and input into the pit flooding model.

Surface Water Inflow

Surface water flows were estimated from the closure water balance (Appendix 3.II) under average climatic conditions**.** The closure water balance reflects the ultimate – mine configuration, where the prepared ground surfaces (Ore Processing Facility, office pad, etc.), tailings surfaces, overburden stockpile, and low grade ore stockpile have been re-vegetated. The pit flooding model assumes that all surface flows from the decommissioned mine facilities, except those from the TMF, will be directed to the open pits until overflow to the environment occurs.

The closure water balance provided in Appendix 3.II represents the expected site conditions 1 year into closure. During the closure phase, flows generated over the open pit watershed will increase on an annual basis due to the increasing pit lake surface area and decreasing area of exposed pit wall (pit wall runoff coefficient is less than that for direct precipitation to a water body). The pit flooding model makes a monthly correction to the closure water balance flows to account for the dynamic ratio of pit wall to pit lake surface area. Refer to Figure 3-5 and Figure 3-6 for the normalized contribution of each mine facility to the total runoff collected in the east and west pits, respectively. Note that the TMF contribution is presented in Figure 3-5 for the first 5 years of closure, however, in actuality the flow will only be pumped to the east pit until the water quality is acceptable for direct environmental discharge.



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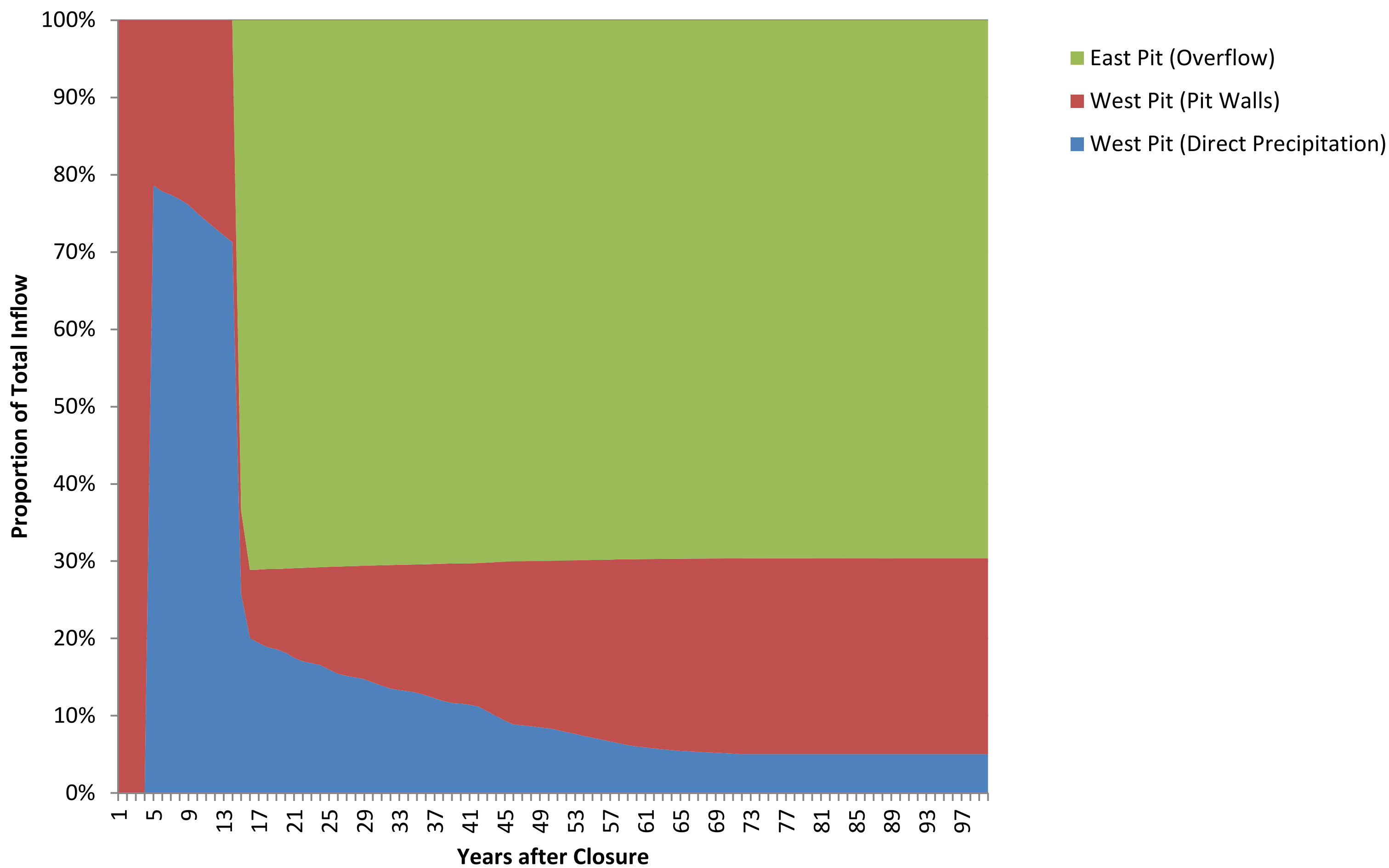
PROJECT NO: 10-1118-0020		DATE:	November 2012
BY:	BA	Review:	KD

SURFACE FLOW CONTRIBUTION TO THE EAST PIT DURING CLOSURE

Osisko Hammond Reef Gold Project

FIGURE 3-5



Golder Associates

SURFACE FLOW CONTRIBUTION TO THE WEST PIT DURING CLOSURE

PROJECT NO: 10-1118-0020		DATE:	November 2012
BY:	BA	Review:	KD

Osisko Hammond Reef Gold Project

FIGURE 3-6

Groundwater Inflow

Preliminary seepage rates into the open pits have been estimated based on the MODFLOW 3-dimensional groundwater flow model. Preliminary model results estimate a seepage rate into the east and west pits of 235 m^3/day and 505 m^3/day (740 m^3/day combined), respectively (Hydrogeology TSD).

Given the inherent uncertainty in the prediction of seepage rates, this number should be treated as an approximate estimate only. A sensitivity analysis was carried out to assess the effect the seepage rate had on the duration of time required for the pits to flood, using a combined seepage rate that ranged from 74 m^3/day to 7400 m^3/day.

The seepage rate into the open pits will decrease from the predicted maximum value as the water elevation in the open pits rises, due to the reduction in driving head. The rate of seepage into the open pits would decrease to 0 m^3/h if the water level in the pit lake becomes equivalent to the phreatic surface in the adjacent ground. The water elevation at which point seepage into the open pits ceases has been taken as 431.0 m, the approximate elevation of Mitta Lake under existing conditions.

Pit Backfill

During mining operations, approximately 16 Mt of waste rock mined from the east pit will be backfilled into the west pit. The volume of waste rock was calculated assuming the waste rock has a specific gravity of 2.73, consistent with the water balance, resulting in a total solids volume of 5.83 Mm^3 backfilled into the west pit.

Assuming the waste rock backfill has a deposited void ratio of 0.5, the void space within the waste rock has an estimated volume of 2.95 Mm^3.

Evaporation Losses

The model accounts for evaporation losses from the pit lake. The evaporation rate used was the same as for the water balance; refer to Section 3.3.2 for discussion on evaporation rates, and Section 3.4.2 for the evaporation loss calculation. The model accounts for the variation in the pit lake surface area with water depth, sourcing this information from the pit contours on the site plan.

The evaporation losses from the west pit have been set to 0 m^3/day until the west pit lake volume reaches 2.95 Mm^3; the volume required to raise the west pit lake elevation above the waste rock backfill.

3.8.2 Results and Discussion

The pit flooding model was run under the average climatic conditions. While the yearly climatic conditions will undoubtedly vary from the average conditions, the climatic conditions over the duration of time required to flood the pits is expected to converge to the long-term average conditions.

The duration of time required to flood the open pits will be mainly dependent on the upstream catchment areas. Discussed under the Conceptual Closure and Rehabilitation Plan, it is expected that during closure surface water flows from the various mine facilities will be directed towards the open pits, until their quality becomes acceptable for direct environmental discharge. At this time, it is unknown for how long water which has been in contact with the remediated mine facilities will require pumping to the open pits. The pit flooding model was run under the assumption that the surface flows from all of the mine facilities, except the TMF, would be directed to the open pits until spill over to the environment occurs.

Figure 3-7 provides the west and east pit lake volumes on an annual basis during the closure period assuming a seepage rate of 740 m^3/day. Table 3-17 provides an estimate as to the number of years required after closure for the pits to flood, considering the expected groundwater inflow rates

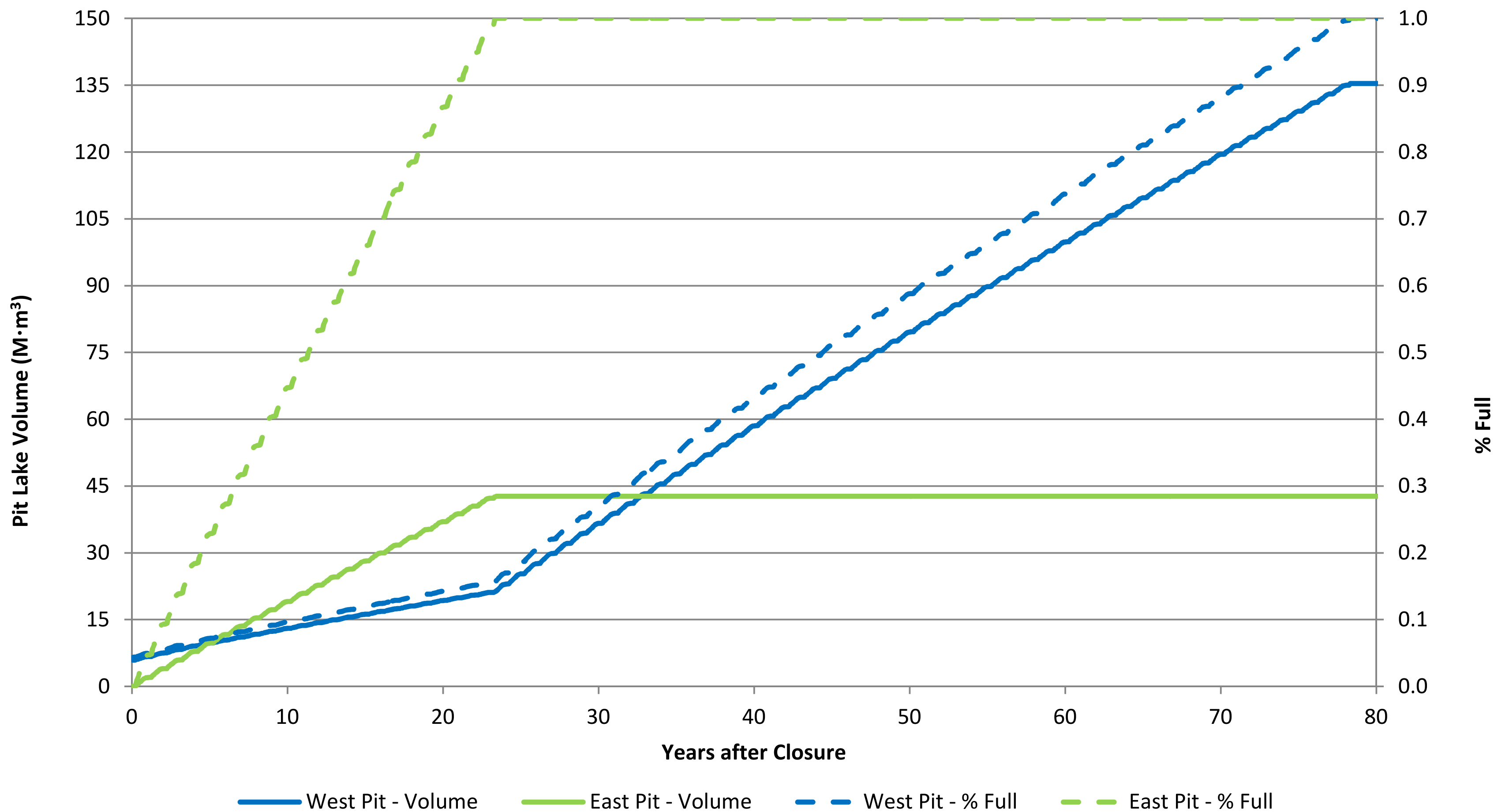
Table 3-17: Pit Flooding Model Results

	Pit Flooding after Closure		
Seepage Rate (m^3/day)	**74.0**	**740**	**7,400**
West Pit (time in years)	80.7	78.3	61.8
East Pit (time in years)	23.7	23.4	20.6

Discussed under Section 3.5, the pit flooding model was run using the seepage inflow rate of 740 m^3/day, with a sensitivity analysis of one order of magnitude. A seepage rate less than the predicted value was estimated to have negligible effect on the duration of time required to flood the open pits, however, an increase of one order of magnitude was estimated to reduce the pit flooding time by 16.5 years.

A sensitivity analysis was also carried out on the assumed waste rock backfill void ratio of 0.5. The model was run using a void ratio ranging from 0.3 - 1.0, with the only observed effect being an increase in pit flooding time by 0.1 years when the waste rock void ratio was reduced to 0.3. The void ratio of the waste rock backfill has minimal effect on the model results because of the small volume of backfilled material in comparison to the total pit lake volume.

The Tailings Management Facility (TMF) contributes the largest percentage of site runoff at 55%. Based on the expected configuration at the end of closure, the average annual discharge rate from the pit is 29 m^3/h, for average climatic conditions. For years drier than the 25-year return period evaporation losses are predicted to exceed runoff inflow (i.e. pit lake elevation will decrease).



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PIT FLOODING MODEL RESULTS
CLIMATIC CONDITIONS: AVERAGE
PIT SEEPAGE RATE: 740 m^3/day

PROJECT NO: 10-1118-0020		DATE:	November 2012
BY:	BA	Review:	KB

Osisko Hammond Reef Gold Project

FIGURE 3-7

4.0 WATER QUALITY MODEL

The site water quality model has been integrated with the water balance as discussed in Section 3.0 and was prepared such that the water chemistry at each of the pumping stations, the TMF reclaim pond, and the reclaim tank could be predicted for the operations phase. Additionally, open pit flooding was modeled to predict closure and post-closure pit lake water quality. Water quality source terms were mixed in proportions, or mixing ratios, defined based on the relative proportion of each inflow at a given site location, as determined by the water balance. The approach used to develop the estimates of water quality discharge from the Project site involved compiling and assessing available data for the various components contributing to or affecting water quality and mass loading on site. Data and information assessed include:

- Existing monitoring data.
- Laboratory test data.
- Data provided by the water balance.
- Mine plan.
- Material movement and usage.

The site water quality model employs the use of the water balance (Section 3.0) and chemistry inputs from the Geochemistry, Geology and Soil TSD, Water and Sediment Quality TSD, and Hydrogeology TSD. Results of the site water quality model are used to predict lake water concentrations as described in the Lake Water Quality TSD.

4.1 Model Framework (Water Quality)

4.1.1 Water Quality Inputs

Each chemical parameter assigned within the water quality model was developed based on existing data, however the approach varied depending on the parameter and conditions expected to be encountered as follows:

- Existing monitoring data – was used to assign an initial or starting concentration for each parameter.
- Material usage – where materials such as explosives or reagents are added then an allowance or addition based on expected material use rate was defined.
- Use of laboratory data – was used to define potential for changes to chemistry relative to the existing conditions.
- Geochemical controls – were used where there was potential for solubility constraints with respect to concentrations of some parameters.

Detailed methodology for assignment of chemistry and loading for each of the main site components is presented Section 4.2. The inputs defined are not expected to vary significantly on a seasonal basis. All components were input and tracked in the dissolved phase since treatment will limit overall suspended solids in the final effluent. A discussion of solid-phase chemistry and its implications on lake water quality is provided in the Lake Water Quality TSD.

4.1.2 Mass Loading Calculations

In order to track mass movement and develop estimates of mass load and concentrations at various points in the system, Excel and PHREEQC Version 2.15.0 (PHREEQC), an equilibrium speciation and mass-transfer code (Parkhurst and Appelo 1999), were selected as the main platform for the mass balance calculations.

To predict the results of water quality mixing, Excel was used to convert inputs and outputs from a water source into proportions based on the water balance. Water quality inputs were applied to each flow component proportion, and these were subsequently mixed in PHREEQC using the following equation:

$$C = \sum_{i=n}^{n} CiFi$$ **Equation 10**

where:

C	=	predicted concentration in the water body (milligrams per litre [mg/L]);
Ci	=	concentration in inflow 'i' discharging into the water body (mg/L);
Fi	=	flow proportion of inflow "i" discharging into water body (unitless);
n	=	number of inflows (unitless).

Each flow proportion is multiplied by the corresponding input concentration value, and the sum of all these calculations is used to predict the final concentration within the water body.

In the open pit flooding model concentrations were calculated by adding mass to the pit water on an annual basis using the following equation:

$$C = \frac{CiVi + CwrVi}{\mathrm{Vi}}$$ **Equation 11**

where:

C	=	predicted concentration in the water body (milligrams per litre [mg/L]);
Ci	=	concentration in current pit water (mg/L);
Vi	=	volume of water in current pit (L);
Cwr	=	concentration applied to contact water for waste rock (mg/L).

4.1.3 Geochemical Controls

Where applicable, geochemical controls were applied to the observed concentrations using PHREEQC. The geochemical controls were used to estimate solubility limits for several parameters based on the peak concentrations as determined from preliminary model runs.

The potential for mineral precipitation was assessed using the saturation index (SI) calculated according to the following equation:

$$SI = \log \frac{IAP}{K_{sp}}$$

Equation 12

The saturation index is the ratio of the ion activity product (IAP) for a given mineral and the solubility product (Ksp). An Saturation Index (SI) greater than 0.5 indicates that the solution is supersaturated with respect to a particular mineral phase, and mineral precipitation may occur, depending on the mineral in question and the precipitation kinetics. An SI less than 0.5 denotes undersaturation and indicates that the mineral in question will have a general propensity to dissolve. Mineral phases with SI values between 0.5 and -0.5 are considered to be in equilibrium with the solution. Mineral stability was evaluated for a limited number of geochemically-credible phases that are known to precipitate/dissolve in surface waters without significant kinetic impediments.

4.1.4 Model Scenarios

Operations

Figures 3-1 and 3-3 present simplified schematics of the operations model and Figure 4-1 shows the primary locations included in the model, including pumping stations, major mine facilities and the final discharge point to Sawbill Bay from the reclaim tank.

The site operations model was run to predict the conditions of various site components at the end of operations. The model was run for each scenario and each climatic condition. Mass loads and chemistry inputs were assigned to the proportional flow (on an annual basis) from each facility. Variability of boundary conditions in input water quality (due to seasonal changes, spring flushing or process changes) were accounted for by completed four modeling scenarios during operations:

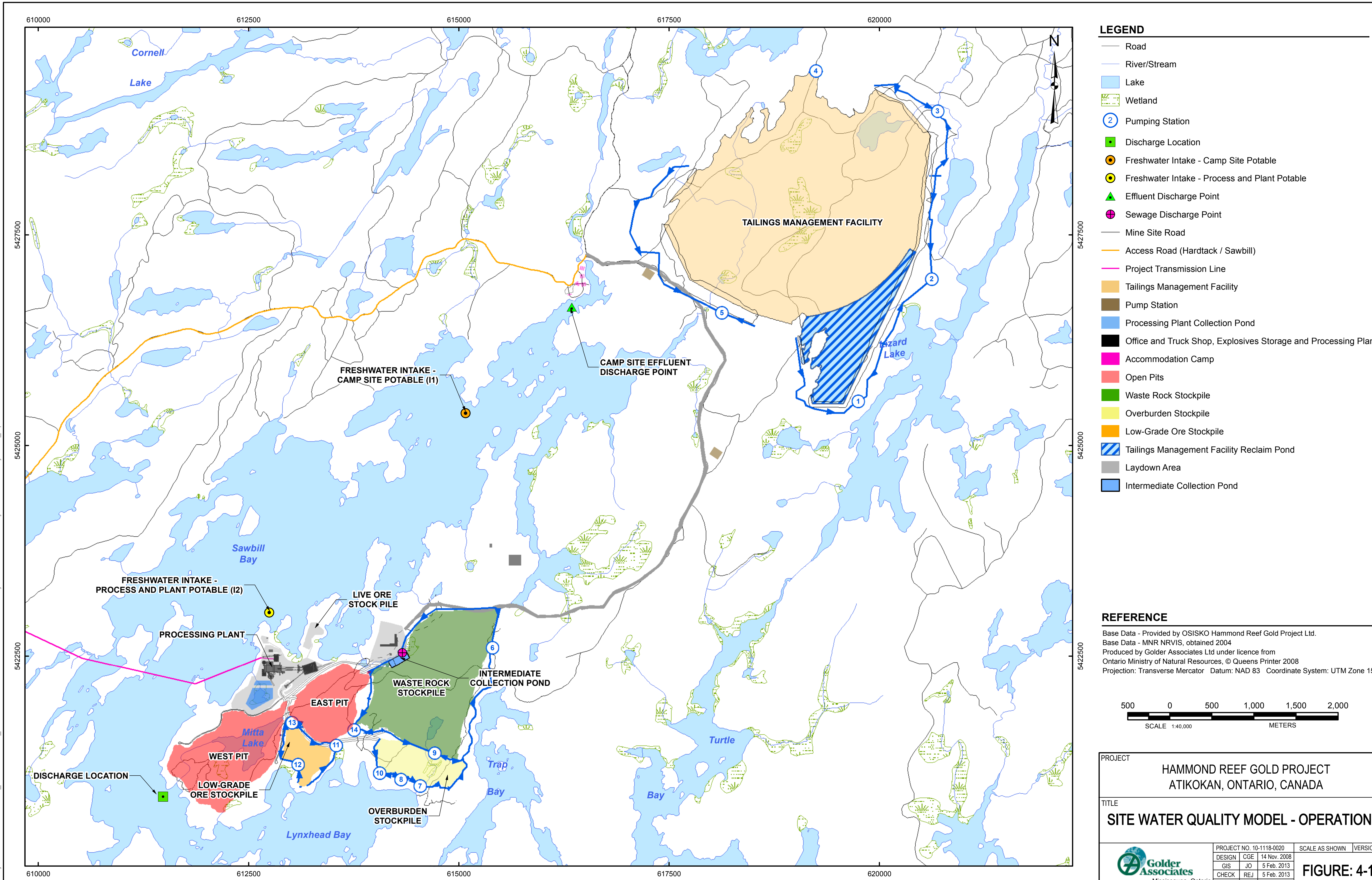
- **Scenario 1 – Steady State (average) conditions**: This scenario was run to model average conditions throughout most of the year at the site. Generally, average values were collected from steady state conditions of geochemical testing (the last five weeks of kinetic testing), or non-freshet periods during site water quality monitoring.

- **Scenario 2 – First Flush (conditions at beginning of precipitation event)**: This scenario was run to model conditions during a precipitation event after a dry period. First flush conditions were selected from geochemical tests, and freshet values were selected from site water quality monitoring.

- **Scenario 3 – Worst Case Runoff (75th Percentile Process Water)**: This scenario was run to model a worst case scenario, as well as to determine the influence of tailings process water in comparison to Scenario 4. The worst case scenario values were selected for contact waters, and the 75th percentile values were selected for tailings process water.

- **Scenario 4 – Worst Case Runoff (Worst Case Process Water)**: This scenario was run to model a worst case scenario with worst case scenario values selected for contact waters, and the maximum values were selected for tailings process water.

Each scenario was run for the average, 10, 25, 50 and 100-year dry, and 10, 25, 50 and 100-year wet climatic conditions. Table 4-1 summarizes in the inputs used for each model scenario.



G:\Projects\2010\10-1118-0020_BrettResources_HammondReef\GIS\MXDs\Draft\WaterQuality\TSD\SiteWaterQuality\SiteWaterQualityModel_Operations.mxd

Post-closure

Post-closure conditions are described in Section 3.8 and a simplified flow schematic is shown in Figure 3-4. Figures 3-5 and 3-6 present the primary flows to the east and west pits after closure and Figure 4-2 shows the general post-closure site conditions used for water quality modeling.

The post-closure open pit flooding model was run for a period of 99 years post-closure to predict the water quality of the open pit throughout and after flooding. The model was run on a quarterly time step, with the freshet occurring in the second quarter from April to June. Two modeling scenarios were run to predict the post-closure water quality during pit flooding:

- **Stratified Pit Lake**: This scenario was run to model open pit water quality assuming the pit lake is stratified and does not mix completely. A stratified pit model assumes water quality at depth is more concentrated than near surface.
- **Mixed Pit Lake**: This scenario was run to model open pit water quality assuming complete mixing of the pit lake during and after flooding.

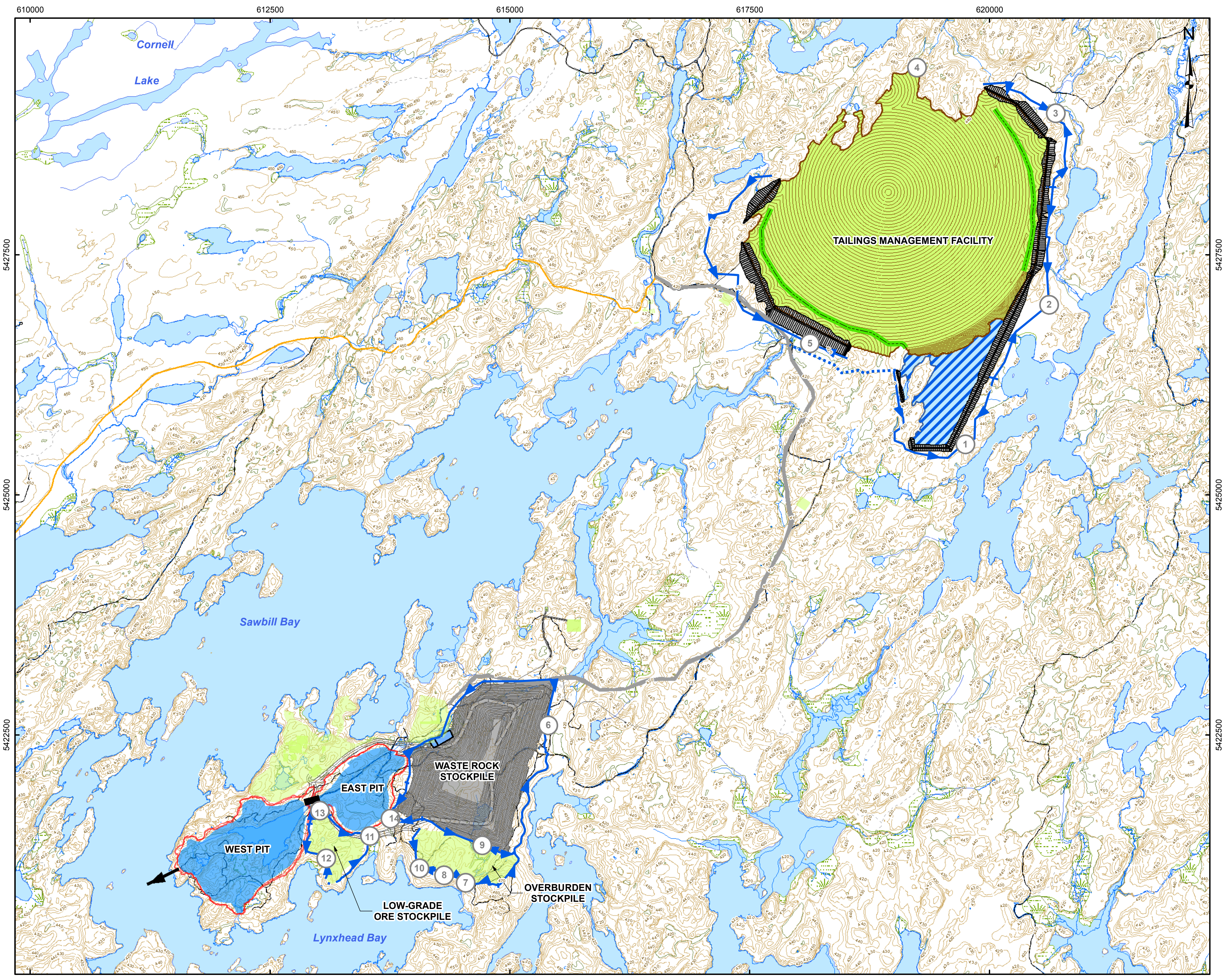
There is no difference in water quality inputs between the two open pit flooding model scenarios. Each scenario was run once assuming flow was diverted from the TMF to the open pits, and once assuming no flows were diverted from the TMF post-closure. Table 4-1 summarizes in the inputs used for open pit flooding modeling.

Table 4-1: Summary of Major Site Load Components

Description	Section	Source	Operations				Post-closure
			Scenario 1 – Steady State	Scenario 2 – First Flush	Scenario 3 – Worst Case 75th Percentile Process Water	Scenario 4 – Worst Case Maximum Process Water	
Existing Monitoring Data							
Precipitation	4.2.1	CapMon, 2012	Average	Average	Average	Average	Average
Natural Runoff	4.2.1	Water and Sediment Quality TSD	Average – Non-Freshet	Average - Freshet	Average – Freshet	Average - Freshet	Average - Seasonal
Groundwater Seepage Into Open Pit	4.2.1	Hydrogeology TSD	Average	Average	Average	Average	Average
Surface Water Seepage Into Open Pit	4.2.1	Hydrogeology TSD	Average	Average	Average	Average	Average
Overburden Runoff	4.2.1	Water and Sediment Quality TSD	Average – Non-Freshet	Average - Freshet	Average – Freshet	Average - Freshet	Average - Seasonal
Site Facility / Remediated Surface Runoff	4.2.1	Water and Sediment Quality TSD	Average – Non-Freshet	Average - Freshet	Average – Freshet	Average - Freshet	Average - Seasonal

Table 4-1: Summary of Major Site Load Components (Continued)

Description	Section	Source	Operations				Post-closure
			Scenario 1 – Steady State	Scenario 2 – First Flush	Scenario 3 – Worst Case 75th Percentile Process Water	Scenario 4 – Worst Case Maximum Process Water	
Laboratory Data							
Tailings Process Water – Non-Cyanide Leach	4.2.2	Geochemistry, Geology and Soil TSD	Average	Average	75th Percentile	Maximum	N/A
Tailings Process Water – Cyanide Leach	4.2.2	Geochemistry, Geology and Soil TSD / Cyanco, 2012	Average	Average	75th Percentile	Maximum	N/A
Tailings Runoff	4.2.2	Geochemistry, Geology and Soil TSD	Average	First Flush	Maximum	Maximum	Average
Waste Rock Runoff	4.2.2	Geochemistry, Geology and Soil TSD	Average	First Flush	Maximum	Maximum	Average
Pit Wall Runoff	4.2.2	Geochemistry, Geology and Soil TSD	Average	First Flush	Maximum	Maximum	Average
Ore Runoff	4.2.2	Geochemistry, Geology and Soil TSD	Average	First Flush	Maximum	Maximum	Average
Material Usage							
Explosives Usage – Nitrate and Ammonia	4.2.3	Calculated	Constant	Constant	Constant	Constant	N/A
Cyanide Treatment - Nitrate and Ammonia	4.2.3	Cyanco, 2012	Constant	Constant	Constant	Constant	N/A



LEGEND

- Index Contour (5m interval)
- Ditch
- Marsh/Swamp
- River/Stream
- Road
- Trail
- Lake
- Wetland
- Decommissioned Pumping Station
- Proposed Ditch
- Pit Spillover Point
- Excavated Channel
- Tailings Drainage Channel Alignment
- Erosion Protected Channel
- Mine Site Road
- Access Road (Hardtack / Sawbill)
- Intermediate Collection Pond
- Revegetated Surface
- Open Pit Pond
- Waste Rock Stockpile
- Open Pit
- Tailings Management Facility Reclaim Pond

NOTES

1. Water in Tailings Management Facility Reclaim Pond will be redirected by ditch to Sawbill Bay once water quality is acceptable.

2. When the water quality in individual seepage collection ponds is acceptable for discharge, the ponds will be decommissioned.

REFERENCE

Base Data - Provided by OSISKO Hammond Reef Gold Project Ltd.
Base Data - MNR NRVIS, obtained 2004
Produced by Golder Associates Ltd under licence from Ontario Ministry of Natural Resources, © Queens Printer 2008
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 15N

500 0 500 1,000 1,500 2,000
SCALE 1:40,000 METERS

PROJECT
HAMMOND REEF GOLD PROJECT
ATIKOKAN, ONTARIO, CANADA

TITLE
SITE WATER QUALITY MODEL - POST-CLOSURE

Golder Associates
Mississauga, Ontario

PROJECT NO. 10-1118-0020			SCALE AS SHOWN	VERSION 1
DESIGN	CGE	14 Nov. 2008	FIGURE: 4-2	
GIS	JO	4 Feb. 2013		
CHECK	REJ	4 Feb. 2013		
REVIEW	KJD	4 Feb. 2013		

4.1.5 Key Model Limitations

Detailed assumptions that govern the models are presented throughout the text. A few key limitations of the operations site water quality model include:

- Changes to operational project or site conditions – The project description (Chapter 5 of the EIS/EA Report) and inputs as discussed in this document are the basis for the model. Changes in project scope or design details will necessarily result in changes to water quality predictions. The model is limited in its ability to accurately forecast operational conditions due to the dynamic nature of developments in a project of this nature, and potential short-term changes to site conditions.
- Changes to post-closure site conditions – Several assumptions were made with respect to the water quality and flows at the project site after closure. These assumptions are based on the project description (Chapter 5 of the EIS/EA Report) and as described in this report and existing flows and may change with changes to operational project or site conditions. The water quality inputs applied within the post-closure model are based on existing monitoring and laboratory data and may change as operational monitoring is conducted.
- System complexity – Care was taken to incorporate known processes as understood during model development. However, it should be noted that, in natural systems and complex man-made systems, observed conditions will vary with respect to predicted conditions.

4.2 Input Data

4.2.1 Existing Monitoring Data

Existing monitoring data was collected between 2010 and 2012 at the project site. Specific components used to calculate inputs for the geochemical mass balance model include groundwater monitoring (Hydrogeology TSD), precipitation (CapMon 2012) and surface water monitoring (Hydrology TSD). Each of these components is discussed in more detail in the following section.

Generally, input values were calculated using statistics of the monitoring data, assuming values below the detection limit are equal to the detection limit for the sake of conservatism. However, several parameters within the existing data set reported elevated detection limits for several sets of analyses with respect to the environmental guidelines used for comparison. Selenium and mercury were assigned the following values due to the elevated detection limits reported in existing monitoring data:

- **Mercury:** The detection limits for mercury in existing monitoring data range from < 0.0001 to < 0.00001 mg/L. Given that all existing samples in the lake basins which are considered representative and useful for inputs to the site water quality model reported mercury concentrations below a typical detection limit of 0.00001, a value of 0.000005 mg/L (½ of the typical existing data detection limit) was used for the purposes of modeling.
- **Selenium:** The detection limits for selenium in existing monitoring data range from < 0.0005 to < 0.002 mg/L. The maximum observed value above the analytical detection limit for existing monitoring in the vicinity of the site is 0.0005 mg/L. Given the observed data, it is considered reasonable, for the

purposes of modeling to assign a value 0.0005 mg/L for the existing selenium values below the detection limit, given the often elevated detection limit values.

Precipitation

The composition of local precipitation was calculated using the average composition of samples in the Environment Canada CapMon Pickle Lake precipitation monitoring station dataset (CapMon 2012) for available chemical parameters. The following inputs were applied to the operations and pit flooding models:

- **Operations:** Constant precipitation input value for all scenarios.
- **Post-closure:** Constant precipitation input value for both scenarios.

Precipitation water quality is summarized in Table 4-2.

Table 4-2: Precipitation Input Water Quality

Parameter	Units	Precipitation
Operations Inputs		All
Post-closure Inputs		All
pH	**s.u.**	5.0
SO_4	**mg/L**	0.52
Cl	**mg/L**	0.11
Ca	**mg/L**	0.11
K	**mg/L**	0.04
Mg	**mg/L**	0.02
Na	**mg/L**	0.05

Natural Runoff

Surface water quality existing data for the Hammond Reef Project was used to define input water qualities for natural runoff. Water quality inputs were calculated for measured parameters using the average composition for rivers and outlets within the Project watershed, draining away from the site and TMF (Water and Sediment Quality TSD) (locations HRWQ-2, HRWQ-3, HRWQ-4, HRWQ-6, HRWQ-8, HRWQ-14, HRWQ-21 and HRWQ-25). Natural runoff input values are summarized in Table 4-3 and the full list of input water quality calculations is included in Appendix 4.I. The following inputs were applied to the operations and pit flooding models:

- **Operations:** The freshet values, collected between April and June, were applied to high flow and worst case scenarios (Scenarios 2, 3 and 4) and the non-freshet values, collected between July and March, were applied to the average condition scenario (Scenario 1).
- **Post-closure:** The post-closure pit flooding model applies the non-freshet runoff values from July to March, and freshet runoff values from April to June.

Table 4-3: Natural Runoff Input Water Quality

Parameter	Units	Natural Runoff – Non-Freshet	Natural Runoff – Freshet
Operations Inputs		Scenario 1	Scenarios 2, 3, 4
Post-closure Inputs		July to March	April to June
pH	**s.u.**	6.9	6.8
Alkalinity	**mg/L as $CaCO_3$**	35	32
SO_4	**mg/L**	1.0	2.2
Cl	**mg/L**	1.1	1.1
Hg	**mg/L**	0.000005	0.000005
Ag	**mg/L**	0.0001	0.00004
Al	**mg/L**	0.054	0.25
As	**mg/L**	0.0006	0.0004
Ba	**mg/L**	0.01	0.01
B	**mg/L**	0.019	0.003
Bi	**mg/L**	0.0008	0.0001
Ca	**mg/L**	13	11
Cd	**mg/L**	0.00005	0.00002
Co	**mg/L**	0.0003	0.0005
Cr	**mg/L**	0.0006	0.0009
Cu	**mg/L**	0.0007	0.001
Fe	**mg/L**	0.4	1.3
K	**mg/L**	0.78	0.37
Mg	**mg/L**	1.8	1.8
Mn	**mg/L**	0.08	0.15
Mo	**mg/L**	0.0006	0.0003
Na	**mg/L**	1.2	1.2
Ni	**mg/L**	0.001	0.001
P	**mg/L**	0.008	0.03
Pb	**mg/L**	0.0004	0.0003
Sb	**mg/L**	0.002	0.00007
Se	**mg/L**	0.0005	0.0005
Sn	**mg/L**	0.0007	0.00008
Sr	**mg/L**	0.03	0.03
Tl	**mg/L**	0.0001	0.00002
U	**mg/L**	0.002	0.00008
V	**mg/L**	0.0005	0.0006
Zn	**mg/L**	0.003	0.003

Groundwater Seepage into Open Pit

The composition of groundwater seepage into the open pits was assumed to equal the average composition of the pumping test samples collected in 2011 and 2012 from two monitoring wells (BR0220 and BR0231) located within the bounds of the proposed open pits (Hydrogeology TSD). The following inputs were applied to the operations and pit flooding models:

- **Operations:** Constant groundwater seepage input value for all scenarios;
- **Post-closure:** Constant groundwater seepage input value for both scenarios.

Groundwater seepage input values are summarized in Table 4-4. A full list of parameters is provided in Appendix 4.I.

Table 4-4: Groundwater Input Water Quality

Parameter	Units	Groundwater Input
Operations Inputs		All
Post-closure Inputs		All
pH	**s.u.**	7.6
Alkalinity	**mg/L as $CaCO_3$**	196
SO_4	**mg/L**	3.0
Cl	**mg/L**	1.8
Hg	**mg/L**	0.000005
Ag	**mg/L**	0.0001
Al	**mg/L**	0.012
As	**mg/L**	0.001
Ba	**mg/L**	0.23
B	**mg/L**	0.05
Bi	**mg/L**	0.001
Ca	**mg/L**	47
Cd	**mg/L**	0.00008
Co	**mg/L**	0.0005
Cr	**mg/L**	0.001
Cu	**mg/L**	0.001
Fe	**mg/L**	0.51
K	**mg/L**	2.7
Mg	**mg/L**	15
Mn	**mg/L**	0.38
Mo	**mg/L**	0.02
Na	**mg/L**	13
Ni	**mg/L**	0.002
P	**mg/L**	0.03
Pb	**mg/L**	0.001

Table 4-4: Groundwater Input Water Quality (Continued)

Parameter	Units	Groundwater Input
Sb	**mg/L**	0.0006
Se	**mg/L**	0.0005
Sn	**mg/L**	0.001
Sr	**mg/L**	0.68
Tl	**mg/L**	0.0003
U	**mg/L**	0.005
V	**mg/L**	0.001
Zn	**mg/L**	0.004

Surface Seepage into Open Pit

Near-surface inflow to the open pits was assigned groundwater quality for the sake of conservatism. Measured parameter concentrations reported in the groundwater were generally higher for key parameters than those reported in surface water. The assumption was applied to both the operations model and the open pit flooding model.

Overburden Stockpile Runoff

As with natural runoff, the following inputs (from Table 4-3) were applied to the operations and pit flooding models for overburden:

- **Operations:** The natural runoff freshet values, collected between April and June (Table 4-3), were applied to high flow and worst case scenarios (Scenarios 2, 3 and 4) and the non-freshet values, collected between July and March, were applied to the average condition scenario (Scenario 1).
- **Post-closure:** The post-closure pit flooding model applies the non-freshet natural runoff values from July to March (Table 4-3), and freshet runoff values from April to June.

Site Facility Runoff

Natural runoff water quality was assigned to the office/truck/fuel bay, detonator storage area, and emulsion plant runoff, as well as the effluent discharge from the sewage treatment facility. For these facilities, it has been assumed that OHRG's operating policies and Environmental Management Plan (EMP) will limit and contain fuel or chemical spills, such that the runoff from these areas would not become contaminated. Natural runoff water quality (Table 4-3) was assigned to the sewage treatment facility effluent. Sewage treatment facility effluent will be required to meet appropriate regulatory guidelines and is addressed separately.

As with natural runoff, the following inputs were applied to the operations and pit flooding models for the site facility runoff:

- **Operations:** The freshet values, collected between April and June, were applied to high flow and worst case scenarios (Scenarios 2, 3 and 4) and the non-freshet values, collected between July and March, were applied to the average condition scenario (Scenario 1).
- **Post-closure:** The post-closure pit flooding model applies the non-freshet runoff values from July to March, and freshet runoff values from April to June.

Remediated and Revegetated Prepared Surface Runoff

Several facilities will be covered in a remediated prepared surface or revegetated after closure, including the detonator storage area, emulsion plant, TMF, Intermediate Control Pond (ICP) and Ore Processing Facility (Section 3.8). Natural runoff water quality was assigned to these flows. Remediated prepared surfaces are not included as an input in the operations model. As with natural runoff, the following inputs were applied to the models:

- **Operations:** Remediated prepared surface runoff was not included in the operations model.
- **Post-closure:** The post-closure pit flooding model applies the non-freshet runoff values from July to March, and freshet runoff values from April to June as per Table 4-3.

4.2.2 Laboratory Data

The results of laboratory testing of mine waste materials and process water were used as inputs for several components within the geochemical mass balance model. Laboratory data was collected as part of the existing geochemical characterization (Geochemistry, Geology and Soil TSD) and cyanide destruction testing (Cyanco 2012).

Generally, input values were calculated using statistics of the laboratory data, assuming values below the detection limit are equal to the detection limit for the sake of conservatism. However, several parameters reported elevated detection limits with respect to the environmental guidelines used for comparison. Selenium and mercury were assigned the following values due to the elevated detection limits reported in laboratory data:

- **Mercury:** All mercury concentrations measured in laboratory data were below the analytical detection limit of < 0.0001 mg/L, which is ten times greater than the typical existing monitoring mercury analytical detection limit. Given the observed existing data, it is considered reasonable, and more representative of the expected mercury conditions at the project site, to use an estimated value equivalent to the lower detection limit from the existing data (< 0.00001 mg/L) for the laboratory data mercury values for the purposes of modeling.
- **Selenium:** The detection limit for selenium in laboratory data is equal to the CCME CWQG for selenium (0.001 mg/L). It is considered reasonable that for the purposes of modeling the values below the detection limit for selenium in laboratory data were assigned values equal to half of the detection limit (0.0005 mg/L).

Tailings Process Water

Tailings process water will discharge to the TMF reclaim pond as a component of the tailings slurry throughout operations. Two datasets were used to create the input values for the various water quality model scenarios, including:

- **Cyanide Destruction Tests:** Testing of cyanide destruction methods on tailings slurry was conducted in the spring of 2012 on representative slurry samples (Cyanco 2012). Several parameters were analyzed in both treated and un-treated slurry, including nickel, iron, copper and pH values. The treated results of the recommended SO_2/AIR technology were selected as inputs for the measured parameters (Cyanco 2012).
- **Aging Tests:** Aging tests on the water that was associated with the tailings was conducted in 2011. The sample of Day 0 process water, as well as the process water that was shipped with the tailings solids was

sampled on days, 0, 7, 15 and 29. (Geochemistry, Geology and Soil TSD). The results from Days 0 to 30 of the 30 day of aging tests conducted at SGS Lakefield were used to represent process water concentrations for all remaining parameters included in the water quality model.

As described in Section 3, the cyanide leach circuit accounts for approximately 5.5% of the total process water discharge, and the remaining process water accounts for 94.5% of the volume. The non-cyanide leach circuit process water was applied the water quality measured during tailings process water aging tests for all parameters. The cyanide leach circuit water was applied iron, nickel, copper and pH values measured in cyanide destruction testing, as well as an input value of 20 ppm weak acid dissociable (WAD) cyanide based on the proposed treatment efficiency (Christian Laroche, *personal communication*, July 13, 2012). A discussion of the cyanide degradation process and concentrations of cyanide over time in seepage from the TMF is included in Section 4.2.3. All other parameters were assigned values measured in tailings aging tests. A full list of parameters, inputs and detection limits is provided in Appendix 4.I.

The following inputs for process water were applied to the models:

- **Operations:**
  - *Average and First Flush Conditions (Scenarios 1 and 2):* Average values measured in both tests.
  - *Worst Case Conditions – 75th Percentile Process Water (Scenario 3):* 75th Percentile values measured in both tests.
  - *Worst Case Conditions – Maximum Process Water (Scenario 4):* The maximum values measured in both tests.
- **Post-closure:** No tailings process water input was included in the post-closure pit flooding model.

The pH value was estimated based on the values measured during each of the tests. A summary of the water quality inputs for both the cyanide leach circuit process water and the non-cyanide leach circuit process water is shown in Table 4-5.

Table 4-5: Process Water Quality Inputs

Parameter	Units	Cyanide Leach Stream			Non-Cyanide Leach Stream		
		Average (Scenarios 1 and 2)	75th Percentile (Scenario 3)	Max (Scenario 4)	Average (Scenarios 1 and 2)	75th Percentile (Scenario 3)	Max (Scenario 4)
pH	**s.u.**	8.5	8.5	8.5	8.4	8.4	8.4
Alkalinity	**mg/L as $CaCO_3$**	158	165	174	158	165	174
SO_4	**mg/L**	243	250	280	243	250	280
Cl	**mg/L**	20	23	24	20	23	24
Hg	**mg/L**	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Ag	**mg/L**	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Al	**mg/L**	0.03	0.04	0.04	0.03	0.04	0.04
As	**mg/L**	0.001	0.0015	0.0015	0.001	0.0015	0.0015
Ba	**mg/L**	0.03	0.04	0.04	0.03	0.04	0.04

Table 4-5: Process Water Quality Inputs (Continued)

Parameter	Units	Cyanide Leach Stream			Non-Cyanide Leach Stream		
B	**mg/L**	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Bi	**mg/L**	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Ca	**mg/L**	31	35	40	31	35	40
Cd	**mg/L**	0.00002	0.00003	0.00003	0.00002	0.00003	0.00003
Co	**mg/L**	0.003	0.003	0.003	0.003	0.003	0.003
Cr	**mg/L**	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cu	**mg/L**	1.86	2.32	2.64	0.008	0.01	0.02
Fe	**mg/L**	0.41	1.4	1.6	0.02	0.02	0.05
K	**mg/L**	40	41	47	40	41	47
Mg	**mg/L**	17	19	24	17	19	24
Mn	**mg/L**	0.04	0.05	0.05	0.04	0.05	0.05
Mo	**mg/L**	0.08	0.09	0.09	0.08	0.09	0.09
Na	**mg/L**	106	108	129	106	108	129
Ni	**mg/L**	0.076	0.08	0.09	0.007	0.008	0.008
P	**mg/L**	0.018	0.02	0.03	0.018	0.02	0.03
Pb	**mg/L**	0.0002	0.0002	0.0004	0.0002	0.0002	0.0004
Sb	**mg/L**	0.002	0.002	0.003	0.002	0.002	0.003
Se	**mg/L**	0.0008	0.001	0.001	0.0008	0.001	0.001
Sn	**mg/L**	0.03	0.04	0.04	0.03	0.04	0.04
Sr	**mg/L**	0.32	0.34	0.39	0.32	0.34	0.39
Tl	**mg/L**	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
U	**mg/L**	0.007	0.0076	0.0086	0.007	0.0076	0.0086
V	**mg/L**	0.0002	0.00018	0.0003	0.0002	0.00018	0.0003
Zn	**mg/L**	0.002	0.002	0.002	0.002	0.002	0.002

Tailings Runoff

The input chemistry of the tailings runoff was assigned based on the results of humidity cell testing of one tailings sample, as reported in the Geochemistry, Geology and Soil TSD. As noted in Section 4.1.3, several scenarios were run to determine the influence of site conditions and material variability on site water quality. The following inputs for tailings runoff were applied to the models:

- **Operations:**
  - *Average Conditions (Scenario 1):* Average of steady state conditions from the final five weeks of the humidity cell test.
  - *First Flush Conditions (Scenario 2):* Average of first flush conditions from the initial five weeks of the humidity cell test.
  - *Worst Case Conditions (Scenarios 3 and 4):* The maximum values for each parameter measured in the humidity cell leachate selected as a worst-case scenario input for tailings runoff.

- **Post-closure:** No tailings runoff water input was included in the post-closure pit flooding model, as tailings will be re-vegetated after closure. Seepage from the TMF was applied the average of steady state conditions from the final five weeks of humidity cell testing.

The pH values were calculated using average values for each selected timeframe. Table 4-6 summarizes the tailings runoff inputs used for each scenario of the site water quality model. A full list of parameters and detection limits is provided in Appendix 4.I.

Table 4-6: Tailings Runoff Inputs

Parameter	Units	Steady State Input	First Flush Input	Worst Case Input
Operations Input		**Scenario 1**	**Scenario 2**	**Scenarios 3 and 4**
Post-closure Input		**TMF Seepage**		
pH	**s.u.**	7.3	7.6	7.3
Alkalinity	**mg/L as $CaCO_3$**	23	34	55
SO_4	**mg/L**	7.9	48	150
Cl	**mg/L**	0.20	0.73	2.9
Hg	**mg/L**	0.00001	0.00001	0.00001
Ag	**mg/L**	0.00001	0.00001	0.00001
Al	**mg/L**	0.01	0.01	0.02
As	**mg/L**	0.0002	0.0004	0.0008
Ba	**mg/L**	0.001	0.007	0.02
B	**mg/L**	0.0008	0.003	0.007
Bi	**mg/L**	0.00001	0.00001	0.00001
Ca	**mg/L**	5.8	17	33
Cd	**mg/L**	0.00001	0.0002	0.001
Co	**mg/L**	0.00009	0.0003	0.0005
Cr	**mg/L**	0.0005	0.0005	0.0005
Cu	**mg/L**	0.0007	0.001	0.002
Fe	**mg/L**	0.003	0.003	0.004
K	**mg/L**	0.69	4.8	14
Mg	**mg/L**	3.1	6.3	13
Mn	**mg/L**	0.02	0.07	0.12
Mo	**mg/L**	0.002	0.006	0.02
Na	**mg/L**	0.31	5.2	20
Ni	**mg/L**	0.0003	0.001	0.003
P	**mg/L**	0.009	0.009	0.009
Pb	**mg/L**	0.00003	0.00004	0.00007
Sb	**mg/L**	0.0002	0.0005	0.001

Table 4-6: Tailings Runoff Inputs (Continued)

Parameter	Units	Steady State Input	First Flush Input	Worst Case Input
Operations Input		**Scenario 1**	**Scenario 2**	**Scenarios 3 and 4**
Post-closure Input		**TMF Seepage**		
Se	**mg/L**	0.0005	0.0006	0.001
Sn	**mg/L**	0.0003	0.0002	0.0006
Sr	**mg/L**	0.025	0.09	0.19
Tl	**mg/L**	0.00002	0.00002	0.00002
U	**mg/L**	0.0007	0.001	0.003
V	**mg/L**	0.00003	0.00004	0.00006
Zn	**mg/L**	0.002	0.009	0.04

Waste Rock Runoff

The composition of waste rock runoff was assigned based on the results of humidity cell testing of eight waste rock samples, as reported in the Geochemistry, Geology and Soil TSD. As noted in Section 4.1.3, several scenarios were run to determine the influence of site conditions and material variability on site water quality. Waste rock unit proportions were input for Scenarios 1 and 2 and the open pit flooding model, based on the proportions of waste rock observed in cross sections and drill core during the geochemical characterization program (Geochemistry, Geology and Soil TSD). Waste rock proportions used for the water quality model are summarized in Table 4-7.

Table 4-7: Waste Rock Proportions

Rock Type	Proportion
Fine Grained Granite	0.14
Tonalite	0.49
Pegmatite	0.06
Chloritic Granite Porphyry	0.09
Altered Granitoid	0.07
Chloritic Granite	0.15

The following inputs for waste rock runoff were applied to the models:

- **Operations:**
  - *Average Conditions (Scenario 1):* Average of steady state conditions from the final five weeks of the humidity cell test. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).
  - *First Flush Conditions (Scenario 2):* Average of first flush conditions from the initial five weeks of the humidity cell test. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).
  - *Worst Case Conditions (Scenarios 3 and 4):* The maximum values for each parameter, for all lithologies, throughout humidity cell testing were selected as a worst case scenario input for waste rock runoff.
- **Post-closure:** The open pit flooding model applies the average of steady state conditions from the final five weeks of the humidity cell tests as the input from waste rock runoff. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).

The pH values were estimated based on the observed values for each selected timeframe. Table 4-8 summarizes the waste rock runoff inputs used for each scenario of the site water quality model. A full list of parameters and detection limits is provided in Appendix 4.I.

Table 4-8: Waste Rock Runoff Inputs

Parameter	Units	2010-HR-004		2010-HR-095		2010-HR-005		2010-HR-065		2010-HR-067		2010-HR-086		2010-HR-091		2010-HR-117		Maximum ALL[c]
		Fine Grained Granite		Fine Grained Granite		Tonalite		Pegmatite		Chloritic Granite Porphyry		Altered Granitoid		Chloritic Granite		Chloritic Granite		
		First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	First Flush[a]	Steady State[b]	
pH	**s.u.**	8.5	7.4	7.6	6.9	8.2	7.5	8.0	7.1	7.9	7.1	8.0	7.0	8.0	7.2	8.0	7.1	6.9
Alkalinity	**mg/L as $CaCO_3$**	21	11	16	6.3	25	13	29	9.2	19	8.8	16	7.3	20	10	16	8.5	33
SO_4	**mg/L**	0.82	0.42	1.0	0.20	0.75	0.20	0.78	0.2	0.55	0.20	0.58	0.20	1.7	0.22	1.22	0.20	3.1
Cl	**mg/L**	0.52	0.20	0.37	0.20	1.9	0.20	1.5	0.20	0.98	0.20	0.80	0.20	0.60	0.20	1.0	0.20	7.2
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
Ag	**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	0.00001	0.00001	0.00001	0.00003
Al	**mg/L**	0.08	0.05	0.02	0.01	0.19	0.20	0.08	0.04	0.06	0.04	0.06	0.03	0.06	0.03	0.05	0.05	0.25
As	**mg/L**	0.0002	0.0003	0.0006	0.0002	0.02	0.003	0.008	0.0002	0.0006	0.0002	0.0004	0.0002	0.0003	0.0002	0.0006	0.0003	0.03
Ba	**mg/L**	0.003	0.0008	0.007	0.001	0.002	0.001	0.002	0.0005	0.002	0.001	0.002	0.0004	0.008	0.015	0.01	0.004	0.02
B	**mg/L**	0.006	0.0005	0.002	0.0002	0.015	0.0004	0.009	0.0002	0.004	0.0003	0.003	0.0002	0.003	0.0002	0.01	0.0002	0.03
Ca	**mg/L**	5.2	3.5	2.4	1.1	5.1	4.9	4.5	2.5	4.0	2.6	3.7	2.1	4.3	3.6	3.9	2.9	6.2
Cd	**mg/L**	0.00001	0.000003	0.000003	0.000003	0.00007	0.000003	0.000003	0.000003	0.000003	0.000003	0.000003	0.000003	0.00004	0.0000003	0.000003	0.0000003	0.00005
Co	**mg/L**	0.00004	0.000008	0.00003	0.000008	0.00005	0.00001	0.00004	0.00008	0.00003	0.000007	0.00003	0.000007	0.00004	0.000009	0.00003	0.000006	0.0001
Cr	**mg/L**	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001
Cu	**mg/L**	0.0005	0.0005	0.0005	0.0005	0.001	0.0005	0.001	0.0005	0.001	0.0005	0.002	0.0005	0.002	0.0005	0.002	0.00055	0.009
Fe	**mg/L**	0.004	0.003	0.003	0.004	0.003	0.003	0.004	0.003	0.004	0.003	0.005	0.003	0.003	0.003	0.003	0.004	0.01
K	**mg/L**	0.34	0.04	1.3	0.16	2.5	0.27	2.4	0.15	2.8	0.20	1.9	0.15	2.3	0.16	1.5	0.16	4.3
Mg	**mg/L**	0.94	0.52	1.86	0.93	0.48	0.07	0.79	0.53	0.81	0.59	0.42	0.39	0.61	0.30	0.37	0.15	2.3
Mn	**mg/L**	0.008	0.009	0.003	0.003	0.006	0.005	0.01	0.01	0.009	0.007	0.009	0.007	0.01	0.02	0.009	0.008	0.02
Mo	**mg/L**	0.0008	0.00008	0.0007	0.00004	0.001	0.00004	0.001	0.0008	0.002	0.00006	0.001	0.00003	0.0009	0.0001	0.0009	0.00002	0.006
Na	**mg/L**	0.66	0.03	0.37	0.01	3.3	0.14	2.0	0.04	1.1	0.05	1.1	0.05	1.5	0.06	1.7	0.09	8.9
Ni	**mg/L**	0.0002	0.0001	0.0002	0.0001	0.0003	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0007
P	**mg/L**	0.02	0.009	0.02	0.01	0.03	0.009	0.02	0.009	0.02	0.009	0.02	0.01	0.02	0.009	0.02	0.009	0.06
Pb	**mg/L**	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00002	0.0003	0.00003	0.00002	0.00005	0.00002	0.0001	0.00005	0.00002	0.00002	0.0002
Sb	**mg/L**	0.0004	0.0002	0.0005	0.0002	0.0007	0.0002	0.0007	0.0002	0.0006	0.0002	0.0005	0.0002	0.0006	0.0002	0.0006	0.0002	0.001
Se	**mg/L**	0.0008	0.0005	0.0008	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.002
Sn	**mg/L**	0.0005	0.00004	0.0007	0.0001	0.001	0.0001	0.65	0.00004	0.002	0.002	0.001	0.00003	0.0005	0.0001	0.001	0.00008	0.002
Sr	**mg/L**	0.02	0.009	0.02	0.005	0.02	0.009	0.02	0.008	0.02	0.01	0.01	0.007	0.03	0.02	0.28	0.068	0.34
Tl	**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	0.00002	0.00002
U	**mg/L**	0.00001	0.00001	0.00004	0.000006	0.004	0.0007	0.003	0.0006	0.003	0.001	0.002	0.0006	0.002	0.0005	0.0003	0.0004	0.007
V	**mg/L**	0.0003	0.0002	0.002	0.0004	0.003	0.0005	0.0009	0.00004	0.0001	0.00004	0.0001	0.00003	0.0001	0.00004	0.0003	0.00008	0.004
Zn	**mg/L**	0.002	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.007

Notes:

(a) Input used in Scenario 2.

(b) Input used in Scenario 1 and Open Pit Flooding Model.

(c) Input used in Scenarios 3 and 4.

Pit Wall Runoff

Rock exposed in the reactive zone (i.e., outer, fractured shell) of the open pits is subject to physical and chemical weathering over time. Due to the lack of data at the time of modelling with respect to the proportions of lithologies on the pit walls during operations, proportions were assumed equal to those reported in the drill core, as summarized in Table 4-7 for all operations scenarios and open pit flooding. Given the similarity in humidity cell water quality between the various units this is considered a reasonable representation. The following inputs for pit wall runoff were applied to the models:

- **Operations:**
  - *Average Conditions (Scenario 1):* Average of steady state conditions from the final five weeks of the humidity cell test. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).
  - *First Flush Conditions (Scenario 2):* Average of first flush conditions from the initial five weeks of the humidity cell test. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).
  - *Worst Case Conditions (Scenarios 3 and 4):* The maximum values for each parameter, for all lithologies, throughout humidity cell testing were selected as a worst case scenario input for waste rock runoff.
- **Post-closure:** The open pit flooding model applies the average of steady state conditions from the final five weeks of the humidity cell tests as the input from waste rock runoff. These values were then assigned proportions based on the proportion of waste rock observed in the drill core during geochemical sampling (Geochemistry, Geology and Soil TSD).

Low-grade Ore Stockpile Runoff

At the time of reporting, no testing program+65 had been conducted to characterize the geochemical composition of the ore at the Hammond Reef project. The composition of the ore stockpile runoff was assigned based on the results of humidity cell testing of one tonalite sample [2010-HR-027] reporting the highest average gold grade (0.198 g/t). The following inputs for ore stockpile runoff were applied to the models:

- **Operations:**
  - *Average Conditions (Scenario 1):* Steady state conditions averaged from the final five weeks of the humidity cell test.
  - *First Flush Conditions (Scenario 2):* First flush conditions averaged from the initial five weeks of the humidity cell test.
  - *Worst Case Conditions (Scenarios 3 and 4):* The maximum values for each parameter, for all waste rock lithologies, throughout humidity cell testing were selected as a worst case scenario input for ore runoff.
- **Post-closure:** The open pit flooding model applies the average of steady state conditions from the final five weeks of the humidity cell tests.

The pH values were calculated using average values for each selected timeframe. Table 4-9 summarizes the ore runoff inputs used for each scenario of the operations and open pit flooding models. A full list of parameters and detection limits is provided in Appendix 4.I.

Table 4-9: Ore Runoff Inputs

Parameter	Units	Steady State (Scenario 1 and Post-closure)	First Flush (Scenario 2)	Worst Case (Scenarios 3 and 4)
pH	s.u.	7.1	8.1	6.9
Alkalinity	mg/L as $CaCO_3$	8.8	20	33
SO_4	mg/L	0.32	1.8	3.1
Cl	mg/L	0.20	0.68	7.2
Hg	mg/L	0.00001	0.00001	0.00001
Ag	mg/L	0.00001	0.00001	0.00003
Al	mg/L	0.04	0.07	0.25
As	mg/L	0.0002	0.0005	0.03
Ba	mg/L	0.0008	0.002	0.02
B	mg/L	0.0004	0.005	0.03
Bi	mg/L	0.00001	0.00001	0.00001
Ca	mg/L	3.6	4.8	6.2
Cd	mg/L	0.000003	0.0000035	0.00005
Co	mg/L	0.00001	0.00004	0.0001
Cr	mg/L	0.0005	0.0005	0.001
Cu	mg/L	0.0005	0.004	0.009
Fe	mg/L	0.003	0.004	0.01
K	mg/L	0.17	2.1	4.3
Mg	mg/L	0.07	0.45	2.3
Mn	mg/L	0.019	0.015	0.02
Mo	mg/L	0.00003	0.0005	0.006
Na	mg/L	0.06	1.3	8.9
Ni	mg/L	0.0001	0.0001	0.0007
P	mg/L	0.009	0.03	0.06
Pb	mg/L	0.00002	0.00003	0.0002
Sb	mg/L	0.0002	0.0005	0.001
Se	mg/L	0.0005	0.0005	0.002
Sn	mg/L	0.00005	0.001	0.002
Sr	mg/L	0.01	0.03	0.34

Table 4-9: Ore Runoff Inputs (Continued)

Parameter	Units	Steady State (Scenario 1 and Post-closure)	First Flush (Scenario 2)	Worst Case (Scenarios 3 and 4)
Tl	**mg/L**	0.00002	0.00002	0.00002
U	**mg/L**	0.0002	0.0004	0.007
V	**mg/L**	0.0002	0.0006	0.004
Zn	**mg/L**	0.001	0.001	0.007

4.2.3 Material Usage

Nitrate and ammonia concentrations are tracked separately from other parameters due to their presence in the explosives used for mining operations. Additionally, ammonia is a product of the oxidation of cyanide during the proposed degradation process using SO_2 (Christian Laroche, *personal communication*, July 13, 2012). The section below describes the nitrate and ammonia concentrations predicted for the site during peak operations based on assumed explosives usage and cyanide degradation methods.

The product of oxidation of ammonia is nitrite, followed by nitrate, as follows:

1) $NH_3 + O_2 \rightarrow NO_2^- + 3H^+$

2) $NO_2^- + H_2O \rightarrow NO_3^- + 2H^+ + 2e^-$

Nitrate and ammonia concentration predictions are presented both assuming no oxidation of ammonia has begun to occur, and assuming all ammonia is oxidized to form nitrate.

Nitrate and ammonia loading calculations are not included in the open pit flooding model as it is assumed the mobile compounds will not remain on surfaces after prolonged exposure to surficial conditions.

Explosives Usage

Explosive agents, including ammonium nitrate/fuel oil (ANFO) and emulsion will be used during operations. The dissolution of waste explosives or residual explosives from blasting activities results in the release of nitrate (NO_3) and ammonium (NH_4^+) to mine contact waters. The potential influence of nitrate and ammonia mass release associated with mining activities was estimated based on the mining schedule and projected explosive use rate for the Project.

Undetonated explosives (i.e., ANFO and emulsion) will be the main source of nitrate and ammonia at the Project during mining. Rock containing residual explosives will be stored in the waste rock and ore stockpiles. Residual explosives will also leach from the wall rocks in the open pit mine workings. The composition of the two components generally estimated as follows:

- ANFO: 94% NH_4NO_3, 6% Fuel Oil.
- Emulsion: 63% NH_4NO_3, 18% $NaNO_3$, 9% H_2O, 6% Fuel Oil and 4% Microballoons (glass).

An explosives usage rate (powder factor) of 0.27 kg per tonne waste rock and ore was selected for the purposes of water quality modeling, assuming 70% ANFO use and 30% emulsion. The fraction of explosive residues remaining after blasting (i.e., “waste rate”) was based on the assumption that reasonable handling practices will be employed at the Project site. Typical explosive waste rates vary from 0.2 to 28% in some case studies (e.g., Morin and Hutt 2009; Forsyth et al 1995). A waste rate of 1.5% is considered reasonable based on a review of these case studies where a rigorous explosive management plan is developed and adhered to in an open pit operation.

Half of the explosives waste was assumed to be contained within the waste rock and ore stockpiles, then split based on the relative tonnages of each of the two, and half was assumed to remain within the open pit.

Cyanide Treatment and Degradation within Seepage

Ammonia is a potential product of cyanide oxidation using SO_2, as described in the following reactions:

3) $CN^- + SO_2 + O_2 + H_2O \rightarrow OCN^- + H_2SO_4$

4) $OCN^- + 2H^+ + H_2O \rightarrow CO_2 + NH_4^+$

Based on the results reported during cyanide degradation laboratory testing (Cyanco 2012), the average cyanide content reported in process water is approximately 531 mg/L. Subtracting the proposed cyanide cut-off of 20 mg/L, and assuming all remaining cyanide is oxidized to nitrate and carbon dioxide, the ammonia content of the cyanide leach stream process water is predicted to be approximately 275 mg/L as N.

As described in Section 4.2.2, the proposed cyanide cut-off of 20 ppm was applied to the cyanide stream for the purposes of mass balance modeling. The total cyanide concentration in the process water is then calculated by mixing the cyanide stream with the non-cyanide stream process water. For the purpose of conservatism, no cyanide degradation was included in the calculation for final discharge concentrations due to the potentially short holding time within the reclaim tank, as well as the low level of interaction with the natural environment prior to discharge. While this is considered reasonable for the main site discharge it does not include any natural degradation of cyanide (a relatively fast process under natural conditions) and as such is overly conservative when evaluating potential seepage water quality from the TMF.

For seepage from the TMF natural degradation of cyanide is expected to occur as the water migrates from the TMF to the nearest receiver (Lizard Lake). This degradation is accounted for by determining seepage flow rate and duration along the pathway between the TMF and Lizard Lake, and applying a decay rate for cyanide based on Simovic et al. (1985).

The seepage duration is calculated using Darcy's equation as follows (Freeze and Cherry 1979):

$$q = \mathrm{Ki} \qquad \textbf{Equation 13}$$

where:

q	=	Darcy's flux (meters per second [cm/s]);
K	=	hydraulic conductivity (meters per second [cm/s]);
i	=	hydraulic gradient (*dh/dl*) (unitless).

Assuming that the water level in the TMF is 20 m greater than that of Lizard Lake and that the TMF seepage path length between the TMF and shoreline is 100 m, the hydraulic gradient *dh/dl* is calculated as 0.2. With an assumed hydraulic conductivity of 1×10^{-5} cm/s, *q* is calculated as 0.000002 cm/s. Using this calculated flux rate, the seepage velocity is calculated using the equation:

$$V_s = q/n$$ **Equation 14**

where:

V_s	=	seepage velocity (meters per second [m/s]);
q	=	Darcy's flux (meters per second [m/s]);
n	=	porosity (unitless).

Assuming a porosity along the seepage pathway of 0.3, the seepage velocity is calculated as 6.7 x 10^{-6} cm/s. Applying this seepage velocity to a distance 100 meters from shore, the seepage duration is equal to 47.6 years.

The cyanide concentration can be calculated based on Simovic et al. 1985, using the following decay rate:

$$C_t = C_0 e^{-lt}$$ **Equation 15**

where:

C_t	=	final total cyanide concentration (milligrams per liter [mg/L]);
C_o	=	initial total cyanide concentration (milligrams per liter [mg/L]);
l	=	cyanide degradation rate (per year [yr^{-1}]);
t	=	time (years).

Assuming the decay of total cyanide is controlled by the degradation of metallo-cyanide complexes, the degradation rate for iron cyanide (at 4^oC) of -0.2310 yr^{-1} was applied. Using a conservative seepage duration estimate of 10 years, the cyanide discharge concentration with natural degradation at the shore of Lizard Lake is estimated at approximately $0.10C_o$, or 10% of the total cyanide in the tailings process water. For the purpose of conservatism, it is assumed that all cyanide released is as free cyanide.

4.2.4 Geochemical Controls

As discussed in Section 4.1.4, geochemical controls were used within PHREEQC to estimate solubility limits for several parameters based on the saturation indices of common precipitate minerals. These solubility limits were then employed in the most recent model run.

Iron-bearing minerals, including goethite [FeO(OH)] and ferrihydrite [$Fe_2(OH)_6(SO_4)_2$] were predicted to be supersaturated in the majority of the input water quality values, with the exception of the process water and precipitation. In cases where ferrihydrite was predicted to be supersaturated, sorption of ions to the surface of the ferrihydrite was permitted within the model when kinetically feasible.

Tailings process water was predicted to be supersaturated with respect to several additional minerals, including calcite [$CaCO_3$], dolomite [$(Ca,Mg)CO_3$] and manganite [MnO(OH)].

4.3 Water Quality Results and Discussion

4.3.1 Site Water Quality During Operations

The site operations geochemical model was run for the expected average climatic conditions, as well as the 10, 25, 50 and 100-year wet and dry return periods. Tables 4-10 to 4-13 provide summaries of the model results for each scenario at the following locations:

- Seepage from the TMF (process water with geochemical controls).
- Natural site runoff.
- Site facility runoff (includes camp, detonator storage area, emulsion plant).
- Reclaim tank (Discharge to the Sawbill Bay).

Detailed results for all parameters in all other scenarios are included in Appendix 4.I. The results of geochemical modeling are discussed separately for each scenario below, with a general discussion in each section on the variability or influence due to climatic conditions.

Water quality modeling results were compared to the following environmental guidelines and regulations:

- Municipal/Industrial Strategy for Abatement (MISA): Effluent Monitoring and Effluent Limits — Metal Mining Sector (O.Reg. 560/94).
- Canadian Council of Ministers of the Environment, Canadian Environmental Quality Guidelines (CCME 2007), for the protection of freshwater aquatic life.
- Provincial Water Quality Objectives (PWQO) (Ontario Ministry of Environment and Energy 1999).

In addition to a general discussion for most key parameters, a discussion on cyanide concentrations in the tailings process water and the results of water quality modeling pertaining to cyanide and a discussion on nitrate and ammonia concentrations and loads have been included within this section. Cyanide, nitrate and ammonia results have been included in the summary tables, though are discussed separately due to the differing assumptions made with regards to the cyanide input value and material usage.

Scenario 1 – Steady State (Average) Conditions

Table 4-10 summarizes the concentrations of key parameters predicted at select site locations under steady state conditions. The ranges refer to the range reported between the average, 10, 25, 50 and 100-year dry, and 10, 25, 50 and 100-year wet climatic conditions. Refer to Appendix 4.II for detailed results.

Table 4-10: Summary of Steady State (Average) Conditions Results During Operations

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.7 - 7.8	7.8	6.9	6.9
Cyanide	**mg/L**	0.005			**0.64 – 0.90**	**0.11**[(d)]	N/A	N/A
NO_3[(e)]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.04	0.04
NH_4[(e)]	**mg/L as N**				15 - 16	20	0.02	0.02

Table 4-10: Summary of Steady State (Average) Conditions Results During Operations (Continued)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
SO_4	**mg/L**				142 - 200	242	1.0	1.0
Cl	**mg/L**				18 - 25	31	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.0001	0.0001
Al	**mg/L**	0.1	0.075		0.01 – 0.02	0.02	0.054	0.054
As	**mg/L**	0.005	0.005	1	0.00004 – 0.00005	0.0001	0.0006	0.0006
B	**mg/L**		0.2		0.0006 – 0.002	0.00002	0.019	0.019
Ca	**mg/L**				19 - 24	28	13	13
Cd	**mg/L**	Note[(f)]	0.0001		0.00002	0.00002	**0.00005**	**0.00005**
Co	**mg/L**		0.0009		**0.002**	**0.003**	0.0003	0.0003
Cr	**mg/L**	0.001	0.001		0.0002	0.0002	0.0006	0.0006
Cu	**mg/L**	0.002	0.001	0.6	**0.06 – 0.09**	**0.11**	0.0007	0.0007
Fe	**mg/L**	0.3	0.3		0.00007	0.0001	**0.4**	**0.4**
K	**mg/L**				24 – 34	40	0.78	0.78
Mg	**mg/L**				10 – 13	16	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.08**	0.0006	0.0006
Na	**mg/L**				62 - 87	106	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.007 – 0.009	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02	0.02	0.008	0.008
Pb	**mg/L**	0.001	0.001	0.4	0.0001	0.0002	0.0004	0.0004
Sb	**mg/L**		0.02		0.002	0.002	0.002	0.002
Se	**mg/L**	0.001	0.1		0.0006 – 0.0007	0.0008	0.0004	0.0004
U	**mg/L**		0.005		0.005 – **0.006**	**0.007**	0.002	0.002
V	**mg/L**		0.006		0.00002 – 0.00005	0.00004	0.0005	0.0005
Zn	**mg/L**	0.03	0.02	1	0.002	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate.

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L $CaCO_3$ = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines during steady state conditions under all climatic scenarios:

- **Natural runoff:** Cadmium and iron.
- **Site runoff:** Cadmium and iron.
- **Seepage from the TMF:** Cyanide, cobalt, copper, molybdenum and uranium.
- **Reclaim tank:** Cyanide, cobalt, copper, molybdenum, uranium.

Phosphorus concentrations were within the PWQO guidelines for lakes and streams for all locations and within all CCME CWQG for natural and site runoff. Phosphorus concentrations within the predicted final discharge were within the CCME CWQG for mesotrophic lakes.

No parameter concentrations were greater than the MISA regulations at any of the modeled water bodies for any climatic conditions modeled.

The variability between climatic conditions within the predicted final discharge water quality was generally small, and did not alter the list of parameters greater than the guidelines/regulations for any locations, with the exception of uranium. Uranium concentrations were greater than the PWQO guideline in the predicted final discharge water quality for all dry climatic conditions, as well as the average climatic conditions. The highest concentrations in the final discharge were generally reported during the 100-year dry condition, with the exception of parameters reporting higher concentrations in natural and site runoff than those reported in contact water. For example, several parameter inputs assigned for natural and site runoff are greater than the CCME CWQG and/or PWQO guidelines, including cadmium and iron. Due to the comparatively low concentrations of cadmium and iron in the contact input waters, these parameter concentrations decreased during dry climatic conditions and increased during wet conditions.

Scenario 2 – First Flush Conditions

Table 4-11 summarizes the concentrations of key parameters predicted at select site locations under first flush conditions. The ranges refer to the range reported between the average, 10, 25, 50 and 100-year dry, and 10, 25, 50 and 100-year wet climatic conditions. Refer to Appendix 4.II for detailed results.

Table 4-11: Summary of First Flush Conditions Results During Operations

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.7 - 7.8	7.8	6.8	6.8
Cyanide	**mg/L**	0.005			**0.64 – 0.90**	**0.11[(d)]**	N/A	N/A
NO_3[(e)]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[(e)]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				150 - 206	242	2.2	2.2
Cl	**mg/L**				19 - 26	31	1.1	1.1

Table 4-11: Summary of First Flush Conditions Results During Operations (Continued)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.01 – 0.02	0.02	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.0002 – 0.0003	0.0001	0.0004	0.0004
B	**mg/L**		0.2		0.0006 – 0.002	0.00002	0.003	0.003
Ca	**mg/L**				21 - 26	28	11	11
Cd	**mg/L**	Note[f]	0.0001		0.00004 – 0.00005	0.000017	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.0002	0.0002	0.0009	0.0009
Cu	**mg/L**	0.002	0.001	0.6	**0.06 – 0.09**	**0.11**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.00007	0.0001	**1.3**	**1.3**
K	**mg/L**				25 – 34	40	0.37	0.37
Mg	**mg/L**				10 – 14	16	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.08**	0.0003	0.0003
Na	**mg/L**				63 - 88	106	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.007 – 0.009	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02	0.02	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0001	0.0002	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.002	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.0008	0.0005	0.0005
U	**mg/L**		0.005		0.0006 – 0.0007	**0.007**	0.00008	0.00008
V	**mg/L**		0.006		0.0001 – 0.0002	0.00004	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.003	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate.

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines during steady state conditions under all climatic scenarios:

- **Natural runoff:** Aluminum, cadmium and iron.
- **Site runoff:** Aluminum, cadmium and iron.
- **Seepage from the TMF:** Cyanide, cobalt, copper, molybdenum and uranium.
- **Reclaim tank:** Cyanide, cobalt, copper, molybdenum, uranium.

Phosphorus concentrations were within the PWQO guidelines for lakes and streams for all locations. Predicted phosphorus concentrations in the final discharge were within the CCME CWQG for mesotrophic lakes, and predicted concentrations for natural and site runoff were within the CCME CWQG for meso-eutrophic lakes.

No parameter concentrations were greater than the MISA regulations at any of the modeled water bodies for any climatic conditions modeled.

The variability between climatic conditions within the predicted final discharge water quality was generally small, and did not alter the list of parameters greater than the guidelines/regulations for any locations, with the exception of uranium. Uranium concentrations were greater than the PWQO guideline in the predicted final discharge water quality for all dry climatic conditions, as well as the average climatic conditions. The highest concentrations in the final discharge were generally reported during the 100-year dry condition, with the exception of parameters reporting higher concentrations in natural and site runoff than those reported in contact water. For example, several parameter inputs assigned for natural and site runoff are greater than the CCME CWQG and/or PWQO guidelines, including aluminum, cadmium and iron. Due to the comparatively low concentrations of aluminum and iron in the contact input waters, these parameter concentrations decreased during dry climatic conditions and increased during wet conditions. Cadmium concentrations do not exceed the CCME CWQG in reclaim water despite higher concentrations than those predicted in natural runoff due to the higher calculated hardness concentrations in the reclaim water, increasing the guideline for cadmium.

Generally, parameter concentrations were higher under Scenario 2 than those reported in Scenario 1, with the exception of parameters reporting higher concentrations in natural runoff values, including cadmium and silver. In particular, parameters reporting elevated concentrations during the first flush of waste rock kinetic tests, including copper, cobalt and iron increased from Scenario 1 to Scenario 2.

Scenario 3 – Worst Case Conditions (75th Percentile Process Water)

Table 4-12 summarizes the concentrations of key parameters predicted at select site locations under worst case conditions using the 75th percentile for process water. The ranges refer to the range reported between the average, 10, 25, 50 and 100-year dry, and 10, 25, 50 and 100-year wet climatic conditions. Refer to Appendix 4.II for detailed results.

Table 4-12: Summary of Worst Case Condition Results During Operations (75th Percentile Process Water)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.6 - 7.7	7.8	6.8	6.8
Cyanide	**mg/L**	0.005			**0.64 – 0.90**	**0.11[d]**	N/A	N/A
NO_3[e]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[e]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				174 - 225	250	2.2	2.2
Cl	**mg/L**				22 - 29	35	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005

Table 4-12: Summary of Worst Case Condition Results During Operations (75th Percentile Process Water) (Continued)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.009 – 0.01	0.01	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.0001 – 0.003	0.0004	0.0004	0.0004
B	**mg/L**		0.2		0.001 – 0.006	0.00002	0.003	0.003
Ca	**mg/L**				26 - 30	31	11	11
Cd	**mg/L**	Note[f]	0.0001		**0.0002**	0.000026	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002 – 0.003**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.0003	0.0002	0.0009	0.0009
Cu	**mg/L**	0.002	0.001	0.6	**0.08 – 0.11**	**0.14**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.0001	0.00007	**1.3**	**1.3**
K	**mg/L**				30 – 38	41	0.37	0.37
Mg	**mg/L**				13 – 16	17	1.8	1.8
Mo	**mg/L**		0.04		**0.05 – 0.07**	**0.09**	0.0003	0.0003
Na	**mg/L**				68 - 92	108	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.008 – 0.01	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.02 – 0.03	0.03	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0001 – 0.0002	0.0002	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.003	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.001	0.0005	0.0005
U	**mg/L**		0.005		**0.006 – 0.007**	**0.008**	0.00008	0.00008
V	**mg/L**		0.006		0.0002 – 0.0005	0.000009	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.007 – 0.01	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate.

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines during steady state conditions under all climatic scenarios:

- **Natural runoff:** Aluminum, cadmium and iron.
- **Site runoff:** Aluminum, cadmium and iron.
- **Seepage from the TMF:** Cyanide, cobalt, copper, molybdenum and uranium.
- **Reclaim tank:** Cyanide, cadmium, cobalt, copper, molybdenum, uranium.

Phosphorus concentrations were within the PWQO guidelines for lakes and streams and within the CCME CWQG for meso-eutrophic lakes for all locations.

No parameter concentrations were greater than the MISA regulations at any of the modeled water bodies for any climatic conditions modeled.

The variability between climatic conditions within the predicted final discharge water quality was generally small, and did not alter the list of parameters greater than the guidelines/regulations for any locations. Similar to Scenarios 1 and 2, the highest concentrations in the final discharge were generally reported during the 100-year dry condition, with the exception of parameters reporting higher concentrations in natural runoff than those reported in contact water, including cadmium, selenium and silver.

Parameter concentrations within the final discharge were generally higher in Scenario 3 than those reported in Scenarios 1 and 2. In particular, concentrations of key parameters including cobalt, molybdenum, copper, cadmium and silver were higher in Scenario 3 than those reported in predicted final discharge concentrations in Scenarios 1 and 2.

Scenario 4 – Worst Case Conditions (Maximum Process Water)

Table 4-13 summarizes the concentrations of key parameters predicted at select site locations under worst case conditions using the maximum values for process water. The ranges refer to the range reported between the average, 10, 25, 50 and 100-year dry, and 10, 25, 50 and 100-year wet climatic conditions. Refer to Appendix 4.II for detailed results.

Table 4-13: Summary of Worst Case Condition Results During Operations (Maximum Process Water)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[a]	PWQO[b]	MISA[c]				
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	8.3	7.7	6.8	6.8
Cyanide	**mg/L**	0.005			**0.64 – 0.90**	**0.11**[d]	N/A	N/A
NO_3[e]	**mg/L as N**	13	13		1.2 – 2.0	0.00004	0.06	0.06
NH_4[e]	**mg/L as N**				15 - 16	20	0.02	0.02
SO_4	**mg/L**				192 - 250	280	2.2	2.2
Cl	**mg/L**				42 - 57	69	1.1	1.1
Hg	**mg/L**	0.000026	0.0002		0.000009 – 0.00001	0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001 – 0.00002	0.00001	0.00004	0.00004
Al	**mg/L**	0.1	0.075		0.009 – 0.01	0.01	**0.25**	**0.25**
As	**mg/L**	0.005	0.005	1	0.00001 – 0.00002	0.00003	0.0004	0.0004
B	**mg/L**		0.2		0.001 – 0.006	0.00002	0.003	0.003
Ca	**mg/L**				20 - 21	36	11	11
Cd	**mg/L**	Note[f]	0.0001		**0.0002**	0.000028	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		**0.002 – 0.003**	**0.003**	0.0005	0.0005
Cr	**mg/L**	0.001	0.001		0.00009	0.0002	0.0009	0.0009

Table 4-13: Summary of Worst Case Condition Results During Operations (Maximum Process Water) (Continued)

Parameter	Units	Guidelines			Reclaim Tank (Final Discharge)	Seepage from TMF	Natural Runoff	Site Runoff
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]				
Cu	**mg/L**	0.002	0.001	0.6	**0.09 – 0.13**	**0.16**	0.001	0.001
Fe	**mg/L**	0.3	0.3		0.0001	0.00008	**1.3**	**1.3**
K	**mg/L**				33 – 42	47	0.37	0.37
Mg	**mg/L**				10 – 11	21	1.8	1.8
Mo	**mg/L**		0.04		**0.06 – 0.08**	**0.09**	0.0003	0.0003
Na	**mg/L**				80 - 109	129	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.008 – 0.01	0.01	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.03	0.03	0.03	0.03
Pb	**mg/L**	0.001	0.001	0.4	0.0003 – 0.0004	0.0004	0.0003	0.0003
Sb	**mg/L**		0.02		0.002	0.003	0.00007	0.00007
Se	**mg/L**	0.001	0.1		0.001	0.001	0.0005	0.0005
U	**mg/L**		0.005		**0.006 – 0.008**	**0.009**	0.00008	0.00008
V	**mg/L**		0.006		0.00002 – 0.0005	0.000002	0.0006	0.0006
Zn	**mg/L**	0.03	0.02	1	0.007 – 0.01	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Assuming treatment efficiency of 20 ppm and natural degradation of cyanide as described in Section 4.2.3.

(e) Assuming no oxidation of ammonia to nitrate

(f) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines during steady state conditions under all climatic scenarios:

- **Natural runoff:** Aluminum, cadmium and iron.
- **Site runoff:** Aluminum, cadmium and iron.
- **Seepage from the TMF:** Cyanide, cobalt, copper, molybdenum and uranium.
- **Reclaim tank:** Cyanide, cadmium, cobalt, copper, molybdenum, uranium.

Phosphorus concentrations were within the PWQO guidelines for lakes and streams and within the CCME CWQG for meso-eutrophic lakes for all locations.

No parameter concentrations were greater than the MISA regulations at any of the modeled water bodies for any climatic conditions modeled.

The variability between climatic conditions within the predicted final discharge water quality was generally small, and did not alter the list of parameters greater than the guidelines/regulations for any locations. Similar to

Scenarios 1 and 2, the highest concentrations in the final discharge were generally reported during the 100-year dry condition, with the exception of parameters reporting higher concentrations in natural runoff than those reported in contact water, including cadmium, selenium and silver.

Generally, parameter concentrations were higher in Scenario 4 than those reported in Scenarios 1, 2 and 3. The list of parameters greater than the applicable guidelines did not change between Scenarios 3 and 4.

Cyanide Concentrations

Total cyanide concentrations at relevant site locations influenced by tailings process water, including the seepage from TMF reporting to receiving water bodies and the final discharge point at the reclaim tank, are summarized in Tables 4-10 to 4-13.

Cyanide concentration input values were constant for all four scenarios of the water quality model due to the assignment of a cyanide degradation objective of 20 ppm in the cyanide leach stream process water. Assuming the process water consists of 5.5% cyanide leach stream process water, the cyanide content of the final mixed process water is predicted to be approximately 1.1 mg/L total cyanide. Seepage from the TMF reports a decrease in total cyanide concentrations to approximately 0.11 mg/L when accounting for natural degradation of cyanide between the TMF and the nearest surface water body (Lizard Lake).

Total cyanide concentrations diluted to between 0.75 to 0.90 mg/L within the TMF reclaim pond, and 0.64 to 0.90 mg/L in the reclaim tank. The highest cyanide concentrations were reported during the 100-year dry period, when dilution by runoff was the lowest. In contrast to other key parameters, cyanide concentrations decreased from Scenarios 1 and 2 to Scenario 3, and then were lowest at the reclaim tank in Scenario 4. The decrease in concentrations is due to the increase in ferrihydrite precipitation, and subsequent sorption of cyanide to ferrihydrite mineral surfaces.

Nitrate and Ammonia Concentrations

As discussed in Section 4.2.3, nitrate and ammonia are tracked separately from the other parameters for the purposes of the water quality model. The results of nitrate and ammonia predictions are summarized in Tables 4-10 to 4-13 and reported in full in Appendix 4.II. Nitrate and ammonia predictions do not vary between scenarios; however, they do vary under different climatic conditions. Generally, the highest concentrations of both nitrate and ammonia were predicted to occur during dry conditions, and the lowest concentrations were predicted during wet conditions. This variation is due to the dilution of contact water with natural runoff and precipitation.

Based on the assumptions described in Section 4.2.3, ammonia concentrations in the cyanide-leach stream process water are predicted to average approximately 275 mg/L as N due to the degradation of cyanide. After the mixing of the cyanide leach stream with non-cyanide leach stream process water, ammonia concentrations in the process water are 20 mg/L in all scenarios.

Nitrate concentrations were calculated for two scenarios, including the following:

- Complete oxidation of ammonia to nitrate.
- No oxidation of ammonia to nitrate.

Tables 4-10 to 4-13 report nitrate values assuming no oxidation of ammonia to nitrate. For values assuming complete oxidation of ammonia, refer to Appendix 4.II. Assuming no oxidation of ammonia to nitrate, nitrate concentrations at the mine site were generally lower than the CCME CWQG (13 mg/L) within the final discharge, site and natural runoff and seepage from the TMF.

Assuming the complete oxidation of ammonia to nitrate, nitrate concentrations at the mine site are generally higher than the CCME CWQG (13 mg/L) in the final discharge (16 to 18 mg/L as N).

4.3.2 Site Water Quality Post-closure

Post-closure conditions at the project site are described in Section 3.8. The primary potential sources of discharge to the environment include the following:

- Natural/Site runoff (runoff from natural ground, overburden, remediated prepared ground and re-vegetated surfaces).
- Seepage from the TMF.
- Open pit flooding.

Water quality modeling results were compared to the following environmental guidelines and regulations:

- Municipal/Industrial Strategy for Abatement (MISA): Effluent Monitoring and Effluent Limits — Metal Mining Sector (O.Reg. 560/94).
- Canadian Council of Ministers of the Environment, Canadian Environmental Quality Guidelines (CCME 2007), for the protection of freshwater aquatic life.
- Provincial Water Quality Objectives (PWQO) (Ontario Ministry of Environment and Energy 1999).

Site Facilities and Seepage

As discussed in Section 4.2, the inputs for natural runoff and site runoff at post-closure (including remediated and re-vegetated prepared surfaces) were applied the same natural runoff values as applied during operations. The values for site and natural runoff are summarized in Table 4-14 below for both freshet (April to June) and non-freshet (July to March) conditions.

Seepage from the TMF after closure was applied steady state concentrations measured during humidity cell testing, and the results are summarized in Table 4-14 below.

Cyanide has been removed from the parameter list, as the mill will no longer be producing tailings or process water after closure. Nitrate and ammonia have also been excluded as it is assumed these soluble compounds will not remain on surfaces after prolonged weathering and exposure.

Table 4-14: Summary of Site Water Quality Predictions Post-closure

Parameter	Units	Guidelines			Seepage from TMF	Site/Natural Runoff (Freshet)	Site/Natural Runoff (Non-freshet)
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]			
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	7.3	6.8	6.8
SO_4	**mg/L**					2.2	1.0
Cl	**mg/L**				0.20	1.1	1.1

Table 4-14: Summary of Site Water Quality Predictions Post-Closure (Continued)

Parameter	Units	Guidelines			Seepage from TMF	Site/Natural Runoff (Freshet)	Site/Natural Runoff (Non-freshet)
		CCME CWQG[a]	PWQO[b]	MISA[c]			
Hg	**mg/L**	0.000026	0.0002		0.00001	0.000005	0.000005
Ag	**mg/L**	0.0001	0.0001		0.00001	0.00004	0.0001
Al	**mg/L**	0.1	0.075		0.01	**0.25**	0.054
As	**mg/L**	0.005	0.005	1	0.0002	0.0004	0.0006
B	**mg/L**		0.2		0.0008	0.003	0.019
Ca	**mg/L**				5.8	11	13
Cd	**mg/L**	Note[d]	0.0001		0.00001	**0.00002**	**0.00005**
Co	**mg/L**		0.0009		0.0001	0.0005	0.0003
Cr	**mg/L**	0.001	0.001		0.0005	0.0009	0.0006
Cu	**mg/L**	0.002	0.001	0.6	0.0007	0.001	0.0007
Fe	**mg/L**	0.3	0.3		0.003	**1.3**	**0.4**
K	**mg/L**				2.5	0.37	0.78
Mg	**mg/L**				3.1	1.8	1.8
Mo	**mg/L**		0.04		0.002	0.0003	0.0006
Na	**mg/L**				0.32	1.2	1.2
Ni	**mg/L**	0.025	0.025	1	0.0003	0.001	0.001
P	**mg/L**	0.004-0.1	0.02-0.03		0.01	0.03	0.008
Pb	**mg/L**	0.001	0.001	0.4	0.00003	0.0003	0.0004
Sb	**mg/L**		0.02		0.0002	0.00007	0.002
Se	**mg/L**	0.001	0.1		0.0005	0.0004	0.0005
U	**mg/L**		0.005		0.0008	0.00008	0.002
V	**mg/L**		0.006		0.00003	0.0006	0.0005
Zn	**mg/L**	0.03	0.02	1	0.002	0.003	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines after closure:

- **Natural and site runoff (Freshet):** Cadmium and iron.
- **Natural and site runoff (Non-freshet):** Aluminum, cadmium and iron.
- **Seepage from the TMF:** No parameters.

Phosphorus concentrations were within the PWQO guidelines for lakes and streams for all locations and within the CCME CWQG for oligotrophic lakes in seepage from the TMF and non-freshet site and natural runoff.

Phosphorus concentrations in natural and site runoff during freshet conditions were within the CCME CWQG for meso-eutrophic lakes.

No parameter concentrations were greater than the MISA regulations in the site or natural runoff, or seepage from the TMF.

Open Pit Flooding

As discussed in Section 4.1, two models were run to predict the water quality of open pit lakes after closure and during pit flooding. The water qualities of both the east and west pits were calculated. The scenarios include the following:

- **Stratified Pit Lake**: This scenario was run to model open pit water quality assuming the pit lake is stratified and does not mix completely. A stratified pit model assumes variable water quality at different depths within the pit.
- **Mixed Pit Lake**: This scenario was run to model open pit water quality assuming complete mixing of the pit lake during and after flooding.

Each model was run once assuming flow as diverted from the TMF to the open pits (Table 4-15) and once assuming no water was diverted from the TMF to the pits after closure (Table 4-16). The detailed results of geochemical modeling of pit flooding are reported in Appendix 4.IV and shown in figure form in Appendix 4.III.

Table 4-15: Summary of Steady State Open Pit Water Quality after Pit Flooding – Assuming Diversion of Water from TMF to Open Pits

Parameter	Units	Guidelines			Stratified (Top of Pit)		Mixed	
		CCME CWQG(a)	PWQO(b)	MISA(c)	East Pit	West Pit	East Pit	West Pit
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	6.7 – 6.9	6.8 – 7.0	6.8	6.9
SO_4	**mg/L**				0.74 – 1.5	1.0 – 1.6	1.1	1.4
NO_3	**mg/L as N**	13	13		0.0003 – 0.0005	0.0003 – 0.0005	0.0004	0.0004
NH_4	**mg/L as N**				0.02 – 0.03	0.11 – 0.12	0.03	0.13
Cl	**mg/L**				3.0 – 3.6	3.2 – 3.9	3.3	3.8
Hg	**mg/L**	0.000026	0.0002		0.000006	0.00002	0.000006	0.00002
Ag	**mg/L**	0.0001	0.0001		0.00002 – 0.00007	0.00003 – 0.00008	0.00005	0.00006
Al	**mg/L**	0.1	0.075		0.001	0.001	0.001	0.001
As	**mg/L**	0.005	0.005	1	0.000008 – 0.00002	0.0008 – 0.0009	0.00002	0.0001
B	**mg/L**		0.2		0.002 – 0.01	0.002 – 0.01	0.007	0.007
Ca	**mg/L**				7.9 – 9.5	11 – 13	8.4	12
Cd	**mg/L**	Note(d)	0.0001		0.00001 – **0.00003**	0.00001 **– 0.00003**	**0.00002**	**0.00002**
Co	**mg/L**		0.0009		0.0002– 0.0003	0.0001 – 0.0003	0.0002	0.0002

Table 4-15: Summary of Steady State Open Pit Water Quality after Pit Flooding – Assuming Diversion of Water from TMF to Open Pits (Continued)

Parameter	Units	Guidelines			Stratified (Top of Pit)		Mixed	
		CCME CWQG(a)	PWQO(b)	MISA(c)	East Pit	West Pit	East Pit	West Pit
Cr	**mg/L**	0.001	0.001		0.000009 – 0.00001	0.0005	0.000001 – 0.000007	0.0005
Cu	**mg/L**	0.002	0.001	0.6	0.00008 – 0.0002	0.0006 – 0.0007	0.0001	0.0007
Fe	**mg/L**	0.3	0.3		0.0007 – 0.001	0.0004 – 0.0006	0.0001	0.0005
K	**mg/L**				0.36 – 0.65	0.60 – 0.87	0.51 – 0.52	0.80
Mg	**mg/L**				1.1 – 1.4	1.1 – 1.6	1.2	1.4
Mo	**mg/L**		0.04		0.0002 – 0.0006	0.0002 – 0.0007	0.0003	0.0004
Na	**mg/L**				0.68 – 0.90	0.68 – 1.0	0.77 – 0.78	0.86
Ni	**mg/L**	0.025	0.025	1	0.0006 – 0.0008	0.0006 – 0.0008	0.0007	0.0008
P	**mg/L**	0.004-0.1	0.02-0.03		0.004	0.02	0.005	0.02
Pb	**mg/L**	0.001	0.001	0.4	0.0000005 – 0.000008	0.00003 – 0.00004	0.0000008 – 0.000006	0.00003
Sb	**mg/L**		0.02		0.0001 – 0.001	0.0003 – 0.001	0.0007	0.0008
Se	**mg/L**	0.001	0.1		0.0003 – 0.0004	0.001	0.0004	0.001
U	**mg/L**		0.005		0.0001 – 0.002	0.0005 – 0.002	0.0009	0.001
V	**mg/L**		0.006		0.00008 – 0.0001	0.00004 – 0.0001	0.0001	0.0004
Zn	**mg/L**	0.03	0.02	1	0.002	0.003	0.002	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

Table 4-16: Summary of Steady State Open Pit Water Quality after Pit Flooding – Assuming No Diversion of Water from TMF to Open Pits

Parameter	Units	Guidelines			Stratified (Top of Pit)		Mixed	
		CCME CWQG(a)	PWQO(b)	MISA(c)	East Pit	West Pit	East Pit	West Pit
pH	**s.u.**	6.5–9.0	6.5–8.5	6.0–9.5	6.8 – 7.0	6.9 – 7.1	6.8 – 6.9	7.0
SO_4	**mg/L**				0.50 – 1.0	0.80 – 1.1	0.80	1.2
NO_3	**mg/L as N**	13	13		0.0003	0.0003 – 0.0005	0.0003	0.0005

Table 4-16: Summary of Steady State Open Pit Water Quality after Pit Flooding – Assuming No Diversion of Water from TMF to Open Pits (Continued)

Parameter	Units	Guidelines			Stratified (Top of Pit)		Mixed	
		CCME CWQG[(a)]	PWQO[(b)]	MISA[(c)]	East Pit	West Pit	East Pit	West Pit
NH_4	**mg/L as N**				0.05	0.12	0.05	0.17
Cl	**mg/L**				1.7 – 2.5	1.8 – 2.7	2.2	2.8
Hg	**mg/L**	0.000026	0.0002		0.000007	0.00002	0.00001	0.00002
Ag	**mg/L**	0.0001	0.0001		0.00002 – 0.00005	0.00002 – 0.00005	0.00003	0.00004
Al	**mg/L**	0.1	0.075		0.001	0.001	0.001	0.001
As	**mg/L**	0.005	0.005	1	0.00003 – 0.0001	0.0008 – 0.001	0.00005 – 0.00006	0.001
B	**mg/L**		0.2		0.001 – 0.009	0.001 – 0.008	0.004	0.005
Ca	**mg/L**				5.4 – 7.6	7.5 - 11	6.5	12
Cd	**mg/L**	Note[(d)]	0.0001		0.000007 – **0.00002**	0.000008 – **0.00002**	**0.00001**	**0.00002**
Co	**mg/L**		0.0009		0.00008 – 0.0002	0.00006 – 0.0001	0.0001	0.0001
Cr	**mg/L**	0.001	0.001		0.000001 – 0.00005	0.0005	0.000003 – 0.000007	0.0006
Cu	**mg/L**	0.002	0.001	0.6	0.00009 – 0.0003	0.0006 – 0.0007	0.0002	0.0007
Fe	**mg/L**	0.3	0.3		0.0004 – 0.0008	0.0003 – 0.0004	0.0006	0.0003
K	**mg/L**				0.34 – 0.55	0.60 – 0.80	0.46	0.90
Mg	**mg/L**				0.60 – 1.2	0.70 – 1.5	0.80	1.4
Mo	**mg/L**		0.04		0.0002 – 0.0006	0.0002 – 0.001	0.0002	0.0008
Na	**mg/L**				0.38 – 0.81	0.37 – 1.0	0.52	0.94
Ni	**mg/L**	0.025	0.025	1	0.0003 – 0.0005	0.0003 – 0.0005	0.0005	0.0006
P	**mg/L**	0.004-0.1	0.02-0.03		0.006 – 0.007	0.02	0.007	0.02
Pb	**mg/L**	0.001	0.001	0.4	0.0000002 – 0.00002	0.00003 – 0.00005	0.000001 – 0.000003	0.00005
Sb	**mg/L**		0.02		0.0001 – 0.0008	0.0003 – 0.0008	0.0004 – 0.0005	0.0006
Se	**mg/L**	0.001	0.1		0.0004	0.001	0.0004	0.001
U	**mg/L**		0.005		0.0002 – 0.001	0.0006 – 0.001	0.0007	0.001
V	**mg/L**		0.006		0.0001 – 0.0002	0.0003 – 0.0004	0.0002	0.0005
Zn	**mg/L**	0.03	0.02	1	0.001 – 0.002	0.002	0.002	0.003

Notes:

(a) Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

(b) Provincial Water Quality Objectives.

(c) Municipal/Industrial Strategy for Abatement.

(d) Cadmium guideline based on hardness calculation where CCME CWQG for Cd, ug/L = 100.86[log(hardness))-3.2. Hardness, mg equivalent/L CaCO3 = ([Ca,mg/L]*2.497) + ([Mg,mg/L]*4.116).

Bold values are greater than one or more of the environmental guidelines.

Stratified Pit Lakes

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines in the pit lakes after closure:

- **East pit:** Cadmium.
- **West pit:** Cadmium.

Phosphorus concentrations were within the PWQO guidelines for lakes for all locations and within the CCME CWQG for oligotrophic lakes in the east pit. Phosphorus concentrations in the west pit were within the CCME CWQG for mesotrophic lakes.

No parameter concentrations were greater than the MISA regulations in the flooded pits.

Generally, the west pit reports higher concentrations of key parameters than those reported in the east pit both when flow is diverted to the pits from the TMF and when TMF flow is not pumped to the pits. The west pit is the proposed location for waste rock disposal after closure. The chemical load released off the waste rock in the west pit is the primary driver of differences in concentrations between the two pits.

The stratified pit lake surface of the east pit is predicted to reach steady state conditions after approximately 8 years when flow is diverted from the TMF, and in approximately 24 years when no water is diverted from the TMF to the pits. The surface of the west pit is predicted to reach steady state conditions after approximately 30 years when flow is diverted from the TMF, and in approximately 81 years when no water is diverted from the TMF to the pits.

Generally, concentrations decrease during the initial years of flooding for key parameters including chloride, calcium, magnesium, potassium, sodium, aluminum, boron, cadmium, cobalt, chromium, copper, molybdenum, nickel, lead, phosphorus, molybdenum, silver, uranium and zinc. However, several parameter concentrations generally increase during the initial years of flooding for both the east and west pits, including antimony, iron and vanadium. The increase of these parameters is due to the comparatively high concentrations of these parameters in the groundwater with respect to the concentrations measured during humidity cell testing of waste rock. As the influence of groundwater and surface runoff increase, and the influence of pit wall runoff decreases, the pit lake water begins to reflect the quality natural groundwater and surface runoff.

A generally sharp decrease in concentrations of key parameters in the west pit is associated with the beginning of inflow from the east pit to the west pit. Generally, the water from the east pit dilutes the west pit water, however exceptions include parameters reporting elevated concentrations in groundwater and surface runoff with respect pit wall runoff and waste rock contact water, including calcium, antimony, mercury, vanadium and silver.

Both the east and west pits exhibit a strong seasonal influence on pit water quality. Generally concentrations are highest in the freshet months.

Mixed Pit Lakes

The water quality model predicts the following parameters to occur at concentrations greater than one or both of the CCME CWQG and PWQO guidelines in the pit lakes after closure:

- **East pit:** Cadmium.
- **West pit:** Cadmium.

Phosphorus concentrations were within the PWQO guidelines for lakes for all locations and within the CCME CWQG for oligotrophic lakes in the east pit. Phosphorus concentrations in the west pit were within the CCME CWQG for mesotrophic lakes.

No parameter concentrations were greater than the MISA regulations in the flooded pits.

The mixed pit lake of the east pit is predicted to reach steady state conditions after approximately 8 years when flow is diverted from the TMF, and in approximately 22 years when no water is diverted from the TMF to the pits. The west pit lake is predicted to reach steady state conditions after approximately 60 years when flow is diverted from the TMF, and in approximately 85 years when no water is diverted from the TMF to the pits

Generally, concentrations decrease during the initial years of flooding for key parameters including chloride, calcium, magnesium, potassium, sodium, aluminum, boron, cadmium, cobalt, chromium, copper, molybdenum, nickel, lead, phosphorus, molybdenum, silver, uranium and zinc. However, several parameter concentrations generally increase during the initial years of flooding for both the east and west pits, including arsenic, antimony, iron and vanadium. Similar to the stratified model, the increase is due to the comparatively high concentrations of these parameters in the groundwater with respect to the concentrations measured during humidity cell testing of waste rock.

As with the stratified model, a generally sharp change in concentrations of key parameters is observed in the west pit associated with the beginning of inflow from the east pit to the west pit.

Seasonal variation within the mixed pits is not as pronounced as the variation predicted within the stratified pits. The discrepancy is due to the influence of the existing pit water quality as a mediating factor when mixed with the seasonally variable surface runoff. Parameters reporting significant seasonal variability include lead, copper and chromium, and to a lesser extent vanadium, iron, aluminum, cadmium and antimony. The seasonal variability occurs when natural and site runoff are primary sources of parameter load to the pit lakes.

4.4 Key Parameter Loading

4.4.1 Site Water during Operations

Based on the results of water quality modeling, the influence of climatic conditions is significantly less than the influence of the model input water quality values and general flow contributions. Generally, the variability between the most extreme 100-year dry and 100-year wet climatic conditions resulted in a maximum change in concentrations by one third, and did not result in significant changes concerning the general conclusions for each scenario. Though concentrations of most key parameters were lowest during wet conditions, long-term climatic events may not significantly change the water quality at the Project site to the extent that the parameter list for treatment would change.

One of the most significant sources of chemical load to the final discharge point at the reclaim tank is the tailings process water. All scenarios under all climatic conditions reported the highest concentrations of key parameters including cobalt, copper, iron, molybdenum, nickel and uranium at one of these two locations due to elevated concentrations in the tailings process water. However, tailings process water is not the primary contributor of chemical load for all parameters. Due to the elevated concentrations of cadmium and silver in the natural and site runoff, these parameters were generally highest when the influence of natural and site runoff were most significant.

The most significant source of nitrate and ammonia loading to the reclaim tank is the tailings process water. Ammonia concentrations were conservatively estimated based on the complete oxidation of cyanide during the cyanide degradation process, and nitrate concentrations were assumed based on the complete oxidation of ammonia. Although some volatilization of ammonia would be expected the model conservatively ignores this.

4.4.2 Flooded Pit Lake Water Post-closure

Based on the results of water quality modeling, a seasonal influence of pit water quality may occur in cases where the pit lakes are not mixed completely. In these cases, the quality of the top of the pit lakes correlates with the quality of natural and site runoff after the complete flooding of the open pits. In cases where the pit is mixed completely, the seasonal influence of the natural and site runoff is lower, and pit lake water quality is mediated by the influence of groundwater and contact water from the pit walls and waste rock.

Generally, the waste rock deposited within the west pit is a significant source of chemical load to the pit lake throughout flooding. However, the diluting effects of ground and surface water bring the pit lake to steady state after the pit lake has flooded completely.

Generally, the water quality of the pit lakes does not change significantly at steady state conditions when water is diverted to the pits from the TMF. However, the time to flooding is significantly delayed in this case.

4.5 Site Discharge and Mitigation

Effluent discharge from the Project site must comply with the MISA Effluent Monitoring and Effluent Limits – Metal Mining Sector (O.Reg. 560/94), however, PWQO and CCME CWQG are receiving water guidelines and are not directly applicable to site discharge. A comparison of the predicted discharge values with respect to the CCME CWQG and PWQO guidelines does however provide an understanding of the key parameters that will require further evaluation within the receiving environment as part of the Lake Water Quality TSD, Aquatic Environment TSD, Terrestrial Environment TSD and Human Health and Ecological Risk Assessment TSD.

4.5.1 Construction and Operations

During construction it is expected that the quality of water will be similar to, or better than at operations, and that the flows from areas of the site that are influenced by disturbance will be lower than during operations, therefore operational water quality predictions are used for the purposes of this EIS/EA to represent both construction and operational conditions.

For operational conditions, a comparison of the predicted discharge concentrations with the guidelines indicates the following:

- Under operating conditions, results of the water quality model runs, for all scenarios under all climatic conditions indicate that the water quality at the potential discharge points, including site and natural runoff, the site discharge (reclaim tank) and seepage from the TMF, will meet MISA discharge guidelines.
- Cadmium, aluminum and iron will require further evaluation due to their concentrations in the natural runoff relative to CCME CWQG and PWQO guidelines.
- Nitrate concentrations at the mine site are generally above the CCME CWQG in the site discharge (at reclaim tank) assuming the complete oxidation of ammonia to nitrate, and will require further evaluation in the Lake Water Quality TSD.
- Nitrate and ammonia concentrations in site and natural runoff, as well as seepage from the TMF, are below CCME CWQG, PWQO and MISA guidelines.
- Cyanide concentrations are greater than the CCME CWQG in seepage from the TMF and in site discharge (at reclaim tank) and will require further evaluation as part of the Lake Water Quality TSD.

4.5.2 Closure and Post-closure

During closure direct discharge of water from the site will cease and runoff will be directed to the open pits. Closure conditions are expected to have a water quality concentrations somewhere between that of operations and post-closure. It is reasonable to use the operational conditions as the worst case water quality for closure.

For post closure discharge will occur via natural runoff and /or seepage from revegetated facilities, from the TMF, and eventually water will overflow from the former open pits at a location near the proposed operational site discharge location. A comparison of these predicted discharge concentrations with the guidelines indicates the following:

- Cadmium, aluminum and iron will require further evaluation due to their concentrations in the natural runoff.
- Predicted open pit water quality at closure shows elevated concentrations of cadmium relative to CCME CWQG and PWQO guidelines. These parameters will require further evaluation as discussed in the Lake Water Quality TSD and other relevant TSDs.

4.5.3 Mitigation

Mitigation that has been included in the water quality predictions includes the following:

- **Sediment Control:** it is assumed that appropriate mitigation measures will be put in place during construction activities to limit total suspended solids (TSS) discharge. If this is not possible water will be collected and stored until it can be appropriately treated and discharged.
- **Treatment:** It is expected that treatment for suspended solids will be required and implemented prior to discharge.
- **Seepage Collection:** Mitigation to reduce seepage to the extent practicable will be implemented on site when required throughout the Project life cycle as is indicated and shown on the water management plans.
- **Spill Clean-up:** Appropriate clean-up of any spills will occur.

5.0 PATH FORWARD

The presented geochemical and site water modelling will require refinement as the Project design advances, the site layout optimized and operational monitoring data is available. Specific aspects of the model that should be periodically reviewed include:

- Runoff water qualities assigned to the site facilities (including Plant Site and Office/truck shop/fuel bay, explosive storage).
- Overburden and borrow source chemistry and runoff water quality.
- TMF and WRMF runoff and seepage.
- Process water quality.

The model should be updated periodically to account for any differences between the assumptions used in the model and the actual conditions observed, and to account for monitoring data collected on site.

6.0 LIST OF REFERENCES

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7.0 GLOSSARY OF TERMS

Table 7-1: Glossary of Terms

Term	Definition
ANFO	Explosive consisting of ammonium nitrate and fuel oil
Backfill	Material placed into an excavation
Closure	The time period bounded by the time required to fully decommission the mine site
Collection Facility	Any mine facility where water is temporarily or permanently stored
Detection Limit	The lowest quantity of a substance that can be detected from the absence of that substance
Emulsion	Explosive consisting of ammonium nitrate, sodium nitrate, water, fuel oil and microballoons
Facility	Any location which is part of the overall mine site (eg. plant site, waste rock stockpile, TMF, etc.)
First flush	Conditions reported in first five weeks of kinetic testing
Freshet	Spring thaw event resulting in higher than average surface runoff flows
Geochemical Control	Mineral phase forced to equilibrate with the mixed solution to calculate a water quality
Interflow	The flow of water within the pore space of a soil, used to refer to water which flows within a stockpile.
Mixed pit lake	Pit lake which mixes completely
Natural runoff	Runoff from natural ground surfaces not influenced by mine site facilities
Overburden	The soil and other material overlying the bedrock
Oxidation	Chemical reaction resulting in the loss of electrons
PHREEQC	Geochemical modeling program
Pit wall runoff	Runoff contacting the reactive zone on the walls of the open pit
Post-closure	The period of time initiating when all closure activities have been completed
Process water	Pore water of tailings discharged from the Ore Processing Facility
Pumping station	Stations located in local topographic low areas where water is collected via a series of excavated ditches
Site runoff	Runoff from mine site facility surfaces
Sorption	Attachment of one substance to the surface of another substance

Table 7-1: Glossary of Terms (Continued)

Term	Definition
Specific Gravity	The ratio of the density of a substance to a reference substance (usually water)
Steady state	Conditions reported in testing after geochemical equilibrium has been reached
Stratified pit lake	Pit lake which does not completely turn over, resulting in a change of water quality from the surface to the lake bottom
String Diagram	Schematic diagram showing the quantity and direction of water flow between Project components
Supersaturated	Minerals reporting a saturation index (S.I) greater than 0.5, and therefore have the potential to precipitate out of solution
TMF reclaim pond	Location where water collected from pumping stations surrounding the TMF will be pumped
TMF reclaim tank	Location of final discharge to the environment
Underflow	The tailings discharged from the thickener to the TMF
Void Ratio	In soil mechanics, the void ratio (e) is the ratio of the volume of voids to the volume of solids
Waste Rate	The fraction of explosive residue remaining after blasting

8.0 ABBREVIATIONS, ACRONYMS AND INITIALS

Table 8-1: List of Abbreviations, Acronyms and Initials

Acronym	Definition
ARA	Aggregate Resource Act
CCME CWQG	Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines
CEA Agency	Canadian Environmental Assessment Agency
DO	Dissolved oxygen
DOC	Dissolved organic carbon
EIS/EA	Environmental Impact Assessment/ Environmental Assessment
EMP	Environmental Management Plan
ETP	Effluent treatment plant
Golder	Golder Associates Ltd.
HHERA	Human Health and Ecological Risk Assessment
HRWQ	Hammond Reef Gold Project surface water/sediment stations
HRWQP	Hammond Reef Gold Project water column profile stations
IAP	Ion Activity Product
ICP	Intermediate Control Pond
Ksp	Solubility Product
LSA	Local study area
MISA	Municipal/Industrial Strategy for Abatement
MOE	Ontario Ministry of the Environment
MOEE	Ontario Ministry of the Environment and Energy
OHRG	Osisko Hammond Reef Gold Ltd.
PPCP	Process plant collection pond
PWQO	Ontario Provincial Water Quality Objectives
QA/QC	Quality assurance/Quality control
RSA	Regional study area
SI	Saturation Index

Table 8-1: List of Abbreviations, Acronyms and Initials (Continued)

Acronym	Definition
TMF	Tailings Management Facility
TSD	Technical Support Document
TSS	Total suspended solids
VEC	Valued ecosystem components
WAD	Weak acid dissociable
WRMF	Waste Rock Management Facility

9.0 UNITS

Table 9-1: List of Units

Unit	Abbreviation
degrees Celsius	°C
grams per tonne	g/t
Kilogram	kg
Kilometre	km
less than	<
Litre	L
Metre	m
micrograms per gram	µg/g
Micrometre	µm
milligrams per litre	mg/L
Millimetre	mm
Percent	%
Standard pH Unit	s.u.
Tons per day	tpd

APPENDIX 3.I

Water Balance Input Data

Precipitation Frequency Analysis

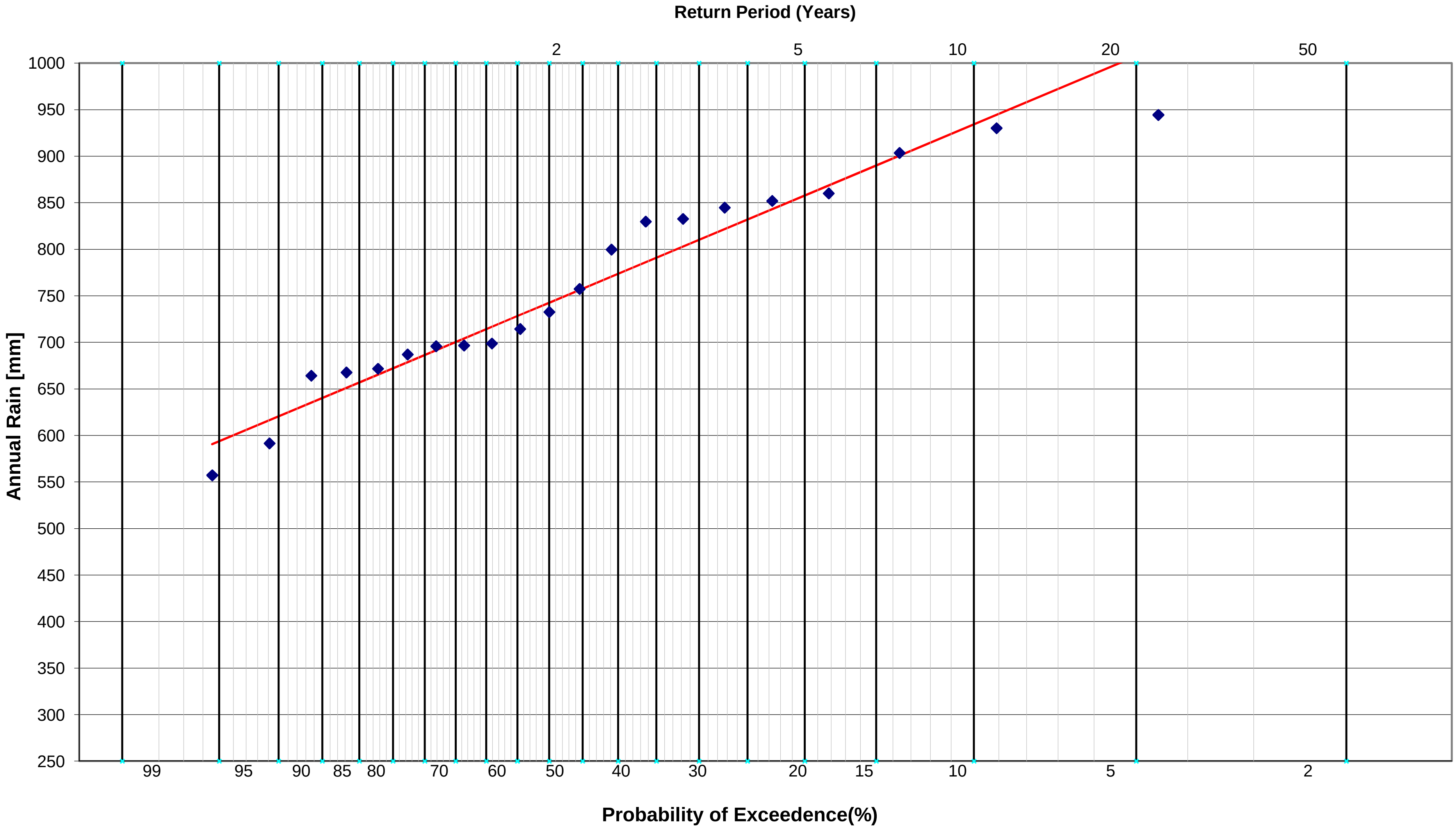
Precipiation Frequency Analysis
Hammond Reef Project
Station: Atikokan 6020379 (Environment Canada)

Year	Annual Precipitation
1966	944.5
1967	930.3
1968	903.6
1969	860.2
1970	852
1971	844.9
1972	832.7
1973	829.9
1974	799.8
1975	757.5
1976	732.7
1977	714.4
1978	698.8
1979	696.7
1980	695.9
1981	687.1
1982	671.7
1983	667.7
1984	664.3
1985	591.5
1986	557.3

Distribution	Normal	Log Normal	Pearson III	Log Pearson III	Gumbel
Correlation Coefficient	0.969	0.967	0.969	0.969	0.946

Return Period (years)	Probability of Exceedence (%)	Distribution Function				
		Normal	Log Normal	Peason III	Log Pearson III	Gumbel
10000	0.01%	1163	1288	1178	1214	1642
1000	0.1%	1094	1176	1105	1130	1408
500	0.2%	1071	1140	1080	1102	1337
250	0.4%	1047	1104	1054	1073	1267
200	0.5%	1039	1091	1045	1063	1244
100	1%	1012	1053	1017	1031	1173
50	2%	982	1012	986	996	1102
25	4%	949	968	951	959	1031
10	10%	898	905	899	902	934
5	20%	850	849	850	850	858
2	50%	759	751	758	755	743

Distribution and values selected for water balance



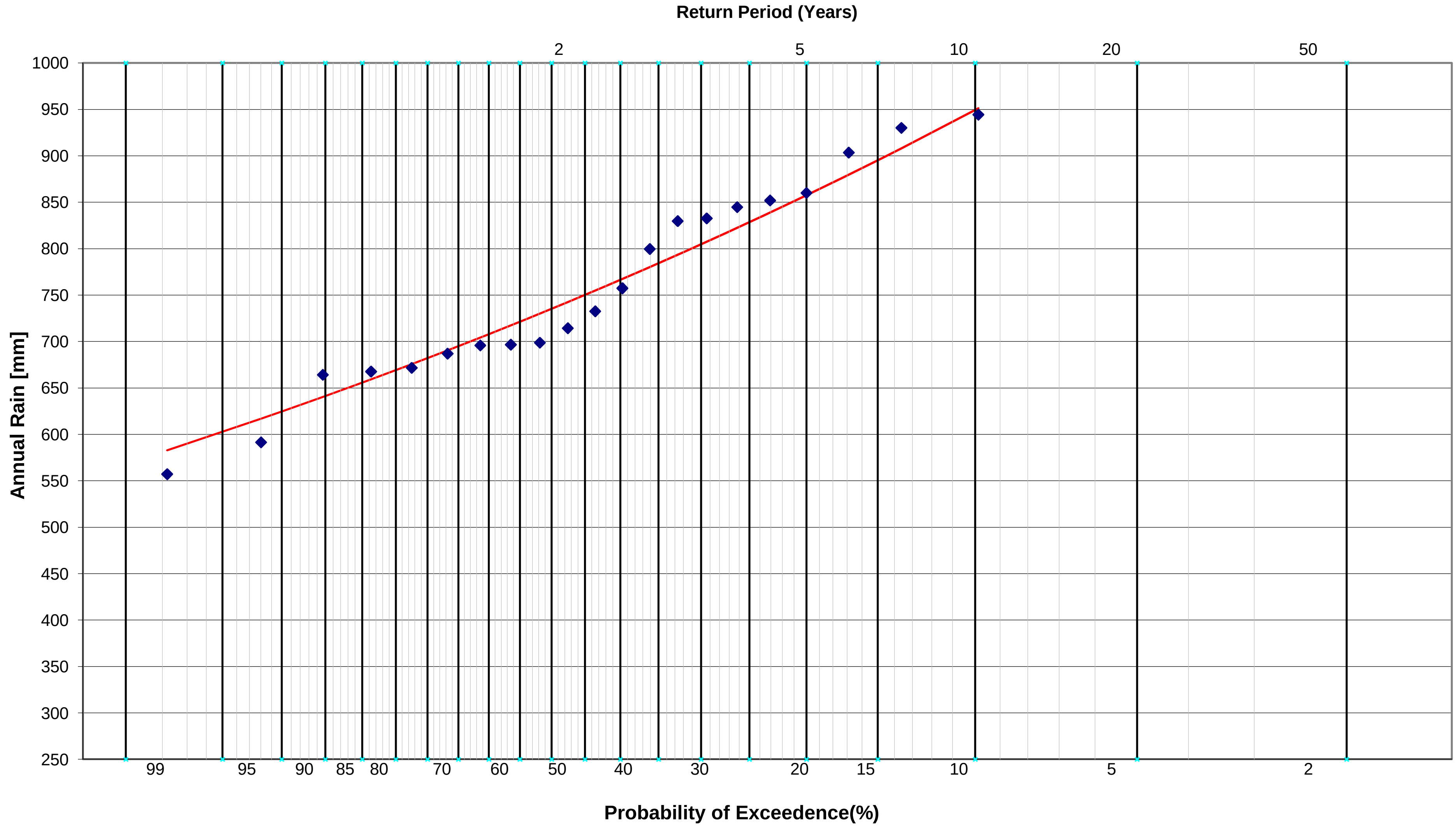
FREQUENCY ANALYSIS RESULTS
STATION: ATIKOKAN 6020379 (ENVIRONMENT CANADA)
DISTRIBUTION: GUMBEL

Golder Associates

PROJECT NO: 11-1118-0020		DATE:	SEPT 2012
BY:	BA	Review:	KD

Hammond Reef

FIGURE X1

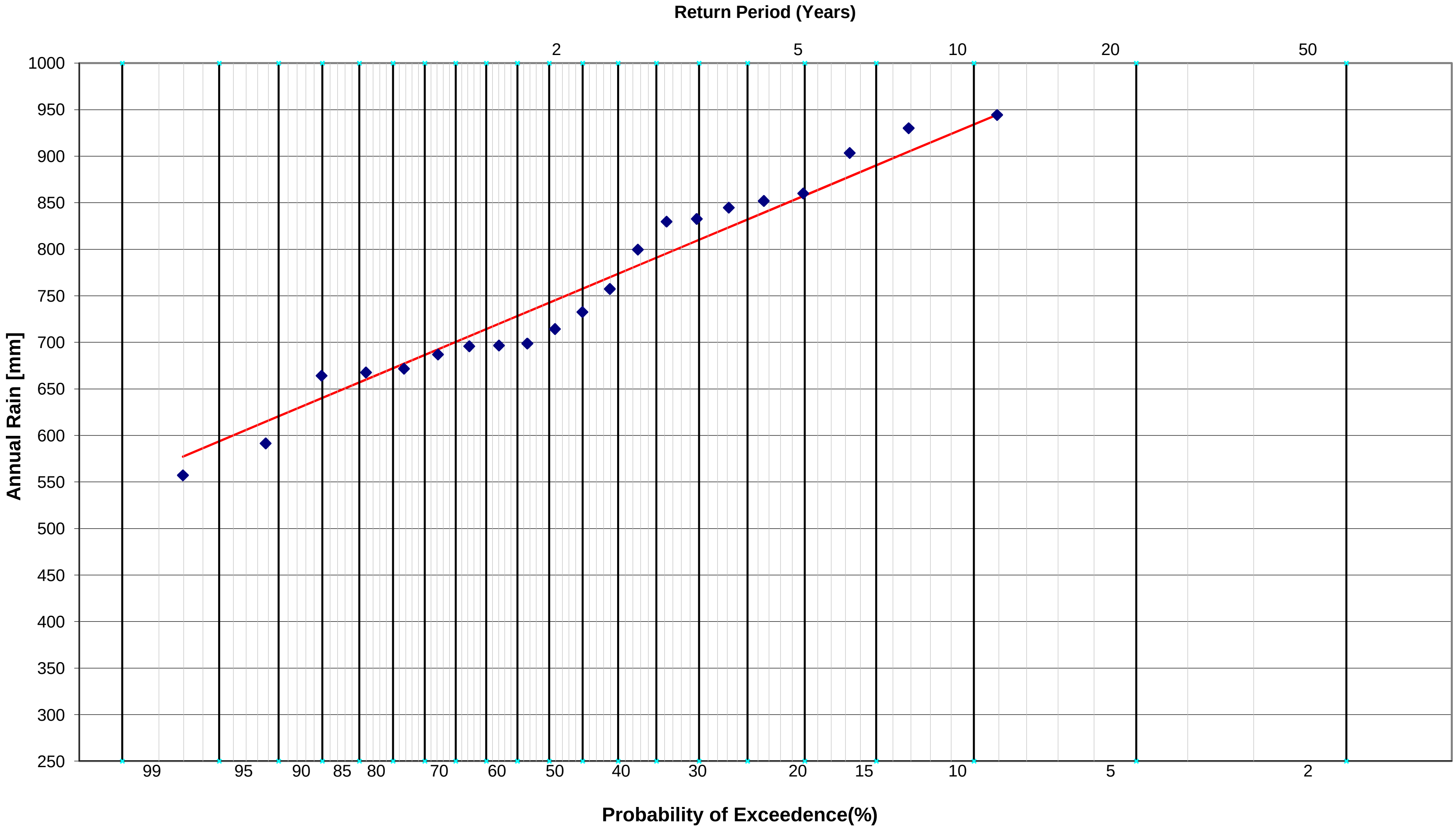


FREQUENCY ANALYSIS RESULTS
STATION: ATIKOKAN 6020379 (ENVIRONMENT CANADA)
DISTRIBUTION: LOGPEARSON III

PROJECT NO: 11-1118-0020		DATE:	SEPT 2012
BY:	BA	Review:	KD

Hammond Reef

FIGURE X2



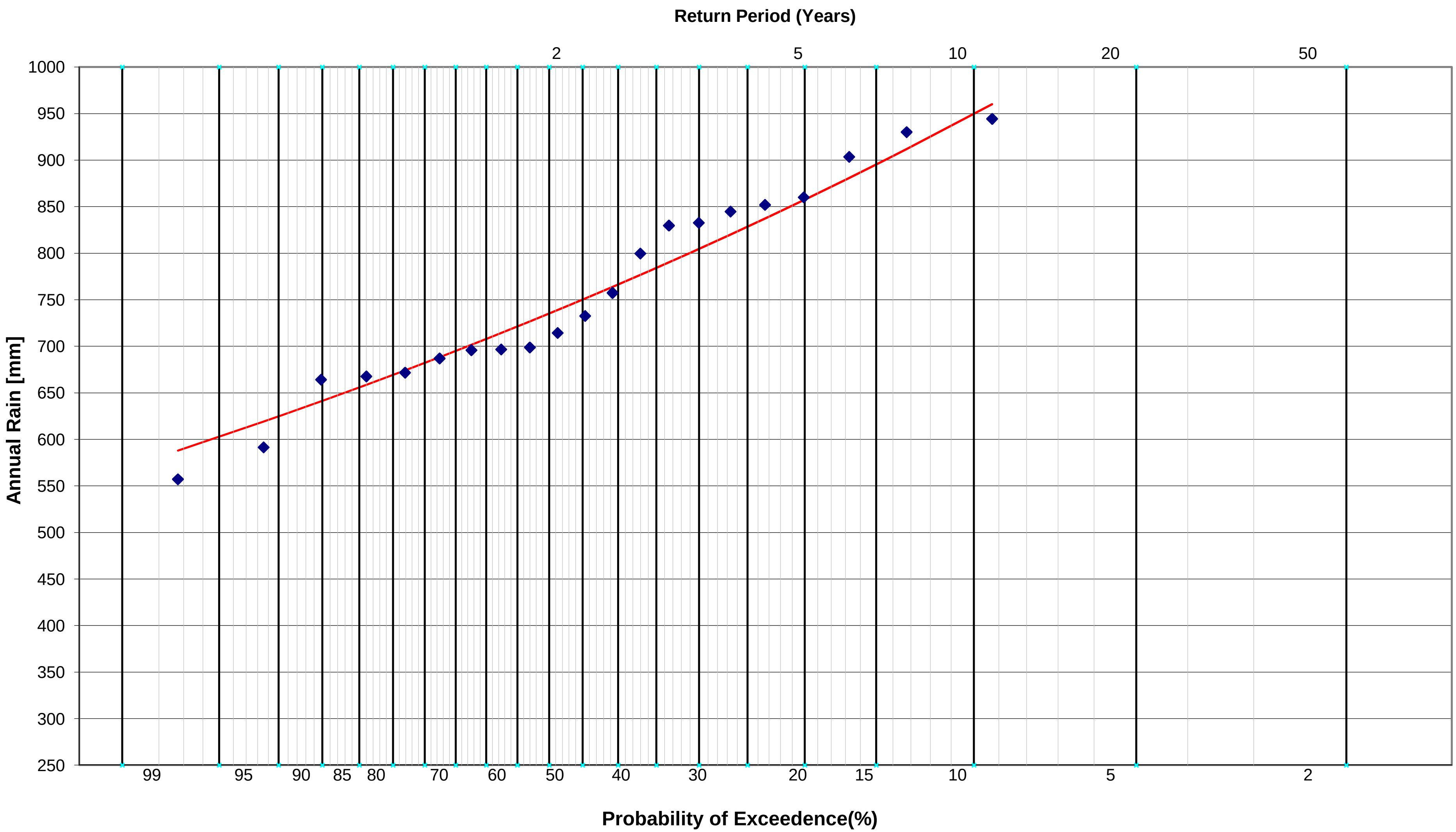
Golder Associates

FREQUENCY ANALYSIS RESULTS
STATION: ATIKOKAN 6020379 (ENVIRONMENT CANADA)
DISTRIBUTION: PEARSON III

PROJECT NO: 11-1118-0020		DATE:	SEPT 2012
BY:	BA	Review:	KD

Hammond Reef

FIGURE X3



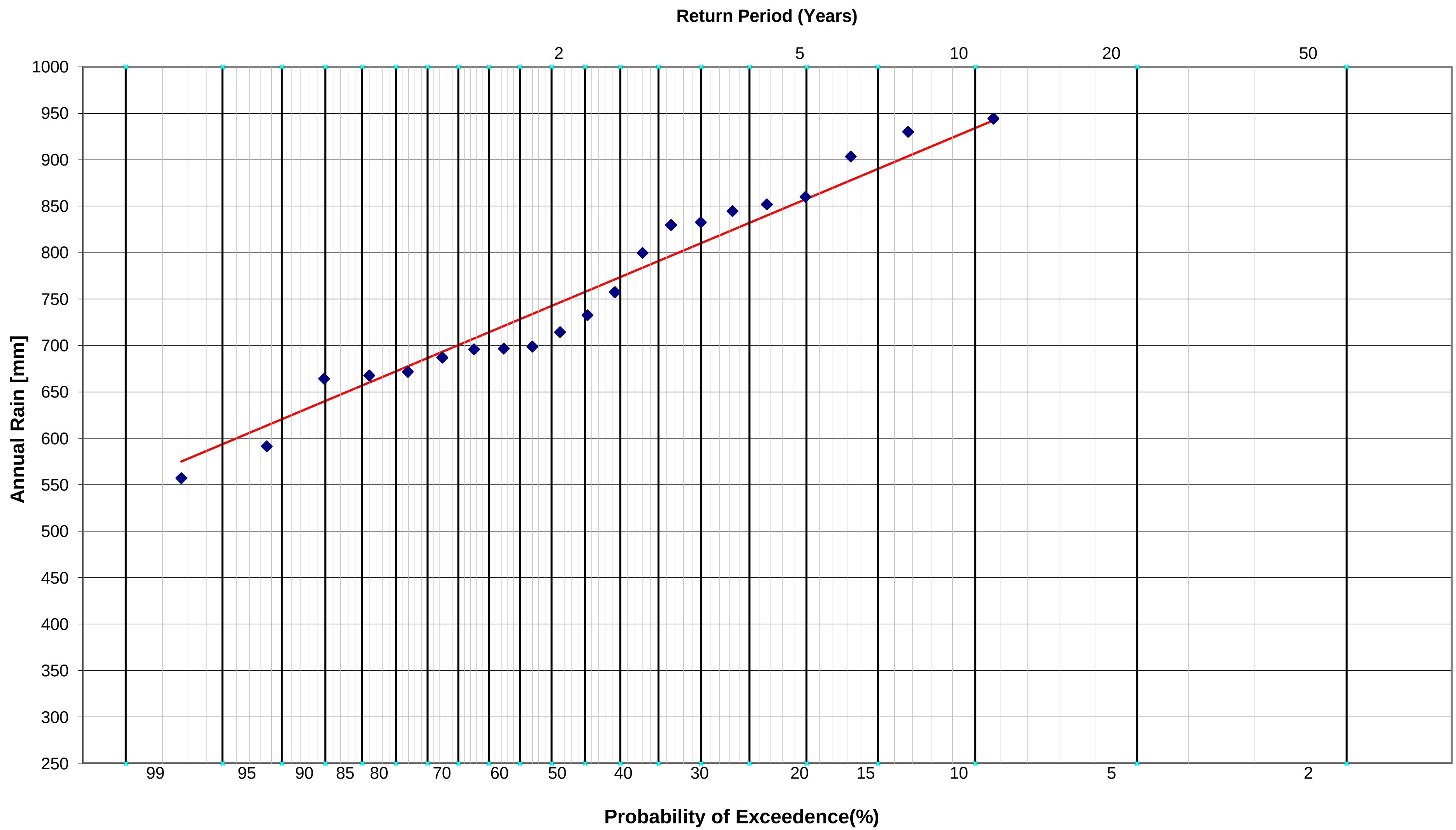
FREQUENCY ANALYSIS RESULTS
STATION: ATIKOKAN 6020379 (ENVIRONMENT CANADA)
DISTRIBUTION: LOGNORMAL

Golder Associates

PROJECT NO: 11-1118-0020	DATE:	SEPT 2012	
BY:	BA	Review:	KD

Hammond Reef

FIGURE X4



Golder Associates

FREQUENCY ANALYSIS RESULTS
STATION: ATIKOKAN 6020379 (ENVIRONMENT CANADA)
DISTRIBUTION: NORMAL

PROJECT NO: 11-1118-0020		DATE:	SEPT 2012
BY:	BA	Review:	KD

Hammond Reef

FIGURE X5

Lake Evaporation Data

Lake Evaporation Rates
Environment Canada Station: Atikokan 6020379

YEAR	Lake Evaporation (mm)					
	May	June	July	August	September	October
1971	94.8	118.2	134.2	107.4	62.2	34.3
1972	120.4	125.8	113.2	94.9	58.3	28.2
1973	96.7	99.9	132.3	91.4	67.6	37.4
1974	83.8	117.2	128.9	96.2	48.7	34.2
1975	111.9	100.6	140.1	96.2	56.7	37.3
1976	125.2	125.9	128.1	121.1	68.6	29.3
1977	129.4	95.0	122.5	86.7	83.7	37.2
1978	94.7	107.5	107.9	110.2	57.0	42.6
1979	75.2	120.3	126.1	88.3	67.2	26.8
1980	123.6	128.4	134.7	93.3	62.9	27.6
1981	111.1	101.9	126.7	103.0	72.7	29.1
1982	96.5	115.3	125.7	86.6	56.2	30.6
1983	111.6	121.6	129.9	115.1	70.9	30.0
1984	94.6	103.3	137.3	122.0	52.8	28.8
1985	101.0	96.7	129.8	90.2	55.9	34.0
1986	114.2	156.5	118.1	95.6	55.9	31.9
1987	105.9	112.0	140.9	125.8	108.1	63.6
1988	141.7	143.3	148.9	162.0	58.1	30.7
MEAN	107.4	116.1	129.2	104.8	64.6	34.1
MAX	141.7	156.5	148.9	162.0	108.1	63.6
MIN	75.2	95.0	107.9	86.6	48.7	26.8

Notes:
Blue coloured and underlined values have been estimated based on correlation with Hargreaves Evapotranspiration. Hargreaves ET estimated at daily basis based on daily temperature (Atikokan Met Station)

Pan Evaporation Data

Pan Evaporation Rates

Environment Canada Station: Atikokan 6020379

YEAR	Lake Evaporation (mm)					
	May	June	July	August	September	October
1971	120.4	154.2	174.7	136.8	79.8	40.5
1972	154.3	161.6	144.8	121.4	69.7	32.4
1973	122.9	128.3	172.4	115.9	82.0	44.6
1974	105.9	151.8	167.9	122.3	58.5	40.3
1975	143.1	124.1	184.6	119.4	64.3	46.6
1976	156.8	165.1	165.7	160.3	91.3	33.9
1977	167.5	121.5	155.3	104.4	108.5	48.2
1978	123.0	141.7	136.5	143.1	71.4	51.6
1979	91.3	154.6	163.4	111.5	86.4	30.6
1980	158.9	163.6	172.6	118.9	79.1	31.7
1981	132.6	126.2	161.6	130.7	89.7	33.6
1982	120.0	143.2	161.0	106.2	71.0	35.7
1983	136.2	163.0	173.3	150.3	94.8	35.9
1984	120.1	132.5	177.0	157.8	65.6	40.2
1985	126.6	121.0	165.8	114.2	68.8	40.1
1986	143.0	169.2	151.4	118.5	67.4	37.3
1987	135.1	143.2	183.8	160.6	139.0	78.2
1988	185.8	187.2	195.4	217.6	72.0	35.8
Mean	**135.7**	**147.3**	**167.1**	**133.9**	**81.1**	**41.0**
Max	**185.8**	**187.2**	**195.4**	**217.6**	**139.0**	**78.2**
Min	**91.3**	**121.0**	**136.5**	**104.4**	**58.5**	**30.6**

Notes:

Blue coloured and underlined values have been estimated based on correlation with Hargreaves Evapotranspiration. Hargreaves ET estimated at daily basis based on daily temperature (Atikokan Met Station)

APPENDIX 3.II

Site Wide Water Balance

Existing Conditions

Sheet 1

Preliminary

Site Wide Deterministic
Flow (Water Balance) Model
Existing Conditions
Average Climatic Conditions

Mine	Osisko Hammond Reef Gold Project
Owner(s)	Osisko Mining Corporation
Operator	Osisko Mining Corporation
Location	Atikokan, Ontario
Product	Gold
Revision #	A
Date	November 21, 2012
Level of study	Feasibility
Configuration	Existing Conditions
Golder Project #	11-1118-0117 (2000)

Data are only input into the orange shaded cells. Relevant data is automatically transferred to other sheets.
Each sheet is password protected except for the orange shaded cells. The password is simply Golder.

Golder Associates

Sheet 2
Table of Contents

Preliminary

Sheet #

Note: This sheet is protected. The password is simply Golder.

Sheet 3

Model Set-up

- The flow model is developed on linked Excel spreadsheets. Input data are only required in the orange shaded cells. The calculations are automatically carried out and linked to the relevant cells on other sheets.
- The sheet entitled "5 Flow Schematics" shows the typical flows into and out of a mill and tailings facility.
- The flow logic and a list of flows specific to this mine site are shown on the sheet entitled "6 Flow Logic Diagram".
- Input parameters required for the calculation of flows associated with the processing of the ore are listed on the sheet entitled "7 Mine Operating Data", together with any miscellaneous flows that could impact the ponds and water management.
- Precipitation, evaporation, sublimation, seepage and runoff coefficients are input in the "8 Hydrological Data" sheet. The data on this sheet can be easily manipulated to model the impact of varying climatic conditions.
- The watersheds at the mine site, their surface area and the percentage covered by different land surface types are input in the sheet entitled "9 Watershed Areas".
- Runoff from the different land surface types in the watersheds at the mine site is calculated on the "10 Runoff" sheet.
- The sheets that follow ("11-1 Plant Site", "11-2 Open Pit", "11-3 Waste Dump", "11-4 Explosives Plant", "11-5 Tailings Management Area", "11-6 Ore Stockpile" and "11-7 Proc. Plant Collect. Pond") show the monthly inflows and outflows to the different watersheds on the mine site. Sheets "11-4 Explosives Plant" and "11-5 Tailings Management Area" require the input of the minimum and maximum storage volumes for the holding pond and reclaim pond associated with these facilities.
- All the monthly inflows and outflows to the different watersheds on the mine site are summarized on the sheet entitled "12 Summary of Flows" at the end of the workbook.

Water Management Assumptions

- It is assumed that the runoff from the Waste Dump, Ore Stockpile, Explosives Plant and Tailings Management Area will be conveyed by gravity or pumping to an Intermediate Collecting Pond in the Ore Stockpile watershed.
- It is assumed that runoff conveyed to the intermediate collecting point will be pumped to the Process Plant Collecting Pond year round.
- The Explosives Plant holding pond has been sized to contain the runoff from the 100-year 24-hour rainfall event. A minimum pond volume of 450 m^3 has been assumed based on a water depth of 0.5 m in the pond for the operation of pumps.
- It is assumed that runoff collecting in the Explosives Plant holding pond will be trucked or pumped to the Intermediate Collecting Pond from April to October. Runoff accumulates in the holding pond during the winter months.
- The reclaim pond in the Tailings Management Area has a maximum storage capacity of 4,000,000 m^3 based on its configuration. A minimum pond volume of 410,000 m^3 has been assumed based on a water elevation of 430 m in the pond.
- It is assumed that reclaim water will be pumped from the Tailings Management Area to the Intermediate Collecting Pond year round.
- The reclaim pond is used as a water storage reservoir to help match seasonal inflows to water consumption. The storage volume accumulates between April and October, and is drawn down over the winter months to a minimum volume of 410,000 m^3 in March ready for the spring freshet.
- It is assumed that the Process Plant Collecting Pond will be operated year round to supply the water required for ore processing to the mill.

Symbols and Abbreviations

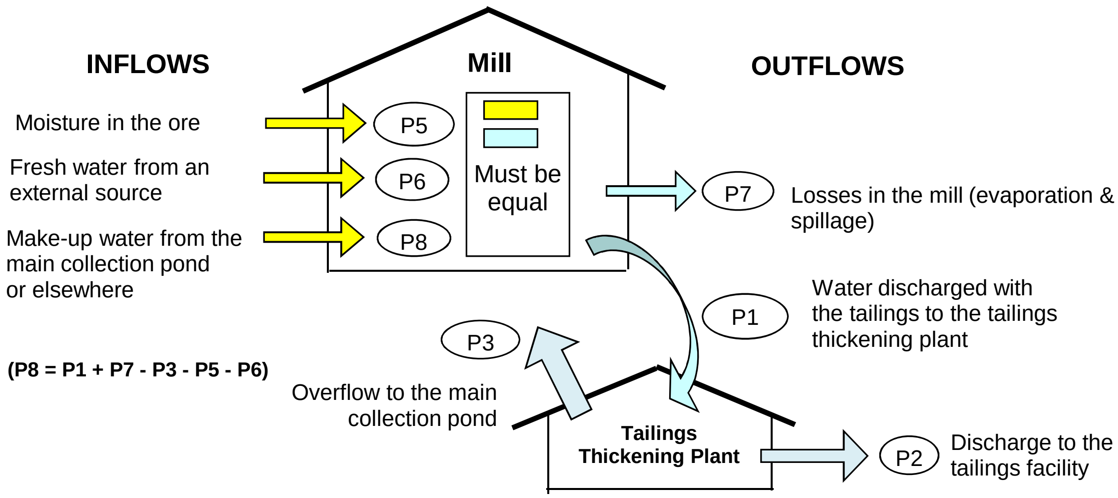
G_s	Specific gravity	- density of solid particles / density of water
e	Void ratio	- voids volume / solids volume *(used to calculate the density of deposited tailings)*
n	Porosity	- voids volume / total volume *(used to designate the void space in deposited waste rock)*
ρ_d	Dry density	- dry mass / volume
ω	Water content	- % mass of water / mass of dry solids *(soil mechanics terminology)*
ω_t	Water content	- % mass of water / total mass *(solids + water)*
S	Slurry density	- % mass of solids / total mass *(solids + water)*

Note: This sheet is protected. The password is simply Golder.

Golder Associates

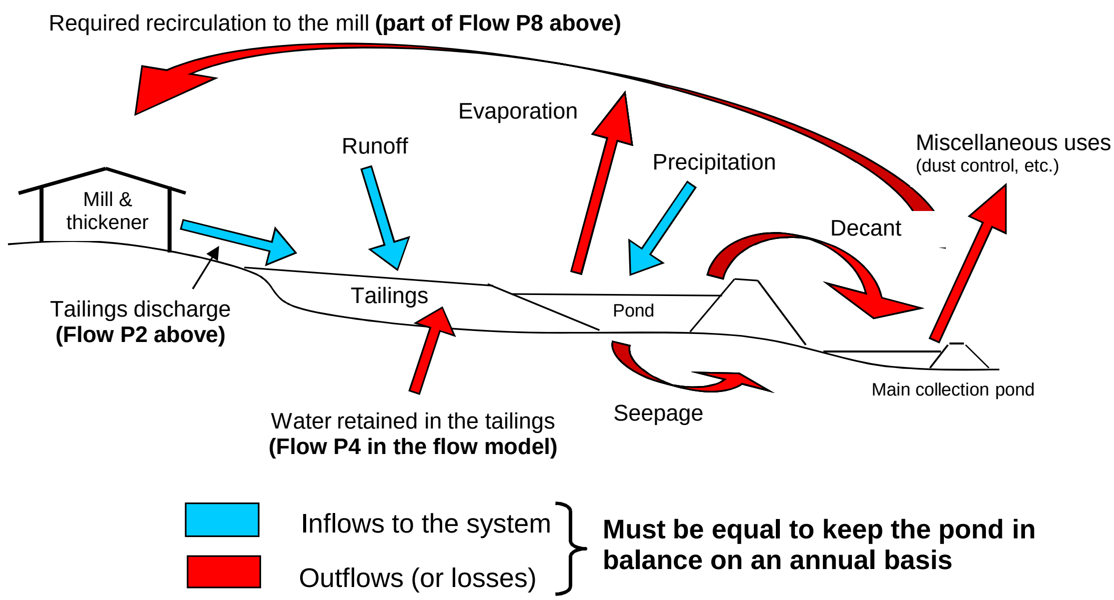
Sheet 4

Schematic Flow Sketches



Mill & Tailings Thickening Plant

(Numbers & colours correspond to the flows associated with the processing of the ore in the flow model)



Waste Disposal Facility

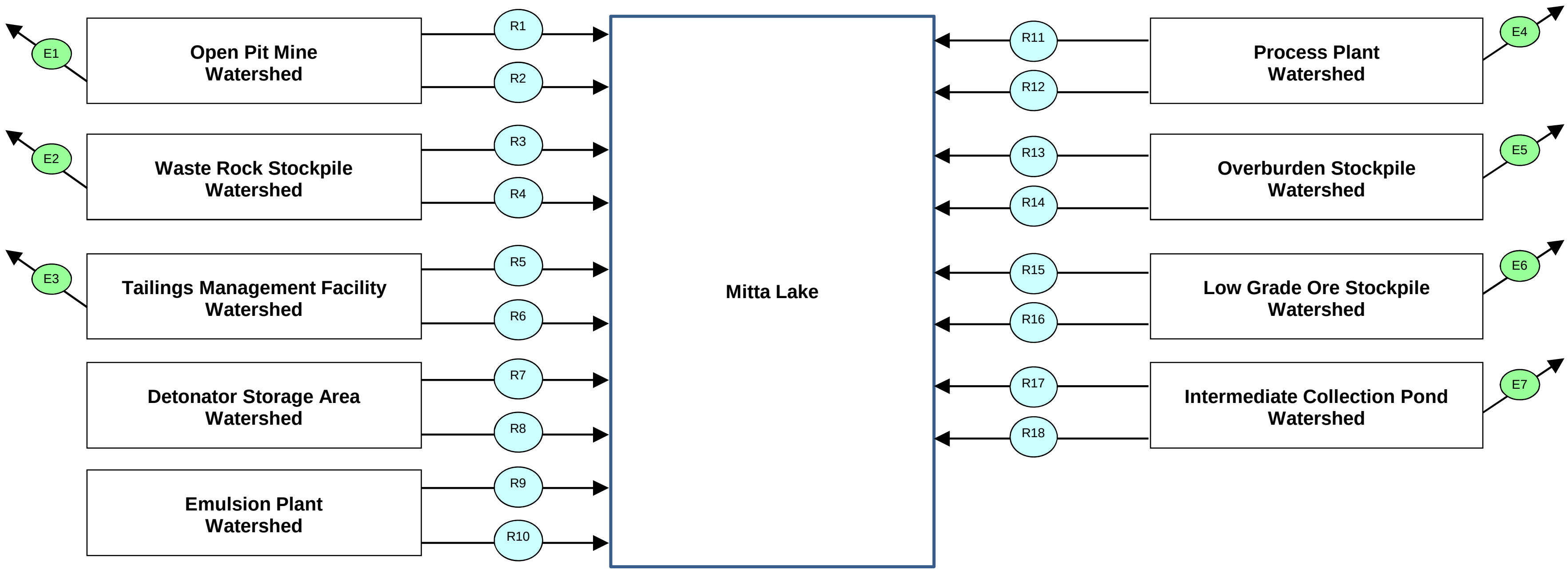
Note: This sheet is protected. The password is simply Golder.

Golder Associates

Sheet 5
Flow Logic Diagram and List of Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	21-Nov-12	**Configuration:**	Ultimate



Area	Flow No.	Description	
Flows associated with runoff from precipitation (R)	R1	Open pit mine	Runoff from natural ground
	R2		Direct precipitation to pond
	R3	Waste Rock Stockpile	Runoff from natural ground
	R4		Direct precipitation to pond
	R5	Tailings Management Facility	Runoff from natural ground
	R6		Direct precipitation to pond
	R7	Detonator Storage Area	Runoff from waste rock
	R8	Emulsion Plant	Precipitation onto the pond
	R9	Process Plant	Runoff from natural ground
	R10		Direct precipitation to pond
	R11	Overburden Stockpile	Runoff from natural ground
	R12		Direct precipitation to pond
	R13	Low Grade Ore Stockpile	Runoff from natural ground
	R14		Direct precipitation to pond
	R15	Inintermediate Collection Pond	Runoff from natural ground
	R16		Direct precipitation to pond

Area	Flow No.	Description
Evaporation from ponds (E)	E1	Open pit mine watershed
	E2	Tailings Management Facility watershed
	E3	Process Plant watershed
	E4	Intermediate collection Pond watershed
Discharge to environment (D)	D1	Inflow to Mitta Lake

11/21/2012

Sheet 6
Hydrological Data

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Level of Study:**	Feasibility	**Date:**	21-Nov-12
Project #:	11-1118-0117 (2000)	**Revision No:**	A	**Configuration:**	Existing Conditions

Meteorological Station(s)	- Location	Atikokan (Climate ID: 6020379)
	- Elevation (m)	395.3
	- Mean annual precipitation (mm)	739.6
	- Distance from the site (km)	24

Month	**Precipitation** (Note 1)			**Sublimation** (Note 2)		**Factored Runoff** (Notes 3 and 4)				
	Annual selected for flow modelling (mm/yr) →		**758.0**	**Rate estimate (mm/d)** →	**0.3**	From natural ground		From Ponds		Monthly runoff **(Note 4)**
	Mean	**Monthly Distribution**	**Precipitation**	Months with sublimation (% of mm/d)		Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Expressed as a % of accumulation
	(mm)	(% of total)	(mm)		(mm)		(mm)		(mm)	(%)
Aug	97.8	13.2	100.2	0	0.0	0.40	40.1	1.00	100.2	100
Sep	91.6	12.4	93.9	0	0.0	0.50	46.9	1.00	93.9	100
Oct	68.4	9.2	70.1	0	0.0	0.30	21.0	1.00	70.1	100
Nov	48.2	6.5	49.4	100	9.0	0.80	32.3	1.00	40.4	60
Dec	27.9	3.8	28.6	100	9.3	0.80	15.4	1.00	19.3	35
Jan	28.8	3.9	29.5	100	9.3	0.80	16.2	1.00	20.2	10
Feb	24.7	3.3	25.3	100	8.4	0.80	13.5	1.00	16.9	0
Mar	37.4	5.1	38.3	100	9.3	0.80	23.2	1.00	29.0	10
Apr	42.9	5.8	44.0	100	9.0	0.80	28.0	1.00	35.0	100
May	70.8	9.6	72.6	0	0.0	0.80	58.0	1.00	72.6	100
Jun	103.3	14.0	105.9	0	0.0	0.30	31.8	1.00	105.9	100
Jul	97.9	13.2	100.3	0	0.0	0.25	25.1	1.00	100.3	100
TOTAL	**739.7**	**100.0**	**758.0**		**54.3**	**0.52**	**351.6**	**1.00**	**703.7**	

Annual Precipitation for Wet and Dry Years		
Return Period	**Precipitation**	
	Wetter	Dryer
(years)	(mm/yr)	
2	758	758
5	850	667
10	899	620
25	951	571
50	986	539
100	1,017	511

Month	**Days/ month**	**Lake Evaporation**
		(mm)
Aug	31	104.8
Sep	30	64.6
Oct	31	34.1
Nov	30	0.0
Dec	31	0.0
Jan	31	0.0
Feb	28	0.0
Mar	31	0.0
Apr	30	59.9
May	31	107.4
Jun	30	116.1
Jul	31	129.2
TOTAL	365	616.1

NOTES:

1 For years that are wetter and drier than the mean year, it usually has to be assumed that the monthly distribution of precipitation is the same as the distribution in the mean year.

2 "Sublimation" is the term used to describe the process of snow and ice changing into water vapour in the air without first melting into water. The process is due to a combination of factors such as radiation from the sun, temperature, pressure and other atmospheric conditions.

3 The "runoff factor" is the percentage of the precipitation that runs off and ends up in the pond(s). It takes into account evapo-transpiration and infiltration. From natural ground it might be in the order of 20 to 70 % depending on the degree of ground saturation, the intensity of rainfall and the time of year. It will be greater from prepared surfaces and pit walls. For modeling purposes it can be assumed that 100 % of the precipitation that falls on the pond and wet tailings beach ends up in the pond. The runoff from a dry tailings beach is considerably less depending on the degree of saturation of the tailings. Flow measurements are seldom available to correlate with precipitation to establish runoff factors at a new mine site.

4 A flow model must be able to account for winter snow accumulation by entering a runoff distribution as a percentage of the total accumulated to date. For example if there is no runoff in January, February and March and 100% runoff in April then the total accumulation of snow over these three months will enter the inflow side of the water balance in April. For the flow model to function properly the precipitation and evaporation data has to start and end on the table in months that 100% of the factored runoff is discharged.

5 [orange] Information are only required in the orange shaded cells (data input cells). [cyan] Values used in the flow model.

6 This sheet is protected except for the orange shaded cells. The password is simply Golder.

11/21/2012

Sheet 7
Watershed Areas

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	21-Nov-12	**Configuration:**	Existing Conditions

Watershed		**Sub Watersheds**			**Flow Number**
Facility	Area (ha)	Collecting area	% of total	(m^2)	
Open pit mine	153.22	Natural ground	87.5	1,340,784	R1
		Direct precipitation to pond	12.5	191,400	R2
		TOTAL	**100.0**	**1,532,184**	
Waste Rock Stockpile (includes Security Building)	192.40	Natural ground	98.4	1,892,906	R3
		Direct precipitation to pond	1.6	31,100	R4
		TOTAL	**100.0**	**1,892,906**	
Tailings Management Facility	957.2	Natural ground	98.0	9,381,693	R5
		Direct precipitation to pond	2.0	190,500	R6
		TOTAL	**100.0**	**9,381,693**	
Detonator Storage Area	0.19	Natural ground	100	1,902	R7
		TOTAL	**100.0**	**1,902**	
Emulsion Plant	2.04	Natural ground	100	20,402	R8
		TOTAL	**100.0**	**20,402**	
Process Control Collection Pond	53.23	Natural ground	99	526,967	R9
		Direct precipitation to pond	1	5,323	R10
		TOTAL	**100.0**	**526,967**	
Overburden Stockpile	39.29	Natural ground	99.7	391,806	R11
		Direct precipitation to pond	0.3	1,100	R12
		TOTAL	**100.0**	**391,806**	
Low Grade Ore Stockpile	27.45	Natural ground	88.7	243,406	R13
		Direct precipitation to pond	11.3	31,100	R14
		TOTAL	**100.0**	**243,406**	
Office/Truck shop/Fuel bay to Intermediate Collection Pond	20.39	Natural ground	99.9	203,727	R15
		Direct precipitation to pond	0.1	200	R16
		TOTAL	**100.0**	**203,727**	

Note: The sub-watersheds are subdivided by percentages which will change as the mine develops.

Data are only input into the orange shaded cells. The calculations are carried out in the other cells and the relevant data are automantically transferred to other sheets. The sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 8
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	21-Nov-12	Configuration:	Existing Conditions

	Open Pit - Runoff Flows (m^3 / mo)						Waste Rock Stockpile - Runoff Flows (m^3 / mo)					
Runoff #	R1 - Natural ground			R2 - Ponds			R3 - Natural Ground			R4 - Ponds		
Area (m^2)	1,340,784			191,400			1,892,906			31,100		
Month	Available runoff [1]	Accumulation left over each month [2]	R1 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R2 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R3 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R4 (note 3)
Aug	53,749	0	53,749	19,182	0	19,182	75,882	0	75,882	3,117	0	3,117
Sep	62,927	0	62,927	17,966	0	17,966	88,840	0	88,840	2,919	0	2,919
Oct	28,194	0	28,194	13,416	0	13,416	39,803	0	39,803	2,180	0	2,180
Nov	43,326	17,330	25,996	7,731	3,092	4,639	61,167	24,467	36,700	1,256	502	754
Dec	20,691	24,714	13,308	3,692	4,410	2,375	29,212	34,891	18,788	600	717	386
Jan	21,680	41,755	4,639	3,869	7,451	828	30,608	58,949	6,550	629	1,211	135
Feb	18,139	59,894	0	3,237	10,688	0	25,609	84,558	0	526	1,737	0
Mar	31,133	81,925	9,103	5,555	14,619	1,624	43,954	115,661	12,851	903	2,375	264
Apr	37,500	0	119,425	6,692	0	21,310	52,943	0	168,604	1,087	0	3,463
May	77,821	0	77,821	13,886	0	13,886	109,867	0	109,867	2,256	0	2,256
Jun	42,579	0	42,579	20,261	0	20,261	60,112	0	60,112	3,292	0	3,292
Jul	33,628	0	33,628	19,202	0	19,202	47,475	0	47,475	3,120	0	3,120
TOTAL	471,368		471,368	134,688		134,688	665,473		665,473	21,885		21,885

	Tailings Management Facility - Runoff Flows (m^3 / mo)						Detonator Storage Area - Runoff Flows (m^3 / mo)			Emulsion Plant - Runoff Flows (m^3 / mo)		
Runoff #	R5 - Natural Ground			R6 - Ponds			R7 - Natural Ground			R8 - Dyke downstream slope		
Area (m^2)	9,381,693			190,500			1,902			20,402		
Month	Available runoff [1]	Accumulation left over each month [2]	R5 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R6 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R7 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R8 (note 3)
Aug	376,092	0	376,092	19,092	0	19,092	76	0	76	818	0	818
Sep	440,312	0	440,312	17,882	0	17,882	89	0	89	958	0	958
Oct	197,275	0	197,275	13,353	0	13,353	40	0	40	429	0	429
Nov	303,160	121,264	181,896	7,695	3,078	4,617	61	25	37	659	264	396
Dec	144,780	172,929	93,115	3,675	4,389	2,363	29	35	19	315	376	202
Jan	151,702	292,168	32,463	3,850	7,416	824	31	59	7	330	635	71
Feb	126,924	419,091	0	3,222	10,637	0	26	85	0	276	911	0
Mar	217,845	573,242	63,694	5,529	14,550	1,617	44	116	13	474	1,247	139
Apr	262,397	0	835,640	6,660	0	21,210	53	0	169	571	0	1,817
May	544,525	0	544,525	13,821	0	13,821	110	0	110	1,184	0	1,184
Jun	297,931	0	297,931	20,165	0	20,165	60	0	60	648	0	648
Jul	235,298	0	235,298	19,111	0	19,111	48	0	48	512	0	512
TOTAL	3,298,240	1,578,694	3,298,240	134,055	40,070	134,055	669		669	7,173		7,173

	Process Plant Control Pond - Runoff Flows (m^3 / mo)						Overburden Stockpile Runoff Flows (m^3 / mo)					
Runoff #	R9 - Natural ground			R10 - Ponds			R11 - Natural Ground			R12 - Ponds		
Area (m^2)	526,967			5,323			391,806			1,100		
Month	Available runoff [1]	Accumulation left over each month [2]	R9 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R10 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R11 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R12 (note 3)
Aug	21,125	0	21,125	533	0	533	15,707	0	15,707	110	0	110
Sep	24,732	0	24,732	500	0	500	18,389	0	18,389	103	0	103
Oct	11,081	0	11,081	373	0	373	8,239	0	8,239	77	0	77
Nov	17,028	6,811	10,217	215	86	129	12,661	5,064	7,596	44	18	27
Dec	8,132	9,713	5,230	103	123	66	6,046	7,222	3,889	21	25	14
Jan	8,521	16,411	1,823	108	207	23	6,336	12,202	1,356	22	43	5
Feb	7,129	23,540	0	90	297	0	5,301	17,502	0	19	61	0
Mar	12,236	32,199	3,578	154	407	45	9,098	23,940	2,660	32	84	9
Apr	14,739	0	46,938	186	0	593	10,958	0	34,899	38	0	122
May	30,586	0	30,586	386	0	386	22,741	0	22,741	80	0	80
Jun	16,735	0	16,735	563	0	563	12,442	0	12,442	116	0	116
Jul	13,217	0	13,217	534	0	534	9,827	0	9,827	110	0	110
TOTAL	185,261		185,261	3,746		3,746	137,744		137,744	774		774

	Low Grade Ore Stockpile Runoff Flows (m^3 / mo)						Intermediate Collection Pond Runoff Flows (m^3 / mo)					
Runoff #	R13 - Natural Ground			R14 - Ponds			R15 - Prepared Ground			R16 - Ponds		
Area (m^2)	243,406			31,100			20,402			200		
Month	Available runoff [1]	Accumulation left over each month [2]	R13 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R14 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R15 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R16 (note 3)
Aug	24,394	0	24,394	3,117	0	3,117	818	0	818	20	0	20
Sep	22,848	0	22,848	2,919	0	2,919	958	0	958	19	0	19
Oct	17,061	0	17,061	2,180	0	2,180	429	0	429	14	0	14
Nov	9,832	3,933	5,899	1,256	502	754	659	264	396	8	3	5
Dec	4,695	5,608	3,020	600	717	386	315	376	202	4	5	2
Jan	4,920	9,475	1,053	629	1,211	135	330	635	71	4	8	1
Feb	4,116	13,592	0	526	1,737	0	276	911	0	3	11	0
Mar	7,065	18,591	2,066	903	2,375	264	474	1,247	139	6	15	2
Apr	8,510	0	27,101	1,087	0	3,463	571	0	1,817	7	0	22
May	17,659	0	17,659	2,256	0	2,256	1,184	0	1,184	15	0	15
Jun	25,766	0	25,766	3,292	0	3,292	648	0	648	21	0	21
Jul	24,419	0	24,419	3,120	0	3,120	512	0	512	20	0	20
TOTAL	171,285		171,285	21,885		21,885	7,173		7,173	141		141

Notes:

1. Available runoff = area x factored runoff from Sheet 8
2. Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %
3. R = (available runoff + accumulation left over) x monthly %
4. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
5. The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.
6. The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.
7. This sheet is protected. The password is simply Golder.

Sheet 9-1
Monthly Flows
To Environment

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	21-Nov-12	**Configuration:**	Existing Conditions

Month	**Flows (m^3/month)**																
	+R1	+R2	+R3	+R4	+R5	+R6	+R7	+R8	+R9	+R10	+R11	+R12	+R13	+R14	+R15	+R16	**+R**
	Runoff from Natural Ground (Open Pit)	Runoff from Ponds (Open Pit)	Runoff from Natural Ground (Waste Rock Stockpile)	Runoff from Ponds (Waste Rock Stockpile)	Runoff from Natural Ground (TMF)	Runoff from Ponds (TMF)	Runoff from Natural Ground (Detonator Storage Area)	Runoff from Natural Ground (Detonator Storage Area)	Runoff from Natural Ground (Emulstion Plant)	Runoff from Ponds (Emulsion Plant)	Runoff from Natural Ground (Process Plant)	Runoff from Ponds (Process Plant)	Runoff from Natural Ground (Overburden Stockpile)	Runoff from Ponds (Overburden Stockpile)	Runoff from Natural Ground (Low Grade Ore Stockpile)	Runoff from Ponds (Mineralized Rock Stockpile)	**Total Runoff Inflow**
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	**(Calculated)**
Aug	53,749	19,182	75,882	3,117	376,092	19,092	76	818	21,125	533	15,707	110	24,394	3,117	818	20	**613,832**
Sep	62,927	17,966	88,840	2,919	440,312	17,882	89	958	24,732	500	18,389	103	22,848	2,919	958	19	**702,359**
Oct	28,194	13,416	39,803	2,180	197,275	13,353	40	429	11,081	373	8,239	77	17,061	2,180	429	14	**334,143**
Nov	25,996	4,639	36,700	754	181,896	4,617	37	396	10,217	129	7,596	27	5,899	754	396	5	**280,056**
Dec	13,308	2,375	18,788	386	93,115	2,363	19	202	5,230	66	3,889	14	3,020	386	202	2	**143,365**
Jan	4,639	828	6,550	135	32,463	824	7	71	1,823	23	1,356	5	1,053	135	71	1	**49,982**
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Mar	9,103	1,624	12,851	264	63,694	1,617	13	139	3,578	45	2,660	9	2,066	264	139	2	**98,066**
Apr	119,425	21,310	168,604	3,463	835,640	21,210	169	1,817	46,938	593	34,899	122	27,101	3,463	1,817	22	**1,286,593**
May	77,821	13,886	109,867	2,256	544,525	13,821	110	1,184	30,586	386	22,741	80	17,659	2,256	1,184	15	**838,378**
Jun	42,579	20,261	60,112	3,292	297,931	20,165	60	648	16,735	563	12,442	116	25,766	3,292	648	21	**504,634**
Jul	33,628	19,202	47,475	3,120	235,298	19,111	48	512	13,217	534	9,827	110	24,419	3,120	512	20	**410,151**
TOTAL	**471,368**	**134,688**	**665,473**	**21,885**	**3,298,240**	**134,055**	**669**	**7,173**	**185,261**	**3,746**	**137,744**	**774**	**171,285**	**21,885**	**7,173**	**141**	**5,261,558**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 9-2
Monthly Flows
To Environment

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	21-Nov-12	Configuration:	Existing Conditions

Month	Flows (m^3/month)								
	-E1	-E2	-E3	-E4	-E5	-E6	-E7	+R	-D1
	Evaporation from Open Pit Watershed	Evaporation from Waste Rock Stockpile Watershed	Evaporation from TMF Watershed	Evaporation from Process Plant Watershed	Evaporation from Overburden stockpile watershed	Evaporation from Mineralized Rock Stockpile Waterhsed	Evaporation from ICP Watershed	Runoff from Natural Ground	Total flow to Environment
	(From Sheet 6)	(From Sheet 6)	(From Sheet 6)	(From Sheet 6)	(From Sheet 6)	(From Sheet 6)	(From Sheet 6)	(From Sheet 8)	(Calculated)
Aug	-20,059	-3,259	-19,964	-558	-115	-3,259	-21	613,832	-566,596
Sep	-12,364	-2,009	-12,306	-344	-71	-2,009	-13	702,359	-673,242
Oct	-6,527	-1,061	-6,496	-182	-38	-1,061	-7	334,143	-318,773
Nov	0	0	0	0	0	0	0	280,056	-280,056
Dec	0	0	0	0	0	0	0	143,365	-143,365
Jan	0	0	0	0	0	0	0	49,982	-49,982
Feb	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	98,066	-98,066
Apr	-11,465	-1,863	-11,411	-319	-66	-1,863	-12	1,286,593	-1,259,594
May	-20,556	-3,340	-20,460	-572	-118	-3,340	-21	838,378	-789,971
Jun	-22,222	-3,611	-22,117	-618	-128	-3,611	-23	504,634	-452,305
Jul	-24,729	-4,018	-24,613	-688	-142	-4,018	-26	410,151	-351,918
TOTAL	-117,922	-19,161	-117,367	-3,279	-678	-19,161	-123	5,261,558	-4,983,867

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 10
Summary of All Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Project #:**	11-1118-0117 (2000)	**Date:**	21-Nov-12	**Revision #**	A	**Annual Precipitation:**	758 mm	**Model year:**	Existing Conditions

			Flow (m^3)												
			August	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**Annual**
Flows associated with processing the ore			31	30	31	30	31	31	28	31	30	31	30	31	365
Runoff from precipitation															1
R1	Open pit mine	Runoff from natural ground	53,749	62,927	28,194	25,996	13,308	4,639	0	9,103	119,425	77,821	42,579	33,628	471,368
R2		Direct precipitation to ponds	19,182	17,966	13,416	4,639	2,375	828	0	1,624	21,310	13,886	20,261	19,202	134,688
R3	Waste Rock Stockpile	Runoff from natural ground	75,882	88,840	39,803	36,700	18,788	6,550	0	12,851	168,604	109,867	60,112	47,475	665,473
R4		Direct precipitation to ponds	3,117	2,919	2,180	754	386	135	0	264	3,463	2,256	3,292	3,120	21,885
R5	Tailings Management Facility watershed	Runoff from natural ground	376,092	440,312	197,275	181,896	93,115	32,463	0	63,694	835,640	544,525	297,931	235,298	3,298,240
R6		Direct precipitation to ponds	19,092	17,882	13,353	4,617	2,363	824	0	1,617	21,210	13,821	20,165	19,111	134,055
R7	Detonator Storage Area	Infiltration through Waste Rock	76	89	40	37	19	7	0	13	169	110	60	48	669
R8	Emulsion Plant	Runoff from natural ground	818	958	429	396	202	71	0	139	1,817	1,184	648	512	7,173
R9	Process Plant	Runoff from natural ground	21,125	24,732	11,081	10,217	5,230	1,823	0	3,578	46,938	30,586	16,735	13,217	185,261
R10		Direct precipitation to ponds	533	500	373	129	66	23	0	45	593	386	563	534	3,746
R11	Overburden Stockpile	Runoff from natural ground	15,707	18,389	8,239	7,596	3,889	1,356	0	2,660	34,899	22,741	12,442	9,827	137,744
R12		Direct precipitation to ponds	110	103	77	27	14	5	0	9	122	80	116	110	774
R13	Mineralized Rock stockpile	Runoff from natural ground	24,394	22,848	17,061	5,899	3,020	1,053	0	2,066	27,101	17,659	25,766	24,419	171,285
R14		Direct precipitation to ponds	3,117	2,919	2,180	754	386	135	0	264	3,463	2,256	3,292	3,120	21,885
R15	Intermediate Collection Pond	Runoff from natural ground	818	958	429	396	202	71	0	139	1,817	1,184	648	512	7,173
R16		Direct precipitation to ponds	20	19	14	5	2	1	0	2	22	15	21	20	141
Evaporation															
E1	Open pit mine watershed		20,059	12,364	6,527	0	0	0	0	0	11,465	20,556	22,222	24,729	117,922
E2	Tailings Management Facility watershed		3,259	2,009	1,061	0	0	0	0	0	1,863	3,340	3,611	4,018	19,161
E3	Process Plant watershed		19,964	12,306	6,496	0	0	0	0	0	11,411	20,460	22,117	24,613	117,367
E4	Intermediate collection pond watershed		558	344	182	0	0	0	0	0	319	572	618	688	3,279
E5	Intermediate collection pond watershed		115	71	38	0	0	0	0	0	66	118	128	142	678
E6	Intermediate collection pond watershed		3,259	2,009	1,061	0	0	0	0	0	1,863	3,340	3,611	4,018	19,161
E7	Intermediate collection pond watershed		21	13	7	0	0	0	0	0	12	21	23	26	123
Discharge to the environment															
D1	Inflow to Mitta Lake		566,596	673,242	318,773	280,056	143,365	49,982	0	98,066	1,259,594	789,971	452,305	351,918	4,983,867

Note: Input data are not required on this sheet, The information is automatically transferred from the other sheets. The sheet is protected. The password is simply Golder.
A negative number means the flow does not exist (note that this convention is not consistent with that used in the rest of the model)

Ultimate Mine Configuration

Sheet 1

Preliminary

Site Wide Deterministic
Flow (Water Balance) Model
Ultimate Configuration
Average Climatic Conditions

Mine	Osisko Hammond Reef Gold Project
Owner(s)	Osisko Mining Corporation
Operator	Osisko Mining Corporation
Location	Atikokan, Ontario
Product	Gold
Revision #	D
Date	September 27, 2012
Level of study	Feasibility
Configuration	Ultimate
Golder Project #	11-1118-0117 (2000)

Data are only input into the orange shaded cells. Relevant data is automatically transferred to other sheets.
Each sheet is password protected except for the orange shaded cells. The password is simply Golder.

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Sheet 2
Table of Contents

Preliminary

Sheet #

Note: This sheet is protected. The password is simply Golder.

Sheet 3

Model Set-up

- The flow model is developed on linked Excel spreadsheets. Input data are only required in the orange shaded cells. The calculations are automatically carried out and linked to the relevant cells on other sheets.
- The sheet entitled "5 Flow Schematics" shows the typical flows into and out of a mill and tailings facility.
- The flow logic and a list of flows specific to this mine site are shown on the sheet entitled "6 Flow Logic Diagram".
- Input parameters required for the calculation of flows associated with the processing of the ore are listed on the sheet entitled "7 Mine Operating Data", together with any miscellaneous flows that could impact the ponds and water management.
- Precipitation, evaporation, sublimation, seepage and runoff coefficients are input in the "8 Hydrological Data" sheet. The data on this sheet can be easily manipulated to model the impact of varying climatic conditions.
- The watersheds at the mine site, their surface area and the percentage covered by different land surface types are input in the sheet entitled "9 Watershed Areas".
- Runoff from the different land surface types in the watersheds at the mine site is calculated on the "10 Runoff" sheet.
- The sheets that follow ("11-1 Plant Site", "11-2 Open Pit", "11-3 Waste Dump", "11-4 Explosives Plant", "11-5 Tailings Management Area", "11-6 Ore Stockpile" and "11-7 Proc. Plant Collect. Pond") show the monthly inflows and outflows to the different watersheds on the mine site. Sheets "11-4 Explosives Plant" and "11-5 Tailings Management Area" require the input of the minimum and maximum storage volumes for the holding pond and reclaim pond associated with these facilities.
- All the monthly inflows and outflows to the different watersheds on the mine site are summarized on the sheet entitled "12 Summary of Flows" at the end of the workbook.

Water Management Assumptions

- It is assumed that the runoff from the Waste Dump, Ore Stockpile, Explosives Plant and Tailings Management Area will be conveyed by gravity or pumping to an Intermediate Collecting Pond in the Ore Stockpile watershed.
- It is assumed that runoff conveyed to the intermediate collecting point will be pumped to the Process Plant Collecting Pond year round.
- The Explosives Plant holding pond has been sized to contain the runoff from the 100-year 24-hour rainfall event. A minimum pond volume of 450 m³ has been assumed based on a water depth of 0.5 m in the pond for the operation of pumps.
- It is assumed that runoff collecting in the Explosives Plant holding pond will be trucked or pumped to the Intermediate Collecting Pond from April to October. Runoff accumulates in the holding pond during the winter months.
- The reclaim pond in the Tailings Management Area has a maximum storage capacity of 4,000,000 m³ based on its configuration. A minimum pond volume of 410,000 m³ has been assumed based on a water elevation of 430 m in the pond.
- It is assumed that reclaim water will be pumped from the Tailings Management Area to the Intermediate Collecting Pond year round.
- The reclaim pond is used as a water storage reservoir to help match seasonal inflows to water consumption. The storage volume accumulates between April and October, and is drawn down over the winter months to a minimum volume of 410,000 m³ in March ready for the spring freshet.
- It is assumed that the Process Plant Collecting Pond will be operated year round to supply the water required for ore processing to the mill.

Symbols and Abbreviations

G_s	Specific gravity	- density of solid particles / density of water
e	Void ratio	- voids volume / solids volume *(used to calculate the density of deposited tailings)*
n	Porosity	- voids volume / total volume *(used to designate the void space in deposited waste rock)*
ρ_d	Dry density	- dry mass / volume
ω	Water content	- % mass of water / mass of dry solids *(soil mechanics terminology)*
ω_t	Water content	- % mass of water / total mass *(solids + water)*
S	Slurry density	- % mass of solids / total mass *(solids + water)*

Note: This sheet is protected. The password is simply Golder.

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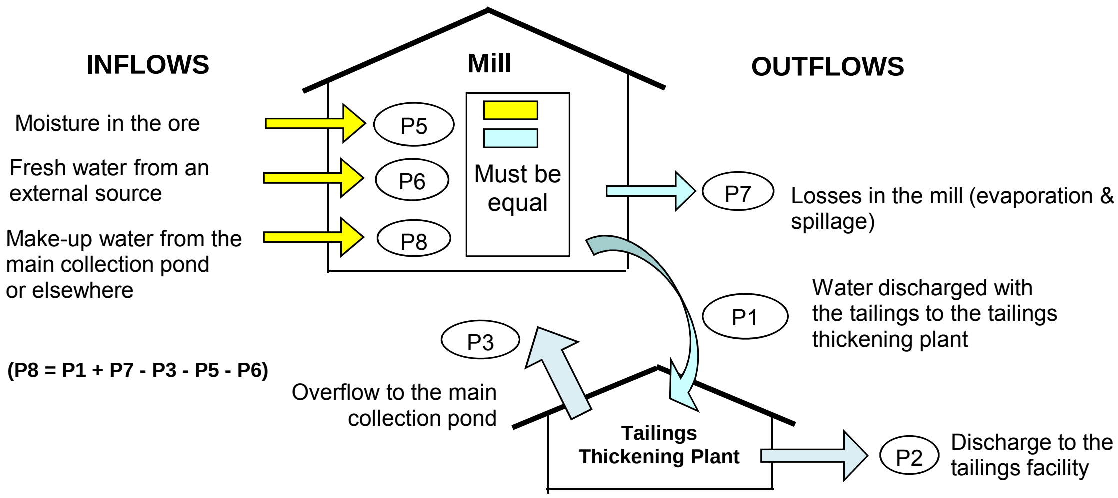
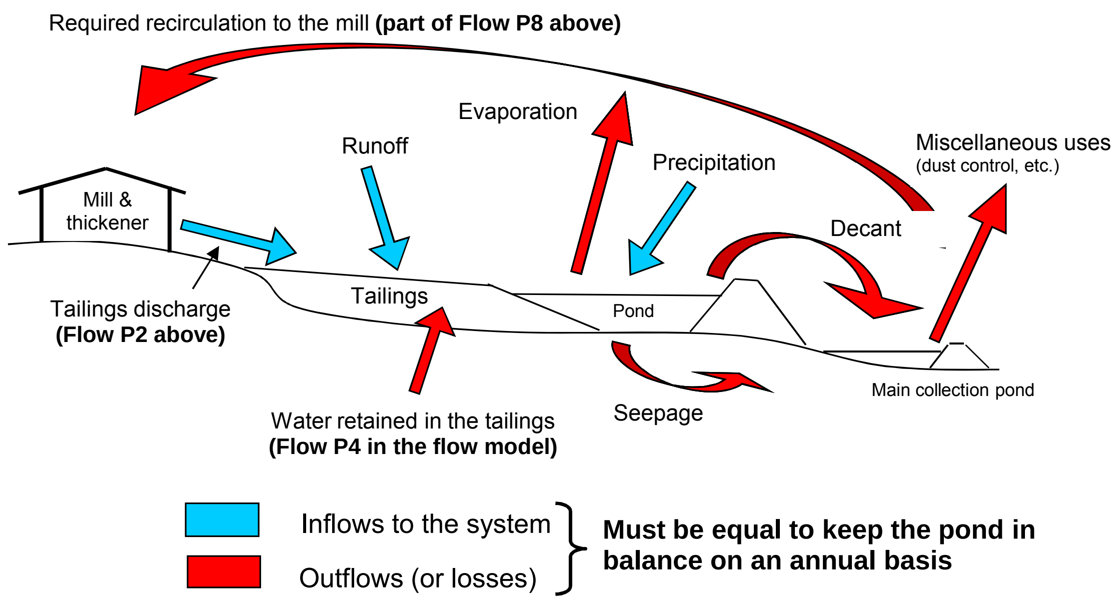
Sheet 4

Schematic Flow Sketches



Mill & Tailings Thickening Plant

(Numbers & colours correspond to the flows associated with the processing of the ore in the flow model)



Waste Disposal Facility

Note: This sheet is protected. The password is simply Golder.

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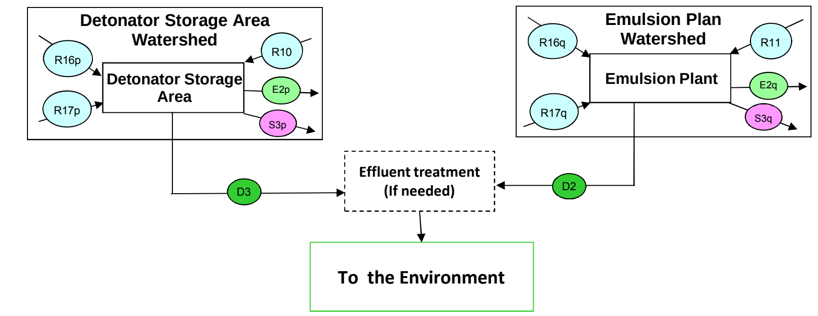
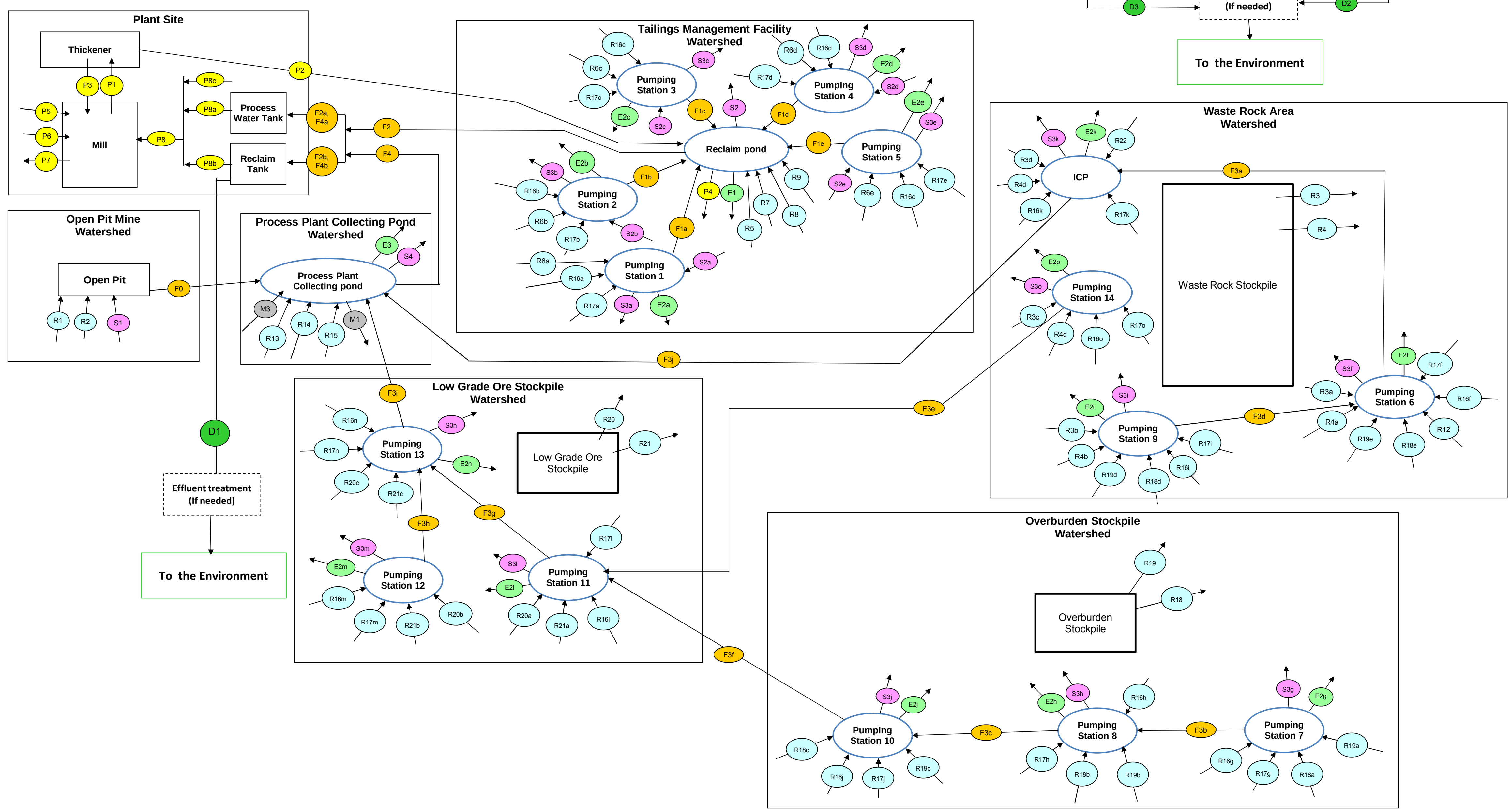
Sheet 5
Flow Logic Diagram and List of Flows

Preliminary



Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
Date:	27-Sep-12	Configuration:	Ultimate



Area	Flow No.	Description	
Flows associated with runoff from precipitation (R)	R1	Open pit mine	Runoff from natural ground
	R2		Runoff from open pit walls
	R3a	Waste Dump	Runoff from Waste Rock
	R3b		
	R3c		
	R3d		
	R4a		Infiltration through Waste Rock
	R4b		
	R4c		
	R4d		
	R5	Tailings Management Facility	Runoff from waste rock (containment dyke upstream slope)
	R6a		Runoff from waste rock (containment dyke downstream slope)
	R6b		
	R6c		
	R6d		
	R6e		
	R7		Runoff from unsaturated tailings
	R8		Precipitation onto the pond and saturated tailings
	R9		Runoff from natural ground
	R10	Detonator Storage Area	Runoff from prepared ground
	R11	Emulsion Plant	Runoff from prepared ground
	R12	Security Building	Runoff from prepared ground
	R13	Main Collecting Pond	Runoff from natural ground
	R14		Runoff from prepared ground
	R15		Precipitation onto the pond
	R16a	Pumping Stations	Runoff from natural ground
	R16b		
	R16c		
	R16d		
	R16e		
	R16f		
	R16g		
	R16h		
	R16i		
	R16j		
	R16k		
	R16l		
	R16m		
	R16n		
	R16o		
	R16p		
	R16q		
Evaporation from ponds (E)	E1	TMF reclaim pond and saturated tailings	
	E2a	Pumping Station 1	
	E2b	Pumping Station 2	
	E2c	Pumping Station 3	
	E2d	Pumping Station 4	
	E2e	Pumping Station 5	
	E2f	Pumping Station 6	
	E2g	Pumping Station 7	
	E2h	Pumping Station 8	
	E2i	Pumping Station 9	
	E2j	Pumping Station 10	
	E2k	Intermediate Collection Pond	
	E2l	Pumping Station 11	
	E2m	Pumping Station 12	
	E2n	Pumping Station 13	
	E2o	Pumping Station 14	
	E2p	Detonator Storage Area	
	E2q	Emulsion Plant	
	E3	Process Plant Collecting Pond	
Seepage (S)	S1	Into open pit mine	
	S2	Tailings Management Area (lost to groundwater, not recovered in pumping stations)	
	S2a	TMF to Pumping Station 1	
	S2b	TMF to Pumping Station 2	
	S2c	TMF to Pumping Station 3	
	S2d	TMF to Pumping Station 4	
	S2e	TMF to Pumping Station 5	
	S3a	From Pumping Station 1	
	S3b	From Pumping Station 2	
	S3c	From Pumping Station 3	
	S3d	From Pumping Station 4	
	S3e	From Pumping Station 5	
	S3f	From Pumping Station 6	
	S3g	From Pumping Station 7	
	S3h	From Pumping Station 8	
	S3i	From Pumping Station 9	
	S3j	From Pumping Station 10	
	S3k	From Intermediate Collection Pond	
	S3l	From Pumping Station 11	
	S3m	From Pumping Station 12	
	S3n	From Pumping Station 13	
	S3o	From Pumping Station 14	
	S3p	From Detonator Storage Area	
	S3q	From Emulsion Plant Area	
	S4	From Process Plant Collecting Pond	

Area	Flow No.	Description	
	R17a	Pumping Stations	Direct Precipitation
	R17b		
	R17c		
	R17d		
	R17e		
	R17f		
	R17g		
	R17h		
	R17i		
	R17j		
	R17k		
	R17l		
	R17m		
	R17n		
	R17o		
	R17p		
	R17q		
	R18a	Overburden Stockpile	Runoff from stockpile
	R18b		
	R18c		
	R18d		
	R18e		
	R19a		Infiltration through stockpile
	R19b		
	R19c		
	R19d		
	R19e		
	R20a	Low Grade Ore Stockpile	Runoff from stockpile
	R20b		
	R20c		
	R21a		Infiltration through stockpile
	R21b		
	R21c		
	R22	Office/Truck shop/Fuel Bay	Runoff from prepared ground
Miscellaneous flows (M)	M1	Water for dust control during the months April to October	
	M2	Potable water (used to calculate treated sewage flow)	
	M3	Treated sewage	
Flows associated with the ore and tailings production (P)	P1	Discharge from the mill to the tailings thickener	
	P2	Water in tailings discharged from thickener to TMF	
	P3	Overflow from the thickener to the mill	
	P4	Water retained in the deposited tailings	
	P5	Moisture going into the mill with the ore	
	P6	Fresh water required in the mill (gland seal, reagent mixing)	
	P7	Losses in the mill	
	P8	Make-up water required in the mill (from Process Plant Collecting Pond or elsewhere)	
Surface flows between elements (F)	F0	Pumped outflow from the open pit to the Process Plant Collecting Pond	
	F1a	Pumped outflow from Sump 1 to TMF Reclaim Pond	
	F1b	Pumped outflow from Sump 2 to TMF Reclaim Pond	
	F1c	Pumped outflow from Sump 3 to TMF Reclaim Pond	
	F1d	Pumped outflow from Sump 4 to TMF Reclaim Pond	
	F1e	Pumped outflow from Sump 5 to TMF Reclaim Pond	
	F2	Pumped outflow from TMF Reclaim Pond to Reclaim or Process Tank	
	F3a	Pumped outflow from Sump 6 to Intermediate Collection Pond	
	F3b	Pumped outflow from Sump 7 to Sump 8	
	F3c	Pumped outflow from Sump 8 to Sump 10	
	F3d	Pumped outflow from Sump 9 to Sump 6	
	F3e	Pumped outflow from Sump 14 to Sump 11	
	F3f	Pumped outflow from Sump 10 to Sump 11	
	F3g	Pumped outflow from Sump 11 to Sump 13	
	F3h	Pumped outflow from Sump 12 to Sump 13	
	F3i	Pumped outflow from Sump 13 to Process Plant Collection Pond	
	F3j	Pumped outflow from the ICP to the Process Plant Collection Pond	
	F4	Outflow from Proces Plant Collection Pond to the Reclaim Tank and Process Water Tank	
Discharge to environment (D)	D1	Outflow from the Reclaim Tank to the environment	
	D2	Outflow from the emulsion plant bunded area to the environment	
	D3	Outflow from the detonator storage bunded area to the environment	

11/27/2012

Sheet 6

Mine Operating Data

Preliminary

<u>Nominal</u> <u>and</u> <u>design</u> <u>values</u>: Nominal values are based on the planned annual mill throughput averaged over 365 days per year. The <u>nominal</u> <u>values</u> are used to size the tailings facility and for the flow (water balance) modeling. The design values are larger and take into account the availability of the mill (% of the year that the mill is available to operate) plus an appropriate factor of safety. The <u>design</u> <u>values</u> are used to size and design the process facilities, pipelines and pumping systems. A word of caution - sometimes process designers define nominal and design values differently.

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

	Indicator		Flow No. (Note 1)	Source or Calculation	Stream		Total	Units (metric)
	Letter	Symbol			1	2		
Ore processing								
- Ore reserve	A			Osisko	231,000,000	0	231,000,000	t
- Design mill production rate	B			Osisko	-	-	65,217	t/d
- Mill availability *(% of the year the mill is available to operate)*	C			Osisko	-	-	92.0	%
- Factor of safety on the design value	D			Osisko	-	-	1.15	-
- Nominal (average) mill production rate	E			Osisko	-	-	60,000	t/d
- Life of mine	F			Osisko	-	-	10.5	years
- Water content of ore going into the mill *(% of total ~~dry~~ mass of ore)*		ω_t		Osisko	-	-	2.0	%
- Nominal (average) mill fresh water requirements (gland seal, reagent mixing)			P6	Osisko	-	-	7,200	m^3/d
- Water lost in the mill to evaporation			P7	Osisko	-	-	2,640	m^3/d
- CN feed *(% mass of dry solids in flotation feed)*	G			Osisko	-	-	7.0	%
- Nominal (average) CN feed rate	H			G x E			4,200	tpd
- Discharge slurry density of the CN feed thickener *(% solids in total mass of tailings)*		S_1		Osisko	-	-	50.0	% solids
- Discharge slurry density of the tailings thickener feed *(% solids in total mass of tailings)*		S_2		Osisko			43.1	% solids
- Discharge slurry density of the tailings from the thickener *(% solids in total mass of tailings)*		S_3		Osisko	-	-	65.0	% solids
- Overflow from thickener to the mill			P3	(H/S1-H)+((K-H)/S2-(K-H))-(K/S3-K)	-	-	45,521	m^3/d
Tailings management								
- Tailings / ore ratio	J			Assumed	-	-	1.00	-
- Nominal (average) tailings production rate	K			E x J	-	-	60,000	t/d
- Specific gravity of tailings solids		G_s		Osisko	2.73	0	2.73	-
- Void ratio of deposited tailings		e		Golder	0.95	0	0.95	-
- Dry density of deposited tailings		ρ_d		$G_s \times \rho_\omega / (1 + e)$	-	-	1.40	t/m^3
- Total volume of deposited tailings (*based on nominal values)*	L			$(A * J) / \rho_d$	165,000,000	0	165,000,000	m^3
- Saturated water content of deposited tailings *(% of dry mass of tailings)*		ω		e / G_s	-	-	34.8	%
- Volume of water retained in the tailings			P4	$K \times \omega$	-	-	20,879	m^3/d
Miscellaneous Flows								
- Water required for dust control in the months April to October			M1	Assumed	-	-	3,320	m^3/d
- Potable water requirments			M2	Assumed	-	-	35	m^3/d
- Sewage *(estimated as 80% of potable water)*			M3	Assumed	-	-	28	m^3/d

Notes:

1 Flow numbers correspond to the flows on the sheet entitled "6 Flow Logic Diagram".

2 Water losses in the mill (evaporation/spillage) were assumed to be 1.0 % of the total process water going through the mill.

3 It is assumed that the density of water is unity for the calculations.

4 Input data are only required in the orange shaded cells.

5 This sheet is protected except for the orange shaded cells. The password is simply Golder.

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Sheet 7
Hydrological Data

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Level of Study:**	Feasibility	**Date:**	27-Sep-12
Project #:	11-1118-0117 (2000)	**Revision No:**	D	**Configuration:**	Ultimate

Meteorological Station(s)	-	Location	Atikokan (Climate ID: 6020379)
	-	Elevation (m)	395.3
	-	Mean annual precipitation (mm)	739.6
	-	Distance from the site (km)	24

Precipitation (Note 1)				Sublimation (Note 2)		Factored Runoff (Notes 3 and 4)					
Month	Annual selected for flow modelling (mm/yr) →		758.0	Rate estimate (mm/d) →	0.3	From natural ground		From prepared ground (around mill site etc.)		From open pit walls	
	Mean	Monthly Distribution	Precipitation	Months with sublimation (% of mm/d)		Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model
	(mm)	(% of total)	(mm)		(mm)		(mm)		(mm)		(mm)
Aug	97.8	13.2	100.2	0	0.0	0.40	40.1	0.70	70.2	0.85	85.2
Sep	91.6	12.4	93.9	0	0.0	0.50	46.9	0.70	65.7	0.85	79.8
Oct	68.4	9.2	70.1	0	0.0	0.30	21.0	0.70	49.1	0.85	59.6
Nov	48.2	6.5	49.4	100	9.0	0.80	32.3	0.80	32.3	0.95	38.4
Dec	27.9	3.8	28.6	100	9.3	0.80	15.4	0.80	15.4	0.95	18.3
Jan	28.8	3.9	29.5	100	9.3	0.80	16.2	0.80	16.2	0.95	19.2
Feb	24.7	3.3	25.3	100	8.4	0.80	13.5	0.80	13.5	0.95	16.1
Mar	37.4	5.1	38.3	100	9.3	0.80	23.2	0.80	23.2	0.95	27.6
Apr	42.9	5.8	44.0	100	9.0	0.80	28.0	0.80	28.0	0.95	33.2
May	70.8	9.6	72.6	0	0.0	0.80	58.0	0.70	50.8	0.85	61.7
Jun	103.3	14.0	105.9	0	0.0	0.30	31.8	0.70	74.1	0.85	90.0
Jul	97.9	13.2	100.3	0	0.0	0.25	25.1	0.70	70.2	0.85	85.3
TOTAL	**739.7**	**100.0**	**758.0**		**54.3**	**0.52**	**351.6**	**0.73**	**508.7**	**0.88**	**614.2**

Month	From waste rock		Waste rock and ore interflow		From low grade ore stockpile		From unsaturated tailings		From ponds and saturated tailings		From Overburden Stockpile		Overburden Stockpile interflow		Monthly runoff **(Note 4)**
	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Expressed as a % of accumulation
		(mm)		(mm)		(mm)		(mm)		(mm)		(mm)		(mm)	(%)
Aug	0.20	20.0	0.65	65.1	0.20	20.0	0.60	60.1	1.00	100.2	0.40	40.1	0.45	45.1	100
Sep	0.20	18.8	0.65	61.0	0.20	18.8	0.60	56.3	1.00	93.9	0.50	46.9	0.35	32.9	100
Oct	0.20	14.0	0.65	45.6	0.20	14.0	0.60	42.1	1.00	70.1	0.30	21.0	0.55	38.6	100
Nov	0.25	10.1	0.60	24.2	0.25	10.1	0.65	26.3	1.00	40.4	0.80	32.3	0.05	2.0	60
Dec	0.25	4.8	0.60	11.6	0.25	4.8	0.65	12.5	1.00	19.3	0.80	15.4	0.05	1.0	35
Jan	0.25	5.1	0.60	12.1	0.25	5.1	0.65	13.1	1.00	20.2	0.80	16.2	0.05	1.0	10
Feb	0.25	4.2	0.60	10.1	0.25	4.2	0.65	11.0	1.00	16.9	0.80	13.5	0.05	0.8	0
Mar	0.25	7.3	0.60	17.4	0.25	7.3	0.65	18.9	1.00	29.0	0.80	23.2	0.05	1.5	10
Apr	0.25	8.7	0.60	21.0	0.25	8.7	0.65	22.7	1.00	35.0	0.80	28.0	0.05	1.7	100
May	0.20	14.5	0.65	47.2	0.20	14.5	0.60	43.5	1.00	72.6	0.80	58.0	0.05	3.6	100
Jun	0.20	21.2	0.65	68.8	0.20	21.2	0.60	63.5	1.00	105.9	0.30	31.8	0.55	58.2	100
Jul	0.20	20.1	0.65	65.2	0.20	20.1	0.60	60.2	1.00	100.3	0.25	25.1	0.60	60.2	100
TOTAL	**0.21**	**148.8**	**0.64**	**449.4**	**0.21**	**148.8**	**0.61**	**430.3**	**1.00**	**703.7**	**0.52**	**351.6**	**0.33**	**246.6**	

Annual Precipitation for Wet and Dry Years		
Return Period	**Precipitation**	
	Wetter	Dryer
(years)	(mm/yr)	
2	758	758
5	850	667
10	899	620
25	951	571
50	986	539
100	1,017	511

Month	Days/ month	Lake Evaporation	Seepage									
			Location:	Into open pit mine	From reclaim pond (TMA)						Pumping Station 1	Pumping Station 2	Pumping Station 3
			Seepage #:	**S1**	**S2**	**S2a**	**S2b**	**S2c**	**S2d**	**S2e**	**S3a**	**S3b**	**S3c**
			Rate estimate (m^3/day) (Note 1)	750	0	0	0	0	0	0	0	0	0
		(mm)	Months with seepage (% of m^3/day)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Aug	31	104.8	100	23,250	0	0	0	0	0	0	0	0	0
Sep	30	64.6	100	22,500	0	0	0	0	0	0	0	0	0
Oct	31	34.1	100	23,250	0	0	0	0	0	0	0	0	0
Nov	30	0.0	100	22,500	0	0	0	0	0	0	0	0	0
Dec	31	0.0	100	23,250	0	0	0	0	0	0	0	0	0
Jan	31	0.0	100	23,250	0	0	0	0	0	0	0	0	0
Feb	28	0.0	100	21,000	0	0	0	0	0	0	0	0	0
Mar	31	0.0	100	23,250	0	0	0	0	0	0	0	0	0
Apr	30	59.9	100	22,500	0	0	0	0	0	0	0	0	0
May	31	107.4	100	23,250	0	0	0	0	0	0	0	0	0
Jun	30	116.1	100	22,500	0	0	0	0	0	0	0	0	0
Jul	31	129.2	100	23,250	0	0	0	0	0	0	0	0	0
TOTAL	365	616.1		**273,750**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Month	Pumping Station 4	Pumping Station 5	Pumping Station 6	Pumping Station 7	Pumping Station 8	Pumping Station 9	Pumping Station 10	From Intermediate Collection Pond	Pumping Station 11	Pumping Station 12	Pumping Station 13	Pumping Station 14	Pumping Station 15	Pumping Station 16	From detonator storage	From Emulsion Plant	From Process Plant Collecting Pond
	S3d	**S3e**	**S3f**	**S3g**	**S3h**	**S3i**	**S3j**	**S3k**	**S3l**	**S3m**	**S3n**	**S3o**	**S3p**	**S3q**	**S3r**	**S3s**	**S4**
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

NOTES:

1 For years that are wetter and drier than the mean year, it usually has to be assumed that the monthly distribution of precipitation is the same as the distribution in the mean year.

2 "Sublimation" is the term used to describe the process of snow and ice changing into water vapour in the air without first melting into water. The process is due to a combination of factors such as radiation from the sun, temperature, pressure and other atmospheric conditions.

3 The "runoff factor" is the percentage of the precipitation that runs off and ends up in the pond(s). It takes into account evapo-transpiration and infiltration. From natural ground it might be in the order of 20 to 70 % depending on the degree of ground saturation, the intensity of rainfall and the time of year. It will be greater from prepared surfaces and pit walls. For modeling purposes it can be assumed that 100 % of the precipitation that falls on the pond and wet tailings beach ends up in the pond. The runoff from a dry tailings beach is considerably less depending on the degree of saturation of the tailings. Flow measurements are seldom available to correlate with precipitation to establish runoff factors at a new mine site.

4 A flow model must be able to account for winter snow accumulation by entering a runoff distribution as a percentage of the total accumulated to date. For example if there is no runoff in January, February and March and 100% runoff in April then the total accumulation of snow over these three months will enter the inflow side of the water balance in April. For the flow model to function properly the precipitation and evaporation data has to start and end on the table in months that 100% of the factored runoff is discharged.

5 [ ] Information are only required in the orange shaded cells (data input cells). [ ] Values used in the flow model.

6 This sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 8
Watershed Areas

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

Watershed		Sub Watersheds			Flow Number
Facility	Area (ha)	Collecting area	% of total	(m^2)	
Open pit mine	153.22	Natural ground	0	0	R1
		Open pit walls	100	1,532,184	R2
		TOTAL	**100.0**	**1,532,184**	
Waste Rock Stockpile	172.45	Runoff from waste rock	40	689,800	R3a
			17.5	301,788	R3b
			5	86,225	R3c
			37.5	646,688	R3d
		TOTAL	**100.0**	**1,724,500**	
		Infiltration through waste rock	41.7	719,117	R4a
			24.1	415,605	R4b
			4.6	79,327	R4c
			29.6	510,452	R4d
		TOTAL	**100.0**	**1,724,500**	
Tailings Management Facility	891.3	Runoff from waste rock (containment dykes upstream slope)	4.4	393,198	R5
		Runoff from waste rock (containment dykes downstream slopes)	0.4	35,674	R6a
			1.8	164,077	R6b
			0.6	50,857	R6c
			0.1	13,274	R6d
			1.7	151,100	R6e
		Runoff from unsaturated tailings	75.7	6,746,016	R7
		Precipitation onto the pond and saturated tailings	6.4	569,446	R8
		Runoff from natural ground	8.9	789,721	R9
		TOTAL	**100.0**	**8,913,363**	
Detonator Storage Area	0.15	Runoff from prepared ground	100	1,500	R10
		TOTAL	**100.0**	**1,500**	
Emulsion Plant	2.00	Runoff from prepared ground	100	20,000	R11
		TOTAL	**100.0**	**20,000**	
Security Building	1.30	Runoff from prepared ground	100	13,000	R12
		TOTAL	**100.0**	**13,000**	
Process Control Collection Pond	52.25	Runoff from natural ground	0	0	R13
		Runoff from prepared ground	89	474,820	R14
		Direct precipitation onto the pond	11	47,630	R15
		TOTAL	**100.0**	**522,450**	
Pumping Stations	97.53	Runoff from natural ground	0.042	41,161	R16a
			0.138	134,710	R16b
			0.193	188,303	R16c
			0.016	15,500	R16d
			0.284	277,146	R16e
			0.141	137,700	R16f
			0.011	10,500	R16g
			0.003	3,300	R16h
			0.029	27,900	R16i
			0.006	6,100	R16j
			0.057	55,400	R16k
			0.034	33,500	R16l
			0.013	12,200	R16m
			0.005	5,300	R16n
			0.020	19,700	R16o
			0.000	0	R16p
			0.000	0	R16q
		Direct precipitation onto the pond	0.016	402	R17a
			0.016	402	R17b
			0.016	402	R17c
			0.016	402	R17d
			0.016	402	R17e
			0.016	402	R17f
			0.016	402	R17g
			0.016	402	R17h
			0.016	402	R17i
			0.016	402	R17j
			0.016	402	R17k
			0.016	402	R17l
			0.016	402	R17m
			0.016	402	R17n
			0.016	402	R17o
			0.016	402	R17p
			0.016	402	R17q
		TOTAL	**100.0**	**975254.0**	
Overburden Stockpile	37.18	Runoff from stockpile	23.1	85,886	R18a
			9.8	36,436	R18b
			36.4	135,335	R18c
			18.7	69,527	R18d
			12	44,616	R18e
		TOTAL	**100.0**	**371,800**	
		Interflow through stockpile	36	133,848	R19a
			9.4	34,949	R19b
			25.9	96,296	R19c
			17.8	66,180	R19d
			10.9	40,526	R19e
		TOTAL	**100.0**	**371,800**	
Low Grade Ore Stockpile	22.23	Runoff from stockpile	55.8	124,043	R20a
			37.9	84,252	R20b
			6.3	14,005	R20c
		TOTAL	**100.0**	**222,300**	
		Infiltration through stockpile	27.1	60,243	R21a
			67.8	150,719	R21b
			5.1	11,337	R21c
		TOTAL	**100.0**	**222,300**	
Office/Truck shop/Fuel bay	14.80	Runoff from prepared ground	100	148,125	R22
		TOTAL	**100.0**	**148,125**	

Note: The sub-watersheds are subdivided by percentages which will change as the mine develops.

Data are only input into the orange shaded cells. The calculations are carried out in the other cells and the relevant data are automantically transferred to other sheets. The sheet is protected except for the orange shaded cells. The password is simply Golder.

11/27/2012

Sheet 9 - 1
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	27-Sep-12	Configuration:	Ultimate

	Open Pit - Runoff Flows (m^3 / mo)						Waste Dump - Runoff Flows (m^3 / mo)														
Runoff #	R1 - Natural ground			R2 - Pit walls			R3 - Waste Rock			R3a	R3b	R3c	R3d	R4 - Infiltration			R4a	R4b	R4c	R4d
Area (m^2)	0			1,532,184			1,724,500			689,800	301,788	86,225	646,688	1,724,500			719,117	415,605	79,327	510,452
Month	Available runoff [1]	Accumulation left over each month [2]	R1 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R2 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R3 (note 3)	R3a (note 3)	R3b (note 3)	R3c (note 3)	R3d (note 3)	Available runoff [1]	Accumulation left over each month [2]	R4 (note 3)	R4a (note 3)	R4b (note 3)	R4c (note 3)	R4d (note 3)
Aug	0	0	0	130,522	0	130,522	34,566	0	34,566	13,826	6,049	1,728	12,962	112,339	0	112,339	46,845	27,074	5,168	33,252
Sep	0	0	0	122,247	0	122,247	32,374	0	32,374	12,950	5,666	1,619	12,140	105,217	0	105,217	43,875	25,357	4,840	31,144
Oct	0	0	0	91,285	0	91,285	24,175	0	24,175	9,670	4,231	1,209	9,066	78,568	0	78,568	32,763	18,935	3,614	23,256
Nov	0	0	0	58,794	23,518	35,277	17,414	6,966	10,449	4,179	1,828	522	3,918	41,794	16,718	25,076	10,457	6,043	1,154	7,423
Dec	0	0	0	28,078	33,537	18,059	8,317	9,933	5,349	2,140	936	267	2,006	19,960	23,840	12,837	5,353	3,094	591	3,800
Jan	0	0	0	29,421	56,662	6,296	8,714	16,783	1,865	746	326	93	699	20,914	40,279	4,475	1,866	1,079	206	1,325
Feb	0	0	0	24,615	81,278	0	7,291	24,074	0	0	0	0	0	17,498	57,777	0	0	0	0	0
Mar	0	0	0	42,248	111,174	12,353	12,514	32,928	3,659	1,463	640	183	1,372	30,032	79,028	8,781	3,662	2,116	404	2,599
Apr	0	0	0	50,889	0	162,062	15,073	0	48,001	19,200	8,400	2,400	18,000	36,174	0	115,203	48,039	27,764	5,299	34,100
May	0	0	0	94,488	0	94,488	25,023	0	25,023	10,009	4,379	1,251	9,384	81,325	0	81,325	33,912	19,599	3,741	24,072
Jun	0	0	0	137,862	0	137,862	36,510	0	36,510	14,604	6,389	1,825	13,691	118,656	0	118,656	49,480	28,596	5,458	35,122
Jul	0	0	0	130,655	0	130,655	34,601	0	34,601	13,840	6,055	1,730	12,975	112,453	0	112,453	46,893	27,101	5,173	33,286
TOTAL	0		0	941,105		941,105	256,570		256,570	102,628	44,900	12,829	96,214	774,931	217,641	774,931	323,146	186,758	35,647	229,379

	TMF - Runoff Flows (m3 / mo)										
Runoff #	R5 - Dyke upstream slope			R6 - Dyke downstream slope			R6a	R6b	R6c	R6d	R6e
Area (m^2)	393,198			414,982			35,674	164,077	50,857	13,274	151,100
Month	Available runoff [1]	Accumulation left over each month [2]	R5 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R6 (note 3)	R6a (note 3)	R6b (note 3)	R6c (note 3)	R6d (note 3)	R6e (note 3)
Aug	7,881	0	7,881	8,318	0	8,318	715	3,289	1,019	266	3,029
Sep	7,382	0	7,382	7,791	0	7,791	670	3,080	955	249	2,837
Oct	5,512	0	5,512	5,817	0	5,817	500	2,300	713	186	2,118
Nov	3,971	1,588	2,382	4,191	1,676	2,514	216	994	308	80	915
Dec	1,896	2,265	1,220	2,001	2,390	1,287	111	509	158	41	469
Jan	1,987	3,827	425	2,097	4,039	449	39	177	55	14	163
Feb	1,662	5,489	0	1,754	5,793	0	0	0	0	0	0
Mar	2,853	7,508	834	3,011	7,924	880	76	348	108	28	321
Apr	3,437	0	10,945	3,627	0	11,551	993	4,567	1,416	369	4,206
May	5,705	0	5,705	6,022	0	6,022	518	2,381	738	193	2,193
Jun	8,324	0	8,324	8,786	0	8,786	755	3,474	1,077	281	3,199
Jul	7,889	0	7,889	8,326	0	8,326	716	3,292	1,020	266	3,032
TOTAL	58,500		58,500	61,741		61,741	5,308	24,411	7,566	1,975	22,481

	TMF - Runoff Flows (m3 / mo)									Detonator Storage Area Runoff Flows (m3 / mo)			Emulsion Plant Runoff Flows (m3 / mo)		
Runoff #	R7 - Unsaturated Tailings			R8 - Pond and Saturated Tailings			R9 - Natural Ground			R10 - Prepared Ground			R11 - Prepared Ground		
Area (m^2)	6,746,016			569,446			789,721			1,500			20,000		
Month	Available runoff [1]	Accumulation left over each month [2]	R7 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R8 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R9 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R10 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R11 (note 3)
Aug	405,650	0	405,650	57,070	0	57,070	31,658	0	31,658	105	0	105	1,403	0	1,403
Sep	379,934	0	379,934	53,452	0	53,452	37,064	0	37,064	99	0	99	1,314	0	1,314
Oct	283,706	0	283,706	39,914	0	39,914	16,606	0	16,606	74	0	74	981	0	981
Nov	177,117	70,847	106,270	23,001	9,201	13,801	25,519	10,208	15,311	48	19	29	646	259	388
Dec	84,586	101,031	54,402	10,985	13,120	7,065	12,187	14,557	7,838	23	28	15	309	369	199
Jan	88,630	170,695	18,966	11,510	22,167	2,463	12,770	24,594	2,733	24	47	5	323	623	69
Feb	74,154	244,849	0	9,630	31,797	0	10,684	35,278	0	20	67	0	271	893	0
Mar	127,273	334,910	37,212	16,528	43,493	4,833	18,337	48,254	5,362	35	92	10	464	1,222	136
Apr	153,302	0	488,212	19,909	0	63,402	22,088	0	70,341	42	0	134	559	0	1,781
May	293,660	0	293,660	41,314	0	41,314	45,836	0	45,836	76	0	76	1,016	0	1,016
Jun	428,462	0	428,462	60,279	0	60,279	25,079	0	25,079	111	0	111	1,482	0	1,482
Jul	406,064	0	406,064	57,128	0	57,128	19,807	0	19,807	105	0	105	1,405	0	1,405
TOTAL	2,902,538		2,902,538	400,719		400,719	277,635		277,635	763		763	10,173		10,173

	Security Building Runoff Flows (m3 / mo)			Main Collection Pond - Runoff Flows (m3 / mo)								
Runoff #	R12 - Prepared Ground			R13 - Natural ground			R14 - Prepared Ground			R15 - Pond		
Area (m^2)	13,000			0			474,820			47,630		
Month	Available runoff [1]	Accumulation left over each month [2]	R12 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R13 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R14 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R15 (note 3)
Aug	912	0	912	0	0	0	33,310	0	33,310	4,773	0	4,773
Sep	854	0	854	0	0	0	31,199	0	31,199	4,471	0	4,471
Oct	638	0	638	0	0	0	23,297	0	23,297	3,338	0	3,338
Nov	420	168	252	0	0	0	15,343	6,137	9,206	1,924	770	1,154
Dec	201	240	129	0	0	0	7,328	8,752	4,713	919	1,097	591
Jan	210	405	45	0	0	0	7,678	14,787	1,643	963	1,854	206
Feb	176	581	0	0	0	0	6,424	21,211	0	805	2,660	0
Mar	302	794	88	0	0	0	11,025	29,013	3,224	1,382	3,638	404
Apr	364	0	1,158	0	0	0	13,280	0	42,293	1,665	0	5,303
May	660	0	660	0	0	0	24,114	0	24,114	3,456	0	3,456
Jun	963	0	963	0	0	0	35,184	0	35,184	5,042	0	5,042
Jul	913	0	913	0	0	0	33,344	0	33,344	4,778	0	4,778
TOTAL	6,613		6,613	0		0	241,526		241,526	33,517		33,517

Notes:
1. Available runoff = area x factored runoff from Sheet 8
2. Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %
3. R = (available runoff + accumulation left over) x monthly %
4. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
5. The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.
6. The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.
7. This sheet is protected. The password is simply Golder.

Sheet 9 - 2
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	27-Sep-12	Configuration:	Ultimate

Pumping Stations - Runoff Flows (m^3 / mo)

Runoff #	R16 - Natural ground			R16a	R16b	R16c	R16d	R16e	R16f	R16g	R16h	R16i	R16j	R16k	R16l	R16m	R16n	R16o	R16p	R16q
Area (m^2)	948,720			41,161	134,710	188,303	15,500	277,146	137,700	10,500	3,300	27,900	6,100	55,400	33,500	12,200	5,300	19,700	0	0
Month	Available runoff [1]	Accumulation left over each month [2]	R16 (note 3)	R16a (note 3)	R16b (note 3)	R16c (note 3)	R16d (note 3)	R16e (note 3)	R16f (note 3)	R16g (note 3)	R16h (note 3)	R16i (note 3)	R16j (note 3)	R16k (note 3)	R16l (note 3)	R16m (note 3)	R16n (note 3)	R16o (note 3)	R16p (note 3)	R16q (note 3)
Aug	38,032	0	38,032	1,650	5,400	7,549	621	11,110	5,520	421	132	1,118	245	2,221	1,343	489	212	790	0	0
Sep	44,526	0	44,526	1,932	6,322	8,838	727	13,007	6,463	493	155	1,309	286	2,600	1,572	573	249	925	0	0
Oct	19,949	0	19,949	866	2,833	3,960	326	5,828	2,896	221	69	587	128	1,165	704	257	111	414	0	0
Nov	30,657	12,263	18,394	798	2,612	3,651	301	5,373	2,670	204	64	541	118	1,074	650	237	103	382	0	0
Dec	14,641	17,487	9,416	409	1,337	1,869	154	2,751	1,367	104	33	277	61	550	332	121	53	196	0	0
Jan	15,341	29,545	3,283	142	466	652	54	959	476	36	11	97	21	192	116	42	18	68	0	0
Feb	12,835	42,380	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	22,029	57,969	6,441	279	915	1,278	105	1,882	935	71	22	189	41	376	227	83	36	134	0	0
Apr	26,535	0	84,504	3,666	11,999	16,772	1,381	24,686	12,265	935	294	2,485	543	4,935	2,984	1,087	472	1,755	0	0
May	55,065	0	55,065	2,389	7,819	10,929	900	16,086	7,992	609	192	1,619	354	3,215	1,944	708	308	1,143	0	0
Jun	30,128	0	30,128	1,307	4,278	5,980	492	8,801	4,373	333	105	886	194	1,759	1,064	387	168	626	0	0
Jul	23,794	0	23,794	1,032	3,379	4,723	389	6,951	3,454	263	83	700	153	1,389	840	306	133	494	0	0
TOTAL	333,533		333,533	14,471	47,359	66,200	5,449	97,434	48,410	3,691	1,160	9,809	2,145	19,476	11,777	4,289	1,863	6,926	0	0

Pumping Stations - Runoff Flows (m^3 / mo)

Runoff #	R17 - Pond			R17a	R17b	R17c	R17d	R17e	R17f	R17g	R17h
Area (m^2)	5,628			402	402	402	402	402	402	402	402
Month	Available runoff [1]	Accumulation left over each month [2]	R17 (note 3)	R17a (note 3)	R17b (note 3)	R17c (note 3)	R17d (note 3)	R17e (note 3)	R17f (note 3)	R17g (note 3)	R17h (note 3)
Aug	564	0	564	40	40	40	40	40	40	40	40
Sep	528	0	528	38	38	38	38	38	38	38	38
Oct	394	0	394	28	28	28	28	28	28	28	28
Nov	227	91	136	10	10	10	10	10	10	10	10
Dec	109	130	70	5	5	5	5	5	5	5	5
Jan	114	219	24	2	2	2	2	2	2	2	2
Feb	95	314	0	0	0	0	0	0	0	0	0
Mar	163	430	48	3	3	3	3	3	3	3	3
Apr	197	0	627	45	45	45	45	45	45	45	45
May	408	0	408	29	29	29	29	29	29	29	29
Jun	596	0	596	43	43	43	43	43	43	43	43
Jul	565	0	565	40	40	40	40	40	40	40	40
TOTAL	3,960		3,960	283	283	283	283	283	283	283	283

Pumping Stations - Runoff Flows (m3/mo)

Runoff #	R17 - Pond			R17i	R17j	R17k	R17l	R17m	R17n	R17o	R17p	R17q
Area (m^2)	5,628			402	402	402	402	402	402	402	402	402
Month	Available runoff [1]	Accumulation left over each month [2]	R17 (note 3)	R17i (note 3)	R17j (note 3)	R17k (note 3)	R17l (note 3)	R17m (note 3)	R17n (note 3)	R17o (note 3)	R17p (note 3)	R17q (note 3)
Aug	564	0	564	40	40	40	40	40	40	40	40	40
Sep	528	0	528	38	38	38	38	38	38	38	38	38
Oct	394	0	394	28	28	28	28	28	28	28	28	28
Nov	227	91	136	10	10	10	10	10	10	10	10	10
Dec	109	130	70	5	5	5	5	5	5	5	5	5
Jan	114	219	24	2	2	2	2	2	2	2	2	2
Feb	95	314	0	0	0	0	0	0	0	0	0	0
Mar	163	430	48	3	3	3	3	3	3	3	3	3
Apr	197	0	627	45	45	45	45	45	45	45	45	45
May	408	0	408	29	29	29	29	29	29	29	29	29
Jun	596	0	596	43	43	43	43	43	43	43	43	43
Jul	565	0	565	40	40	40	40	40	40	40	40	40
TOTAL	3,960		3,960	283	283	283	283	283	283	283	283	283

Overburden Stockpile - Runoff Flows (m3 / mo)

Runoff #	R18 - Stockpile			R18a	R18b	R18c	R18d	R18e
Area (m^2)	371,800			85,886	36,436	135,335	69,527	44,616
Month	Available runoff [1]	Accumulation left over each month [2]	R18 (note 3)	R18a (note 3)	R18b (note 3)	R18c (note 3)	R18d (note 3)	R18e (note 3)
Aug	14,905	0	14,905	3,443	1,461	5,425	2,787	1,789
Sep	17,450	0	17,450	4,031	1,710	6,352	3,263	2,094
Oct	7,818	0	7,818	1,806	766	2,846	1,462	938
Nov	12,014	4,806	7,209	1,665	706	2,624	1,348	865
Dec	5,738	6,853	3,690	852	362	1,343	690	443
Jan	6,012	11,579	1,287	297	126	468	241	154
Feb	5,030	16,609	0	0	0	0	0	0
Mar	8,633	22,718	2,524	583	247	919	472	303
Apr	10,399	0	33,117	7,650	3,245	12,054	6,193	3,974
May	21,580	0	21,580	4,985	2,115	7,855	4,035	2,590
Jun	11,807	0	11,807	2,727	1,157	4,298	2,208	1,417
Jul	9,325	0	9,325	2,154	914	3,394	1,744	1,119
TOTAL	130,710		130,710	30,194	12,810	47,579	24,443	15,685

Runoff #	R19 - Infiltration			R19a	R19b	R19c	R19d	R19e
Area (m^2)	371,800			133,848	34,949	96,296	66,180	40,526
Month	Available runoff [1]	Accumulation left over each month [2]	R19 (note 3)	R19a (note 3)	R19b (note 3)	R19c (note 3)	R19d (note 3)	R19e (note 3)
Aug	16,768	0	16,768	6,036	1,576	4,343	2,985	1,828
Sep	12,215	0	12,215	4,397	1,148	3,164	2,174	1,331
Oct	14,333	0	14,333	5,160	1,347	3,712	2,551	1,562
Nov	751	300	451	162	42	117	80	49
Dec	359	428	231	83	22	60	41	25
Jan	376	724	80	29	8	21	14	9
Feb	314	1,038	0	0	0	0	0	0
Mar	540	1,420	158	57	15	41	28	17
Apr	650	0	2,070	745	195	536	368	226
May	1,349	0	1,349	486	127	349	240	147
Jun	21,646	0	21,646	7,793	2,035	5,606	3,853	2,359
Jul	22,380	0	22,380	8,057	2,104	5,796	3,984	2,439
TOTAL	91,680		91,680	33,005	8,618	23,745	16,319	9,993

Notes:

1. Available runoff = area x factored runoff from Sheet 8
2. Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %
3. R = (available runoff + accumulation left over) x monthly %
4. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
5. The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.
6. The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.
7. This sheet is protected. The password is simply Golder.

11/27/2012

Sheet 9 - 3
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	27-Sep-12	Configuration:	Ultimate

	Low Grade Ore Stockpile - Runoff Flows (m^3 / mo)												Office/Truck Shop/Fuel Bay-Runoff Flows (m^3 / mo)		
Runoff #	R20 - Stockpile			R20a	R20b	R20c	R21 - Interflow			R21a	R21b	R21c	R22 - Prepared Ground		
Area (m^2)	222,300			124,043	84,252	14,005	222,300			60,243	150,719	11,337	148,125		
Month	Available runoff [1]	Accumulation left over each month [2]	R20 (note 3)	R20a (note 3)	R20b (note 3)	R20c (note 3)	Available runoff [1]	Accumulation left over each month [2]	R21 (note 3)	R21a (note 3)	R21b (note 3)	R21c (note 3)	Available runoff [1]	Accumulation left over each month [2]	R22 (note 3)
Aug	4,456	0	4,456	2,486	1,689	281	14,481	0	14,481	3,924	9,818	739	10,392	0	10,392
Sep	4,173	0	4,173	2,329	1,582	263	13,563	0	13,563	3,676	9,196	692	9,733	0	9,733
Oct	3,116	0	3,116	1,739	1,181	196	10,128	0	10,128	2,745	6,867	517	7,268	0	7,268
Nov	2,245	898	1,347	752	510	85	5,388	2,155	3,233	876	2,192	165	4,787	1,915	2,872
Dec	1,072	1,280	689	385	261	43	2,573	3,073	1,655	448	1,122	84	2,286	2,730	1,470
Jan	1,123	2,163	240	134	91	15	2,696	5,192	577	156	391	29	2,395	4,613	513
Feb	940	3,103	0	0	0	0	2,256	7,448	0	0	0	0	2,004	6,617	0
Mar	1,613	4,245	472	263	179	30	3,871	10,187	1,132	307	767	58	3,439	9,051	1,006
Apr	1,943	0	6,188	3,453	2,345	390	4,663	0	14,850	4,024	10,069	757	4,143	0	13,194
May	3,226	0	3,226	1,800	1,223	203	10,483	0	10,483	2,841	7,108	535	7,523	0	7,523
Jun	4,706	0	4,706	2,626	1,784	296	15,296	0	15,296	4,145	10,370	780	10,976	0	10,976
Jul	4,460	0	4,460	2,489	1,690	281	14,496	0	14,496	3,928	9,828	739	10,402	0	10,402
TOTAL	33,074		33,074	18,455	12,535	2,084	99,894		99,894	27,071	67,728	5,095	75,347		75,347

Notes:

1 Available runoff = area x factored runoff from Sheet 8

2 Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %

3 R = (available runoff + accumulation left over) x monthly %

4 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

5 The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.

6 The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.

7 This sheet is protected. The password is simply Golder.

Sheet 10-1
Monthly Flows
Pumping Stations

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

Month	Flows (m^3/month) Pumping Station 1						Flows (m^3/month) Pumping Station 2					
	+R6a	+R16a	+R17a	-E2a	-S3a	-F1a	+R6b	+R16b	+R17b	-E2b	-S3b	-F1b
	Runoff from waste rock	Runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 1 to the Reclaim Pond	Runoff from waste rock	Runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 2 to the Reclaim Pond
	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	715	1,650	40	-42	0	-2,363	3,289	5,400	40	-42	0	-8,687
Sep	670	1,932	38	-26	0	-2,613	3,080	6,322	38	-26	0	-9,414
Oct	500	866	28	-14	0	-1,380	2,300	2,833	28	-14	0	-5,147
Nov	216	798	10	0	0	-1,024	994	2,612	10	0	0	-3,616
Dec	111	409	5	0	0	-524	509	1,337	5	0	0	-1,851
Jan	39	142	2	0	0	-183	177	466	2	0	0	-645
Feb	0	0	0	0	0	0	0	0	0	0	0	0
Mar	76	279	3	0	0	-359	348	915	3	0	0	-1,266
Apr	993	3,666	45	-24	0	-4,680	4,567	11,999	45	-24	0	-16,587
May	518	2,389	29	-43	0	-2,893	2,381	7,819	29	-43	0	-10,186
Jun	755	1,307	43	-47	0	-2,058	3,474	4,278	43	-47	0	-7,748
Jul	716	1,032	40	-52	0	-1,737	3,292	3,379	40	-52	0	-6,659
TOTAL	**5,308**	**14,471**	**283**	**-248**	**0**	**-19,813**	**24,411**	**47,359**	**283**	**-248**	**0**	**-71,805**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-2
Monthly Flows
Pumping Stations

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m^3/month)**						**Flows (m^3/month)**					
	Pumping Station 3						**Pumping Station 4**					
	+R6c	+R16c	+R17c	-E2c	-S3c	-F1c	+R6d	+R16d	+R17d	-E2d	-S3d	-F1d
	Runoff from waste rock	Runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 3 to the Reclaim Pond	Runoff from waste rock	Runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 4 to the Reclaim Pond
	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	1,019	7,549	40	-42	0	-8,566	266	621	40	-42	0	-886
Sep	955	8,838	38	-26	0	-9,804	249	727	38	-26	0	-988
Oct	713	3,960	28	-14	0	-4,687	186	326	28	-14	0	-526
Nov	308	3,651	10	0	0	-3,969	80	301	10	0	0	-391
Dec	158	1,869	5	0	0	-2,032	41	154	5	0	0	-200
Jan	55	652	2	0	0	-708	14	54	2	0	0	-70
Feb	0	0	0	0	0	0	0	0	0	0	0	0
Mar	108	1,278	3	0	0	-1,390	28	105	3	0	0	-137
Apr	1,416	16,772	45	-24	0	-18,209	369	1,381	45	-24	0	-1,771
May	738	10,929	29	-43	0	-11,653	193	900	29	-43	0	-1,078
Jun	1,077	5,980	43	-47	0	-7,052	281	492	43	-47	0	-769
Jul	1,020	4,723	40	-52	0	-5,732	266	389	40	-52	0	-643
TOTAL	**7,566**	**66,200**	**283**	**-248**	**0**	**-73,802**	**1,975**	**5,449**	**283**	**-248**	**0**	**-7,459**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 10-3
Monthly Flows
Pumping Stations

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	27-Sep-12	Configuration:	Ultimate

Month	Flows (m^3/month)					
	Pumping Station 5					
	+R6e	+R16e	+R17e	-E2e	-S3e	-F1e
	Runoff from waste rock	Runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 5 to the Reclaim Pond
	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	3,029	11,110	40	-42	0	-14,137
Sep	2,837	13,007	38	-26	0	-15,856
Oct	2,118	5,828	28	-14	0	-7,960
Nov	915	5,373	10	0	0	-6,299
Dec	469	2,751	5	0	0	-3,224
Jan	163	959	2	0	0	-1,124
Feb	0	0	0	0	0	0
Mar	321	1,882	3	0	0	-2,206
Apr	4,206	24,686	45	-24	0	-28,912
May	2,193	16,086	29	-43	0	-18,264
Jun	3,199	8,801	43	-47	0	-11,996
Jul	3,032	6,951	40	-52	0	-9,971
TOTAL	**22,481**	**97,434**	**283**	**-248**	**0**	**-119,950**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 10-4
Monthly Flows
Pumping Stations

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m³/month)**										
	Pumping Station 6										
	+R3a	+R4a	+R12	+R16f	+R17f	+R18e	+R19e	+F3d	-E2f	-S3f	-F3a
	Runoff from waste rock	Interflow through waste rock	Runoff from security building prepared ground	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden stockpile	Interflow through overburden stockpile	Pumped inflow from Pumping Station 9	Evaporation from pond	Seepage out of pond	Pumped outflow from Pumping Station 6 to the ICP
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(Calculated)	(From Various)	(From Sheet 7)	(Calculated)
Aug	13,826	46,845	912	5,520	40	1,789	1,828	40,011	-42	0	-110,729
Sep	12,950	43,875	854	6,463	38	2,094	1,331	37,781	-26	0	-105,361
Oct	9,670	32,763	638	2,896	28	938	1,562	27,780	-14	0	-76,261
Nov	4,179	10,457	252	2,670	10	865	49	9,851	0	0	-28,333
Dec	2,140	5,353	129	1,367	5	443	25	5,043	0	0	-14,504
Jan	746	1,866	45	476	2	154	9	1,758	0	0	-5,057
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	1,463	3,662	88	935	3	303	17	3,449	0	0	-9,921
Apr	19,200	48,039	1,158	12,265	45	3,974	226	45,231	-24	0	-130,114
May	10,009	33,912	660	7,992	29	2,590	147	29,859	-43	0	-85,156
Jun	14,604	49,480	963	4,373	43	1,417	2,359	41,928	-47	0	-115,120
Jul	13,840	46,893	913	3,454	40	1,119	2,439	39,572	-52	0	-108,219
TOTAL	**102,628**	**323,146**	**6,613**	**48,410**	**283**	**15,685**	**9,993**	**282,264**	**-248**	**0**	**-788,774**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 10-5
Monthly Flows
Pumping Stations

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

Flows (m^3/month) — Pumping Station 7

Month	+R16g	+R17g	+R18a	+R19a	-E2g	-S3g	-F3b
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden stockpile	Interflow through overburden stockpile	Evaporation from pond	Seepage out of pond	Pumped outflow to Pumping Station 8
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	421	40	3,443	6,036	-42	0	-9,898
Sep	493	38	4,031	4,397	-26	0	-8,933
Oct	221	28	1,806	5,160	-14	0	-7,201
Nov	204	10	1,665	162	0	0	-2,041
Dec	104	5	852	83	0	0	-1,045
Jan	36	2	297	29	0	0	-364
Feb	0	0	0	0	0	0	0
Mar	71	3	583	57	0	0	-715
Apr	935	45	7,650	745	-24	0	-9,351
May	609	29	4,985	486	-43	0	-6,066
Jun	333	43	2,727	7,793	-47	0	-10,849
Jul	263	40	2,154	8,057	-52	0	-10,463
TOTAL	**3,691**	**283**	**30,194**	**33,005**	**-248**	**0**	**-66,925**

Flows (m^3/month) — Pumping Station 8

Month	+R16h	+R17h	+R18b	+R19b	+F3b	-E2h	-S3h	-F3c
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden stockpile 1	Interflow through overburden stockpile	Pumped inflow from Pumping Station 7	Evaporation from pond	Seepage out of pond	Pumped outflow to Pumping Station 10
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(Calculated)	(From Various)	(From Sheet 7)	(Calculated)
Aug	132	40	1,461	1,576	9,898	-42	0	-13,066
Sep	155	38	1,710	1,148	8,933	-26	0	-11,958
Oct	69	28	766	1,347	7,201	-14	0	-9,399
Nov	64	10	706	42	2,041	0	0	-2,863
Dec	33	5	362	22	1,045	0	0	-1,466
Jan	11	2	126	8	364	0	0	-511
Feb	0	0	0	0	0	0	0	0
Mar	22	3	247	15	715	0	0	-1,003
Apr	294	45	3,245	195	9,351	-24	0	-13,106
May	192	29	2,115	127	6,066	-43	0	-8,485
Jun	105	43	1,157	2,035	10,849	-47	0	-14,142
Jul	83	40	914	2,104	10,463	-52	0	-13,551
TOTAL	**1,160**	**283**	**12,810**	**8,618**	**66,925**	**-248**	**0**	**-89,548**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-6
Monthly Flows
Pumping Stations

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

Month	Flows (m^3/month) – Pumping Station 9								
	+R3b	+R4b	+R16i	+R17i	+R18d	+R19d	-E2i	-S3i	-F3d
	Runoff from waste rock	Infiltration through waste rock	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden stockpile	Interflow through overburden stockpile	Evaporation from pond	Seepage out of pond	Pumped outflow to Pumping Station 6
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	6,049	27,074	1,118	40	2,787	2,985	-42	0	-40,011
Sep	5,666	25,357	1,309	38	3,263	2,174	-26	0	-37,781
Oct	4,231	18,935	587	28	1,462	2,551	-14	0	-27,780
Nov	1,828	6,043	541	10	1,348	80	0	0	-9,851
Dec	936	3,094	277	5	690	41	0	0	-5,043
Jan	326	1,079	97	2	241	14	0	0	-1,758
Feb	0	0	0	0	0	0	0	0	0
Mar	640	2,116	189	3	472	28	0	0	-3,449
Apr	8,400	27,764	2,485	45	6,193	368	-24	0	-45,231
May	4,379	19,599	1,619	29	4,035	240	-43	0	-29,859
Jun	6,389	28,596	886	43	2,208	3,853	-47	0	-41,928
Jul	6,055	27,101	700	40	1,744	3,984	-52	0	-39,572
TOTAL	**44,900**	**186,758**	**9,809**	**283**	**24,443**	**16,319**	**-248**	**0**	**-282,264**

Month	Flows (m^3/month) – Pumping Station 14						
	+R3c	+R4c	+R16o	+R17o	-E2o	-S3o	-F3e
	Runoff from waste rock	Interflow through waste rock	Direct runoff from natural ground	Direct precipitation to pond	Evaporation from pond	Seepage out of pond	Pumped outflow to pumping station 11
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(From Sheet 7)	(Calculated)
Aug	1,728	5,168	790	40	-42	0	-7,684
Sep	1,619	4,840	925	38	-26	0	-7,395
Oct	1,209	3,614	414	28	-14	0	-5,252
Nov	522	1,154	382	10	0	0	-2,068
Dec	267	591	196	5	0	0	-1,058
Jan	93	206	68	2	0	0	-369
Feb	0	0	0	0	0	0	0
Mar	183	404	134	3	0	0	-724
Apr	2,400	5,299	1,755	45	-24	0	-9,475
May	1,251	3,741	1,143	29	-43	0	-6,121
Jun	1,825	5,458	626	43	-47	0	-7,905
Jul	1,730	5,173	494	40	-52	0	-7,385
TOTAL	**12,829**	**35,647**	**6,926**	**283**	**-248**	**0**	**-55,436**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-7
Monthly Flows
Pumping Stations

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m^3/month)**							
	Pumping Station 10							
	+R16j	+R17j	+R18c	+R19c	-E2j	+F3c	-S3j	-F3f
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden stockpile	Interflow through overburden stockpile	Evaporation from pond	Pumped inflow from Pumping Station 8	Seepage out of pond	Pumped outflow to Pumping Station 11
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-2)	(From Various)	(Calculated)	(From Sheet 7)	(Calculated)
Aug	245	40	5,425	4,343	-42	13,066	0	-23,077
Sep	286	38	6,352	3,164	-26	11,958	0	-21,771
Oct	128	28	2,846	3,712	-14	9,399	0	-16,099
Nov	118	10	2,624	117	0	2,863	0	-5,732
Dec	61	5	1,343	60	0	1,466	0	-2,934
Jan	21	2	468	21	0	511	0	-1,023
Feb	0	0	0	0	0	0	0	0
Mar	41	3	919	41	0	1,003	0	-2,007
Apr	543	45	12,054	536	-24	13,106	0	-26,260
May	354	29	7,855	349	-43	8,485	0	-17,029
Jun	194	43	4,298	5,606	-47	14,142	0	-24,236
Jul	153	40	3,394	5,796	-52	13,551	0	-22,883
TOTAL	**2,145**	**283**	**47,579**	**23,745**	**-248**	**89,548**	**0**	**-163,052**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-8
Monthly Flows
Pumping Stations

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	Flows (m^3/month)								
	Pumping Station 11								
	+R16l	+R17l	+R20a	+R21a	+F3e	+F3f	-E2l	-S3l	-F3g
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from Ore Stockpile	Interflow through Ore Stockpile	Pumped inflow from Pumping Station 14	Pumped inflow from Pumping Station 10	Evaporation from pond	Seepage out of pond	Pumped outflow to Pumping Station 13
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-3)	(From Sheet 9-3)	(Calculated)	(Calculated)	(From Various)	(From Sheet 7)	(Calculated)
Aug	1,343	40	2,486	3,924	7,684	23,077	-42	0	-38,512
Sep	1,572	38	2,329	3,676	7,395	21,771	-26	0	-36,754
Oct	704	28	1,739	2,745	5,252	16,099	-14	0	-26,553
Nov	650	10	752	876	2,068	5,732	0	0	-10,086
Dec	332	5	385	448	1,058	2,934	0	0	-5,163
Jan	116	2	134	156	369	1,023	0	0	-1,800
Feb	0	0	0	0	0	0	0	0	0
Mar	227	3	263	307	724	2,007	0	0	-3,532
Apr	2,984	45	3,453	4,024	9,475	26,260	-24	0	-46,217
May	1,944	29	1,800	2,841	6,121	17,029	-43	0	-29,722
Jun	1,064	43	2,626	4,145	7,905	24,236	-47	0	-39,972
Jul	840	40	2,489	3,928	7,385	22,883	-52	0	-37,515
TOTAL	**11,777**	**283**	**18,455**	**27,071**	**55,436**	**163,052**	**-248**	**0**	**-275,827**

Month	Flows (m^3/month)						
	Pumping Station 12						
	+R16m	+R17m	+R20b	+R21b	-E2m	-S3m	-F3h
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from Ore stockpile	Interflow through Ore stockpile	Evaporation from pond	Seepage out of pond	Pumped outflow to Pumping Station 13
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-3)	(From Sheet 9-3)	(From Various)	(From Sheet 7)	(Calculated)
Aug	489	40	1,689	9,818	-42	0	-11,994
Sep	573	38	1,582	9,196	-26	0	-11,362
Oct	257	28	1,181	6,867	-14	0	-8,319
Nov	237	10	510	2,192	0	0	-2,948
Dec	121	5	261	1,122	0	0	-1,509
Jan	42	2	91	391	0	0	-526
Feb	0	0	0	0	0	0	0
Mar	83	3	179	767	0	0	-1,032
Apr	1,087	45	2,345	10,069	-24	0	-13,521
May	708	29	1,223	7,108	-43	0	-9,024
Jun	387	43	1,784	10,370	-47	0	-12,537
Jul	306	40	1,690	9,828	-52	0	-11,813
TOTAL	**4,289**	**283**	**12,535**	**67,728**	**-248**	**0**	**-84,587**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-9
Monthly Flows
Pumping Stations

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	27-Sep-12	**Configuration:**	Ultimate

Flows (m^3/month) — Pumping Station 13

Month	+R16n	+R17n	+R20c	+R21c	+F3h	+F3i	-E2n	-S3n	-F3i
	Direct runoff from natural ground	Direct precipitation to pond	Runoff from overburden Ore Stockpile	Interflow through overburden Ore Stockpile	Pumped inflow from Pumping Station 12	Pumped inflow from Pumping Station 11	Evaporation from pond	Seepage out of pond	Pumped outflow to Process Plant Collection Pond
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-3)	(From Sheet 9-3)	(Calculated)	(Calculated)	(From Various)	(From Sheet 7)	(Calculated)
Aug	212	40	281	739	11,994	38,512	-42	0	-51,736
Sep	249	38	263	692	11,362	36,754	-26	0	-49,331
Oct	111	28	196	517	8,319	26,553	-14	0	-35,711
Nov	103	10	85	165	2,948	10,086	0	0	-13,397
Dec	53	5	43	84	1,509	5,163	0	0	-6,858
Jan	18	2	15	29	526	1,800	0	0	-2,391
Feb	0	0	0	0	0	0	0	0	0
Mar	36	3	30	58	1,032	3,532	0	0	-4,691
Apr	472	45	390	757	13,521	46,217	-24	0	-61,378
May	308	29	203	535	9,024	29,722	-43	0	-39,778
Jun	168	43	296	780	12,537	39,972	-47	0	-53,750
Jul	133	40	281	739	11,813	37,515	-52	0	-50,469
TOTAL	**1,863**	**283**	**2,084**	**5,095**	**84,587**	**275,827**	**-248**	**0**	**-369,491**

Flows (m^3/month) — Intermediate Collection Pond

Month	+R3d	+R4d	+R16k	+R17k	+R22	+F3a	-E2k	-S3k	-F3j
	Runoff from waste rock	Interflow through waste rock	Direct runoff from natural ground	Direct precipitation to pond	Runoff from office/truck shop/fuel bay, prepared ground	Pumped inflow from Pumping Station 6	Evaporation from pond	Seepage out of pond	Pumped outflow from ICP to Process Collection Pond
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-3)	(Calculated)	(From Various)	(From Sheet 7)	(Calculated)
Aug	12,962	33,252	2,221	40	10,392	110,729	-42	0	-169,554
Sep	12,140	31,144	2,600	38	9,733	105,361	-26	0	-160,990
Oct	9,066	23,256	1,165	28	7,268	76,261	-14	0	-117,030
Nov	3,918	7,423	1,074	10	2,872	28,333	0	0	-43,629
Dec	2,006	3,800	550	5	1,470	14,504	0	0	-22,335
Jan	699	1,325	192	2	513	5,057	0	0	-7,787
Feb	0	0	0	0	0	0	0	0	0
Mar	1,372	2,599	376	3	1,006	9,921	0	0	-15,277
Apr	18,000	34,100	4,935	45	13,194	130,114	-24	0	-200,364
May	9,384	24,072	3,215	29	7,523	85,156	-43	0	-129,336
Jun	13,691	35,122	1,759	43	10,976	115,120	-47	0	-176,665
Jul	12,975	33,286	1,389	40	10,402	108,219	-52	0	-166,260
TOTAL	**96,214**	**229,379**	**19,476**	**283**	**75,347**	**788,774**	**-248**	**0**	**-1,209,226**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-10
Monthly Flows
Process Plant Site

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m^3/month)**							
	+P3	+P5	+P6	-P1	-P7	+P8	+P8a,b	+P8c
	Overflow from the thickener to the mill	Moisture going into the mill with the ore	Fresh water to the mill for gland seal and reagent mixing	Discharge from the mill to the tailings thickener	Losses in the mill	Makeup water to the mill (from the Process Plant Collecting Pond or elsewhere)	Makeup water to the mill from the Process and Reclaim tank	Makeup water to the mill from elsewhere
	(From Sheet 6)	E x ω_1 (From Sheet 6)	(From Sheet 6)	H / S_2 - H (From Sheet 6)	(From Sheet 6)	+P1+P7-P3-P5-P6 (Calculated)	(From Sheet 11-11, 11-12)	(Calculated)
Aug	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Sep	1,365,626	36,735	216,000	-2,334,857	-79,200	795,696	795,696	0
Oct	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Nov	1,365,626	36,735	216,000	-2,334,857	-79,200	795,696	795,696	0
Dec	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Jan	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Feb	1,274,585	34,286	201,600	-2,179,200	-73,920	742,650	742,650	0
Mar	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Apr	1,365,626	36,735	216,000	-2,334,857	-79,200	795,696	795,696	0
May	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
Jun	1,365,626	36,735	216,000	-2,334,857	-79,200	795,696	795,696	0
Jul	1,411,147	37,959	223,200	-2,412,686	-81,840	822,219	822,219	0
TOTAL	**16,615,121**	**446,939**	**2,628,000**	**-28,407,429**	**-963,600**	**9,680,969**	**9,680,969**	**0**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table should start with the same month as the runoff sheets.
4. The sheet is protected. The password is simply Golder

Sheet 10-11
Monthly Flows

Preliminary

Open Pit Mine Watershed

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m^3/month)**			
	+R1	+R2	+S1	-F_{PIT}
	Runoff from natural ground	Runoff from pit walls	Seepage into the open pit	Pumped outflow from mine to Process Plant Collecting Pond
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 7)	(Calculated)
Aug	0	130,522	23,250	-153,772
Sep	0	122,247	22,500	-144,747
Oct	0	91,285	23,250	-114,535
Nov	0	35,277	22,500	-57,777
Dec	0	18,059	23,250	-41,309
Jan	0	6,296	23,250	-29,546
Feb	0	0	21,000	-21,000
Mar	0	12,353	23,250	-35,603
Apr	0	162,062	22,500	-184,562
May	0	94,488	23,250	-117,738
Jun	0	137,862	22,500	-160,362
Jul	0	130,655	23,250	-153,905
TOTAL	**0**	**941,105**	**273,750**	**-1,214,855**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-12
Monthly Flows

Preliminary

Detonator Storage Area Watershed

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	D
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	27-Sep-12	Configuration:	Ultimate

Month	Flows (m^3/month)					
	+R16p	+R17p	+R10	-E2p	-S3p	-D3
	Direct runoff from natural ground	Direct precipitation to pond	From prepared ground	Evaporation loss from pond	Seepage loss from pond	Outflow from detonator storage area treatment/environment
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-1)	(From Various)	(From Sheet 7)	(Calculated)
Aug	0	40	105	-42	0	-103
Sep	0	38	99	-26	0	-110
Oct	0	28	74	-14	0	-88
Nov	0	10	29	0	0	-39
Dec	0	5	15	0	0	-20
Jan	0	2	5	0	0	-7
Feb	0	0	0	0	0	0
Mar	0	3	10	0	0	-14
Apr	0	45	134	-24	0	-154
May	0	29	76	-43	0	-62
Jun	0	43	111	-47	0	-107
Jul	0	40	105	-52	0	-94
TOTAL	**0**	**283**	**763**	**-248**	**0**	**-798**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
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3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 10-13
Monthly Flows
Emulsion Plant Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	**Flows (m^3/month)**					
	+R16q	+R17q	+R11	-E2q	-S3q	-D2
	Direct runoff from natural ground	Direct precipitation to pond	From prepared ground	Evaporation loss from pond	Seepage loss from pond	Outflow from the emulsion plant to treatment/environment
	(From Sheet 9-2)	(From Sheet 9-2)	(From Sheet 9-1)	(From Various)	(From Sheet 7)	(Calculated)
Aug	0	40	1,403	-42	0	-1,401
Sep	0	38	1,314	-26	0	-1,326
Oct	0	28	981	-14	0	-996
Nov	0	10	388	0	0	-398
Dec	0	5	199	0	0	-203
Jan	0	2	69	0	0	-71
Feb	0	0	0	0	0	0
Mar	0	3	136	0	0	-139
Apr	0	45	1,781	-24	0	-1,802
May	0	29	1,016	-43	0	-1,002
Jun	0	43	1,482	-47	0	-1,478
Jul	0	40	1,405	-52	0	-1,393
TOTAL	**0**	**283**	**10,173**	**-248**	**0**	**-10,209**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 10-14
Monthly Flows
Process Plant Collecting Pond

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project	Revision #:		D
Project #:	11-1118-0117 (2000)	Level of Study:		Feasibility
Date:	27-Sep-12	Configuration:		Ultimate

Month	Flows (m^3/month)											
	+R13	+R14	+R15	-M1	+M3	-E3	-S4	+F0	+F3I	+F3i	-F4a	-F4b
	Runoff from natural ground	Runoff from prepared ground	Direct precipitation on Process Plant Collecting Pond	Water for dust control	Treated sewage from plant site	Evaporation from Process Plant Collecting Pond	Seepage from Process Plant Collecting Pond	Inflow from open pit mine	Inflow from intermediate collection pond	Inflow from pumping station 13	Outflow to the Process Water Tank	Outflow from Process Plant Collecting Pond to Reclaim Tank
	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-1)	(FromVarious)	(From Various)	(From Various)	(From Sheet 7)	(From Sheet 10-11)	(From Sheet 10-9)	(From Sheet 10-9)	(Calculated)	(Calculated)
Aug	0	33,310	4,773	-102,920	868	-4,992	0	153,772	169,554	51,736	-195,263	-110,839
Sep	0	31,199	4,471	-99,600	840	-3,077	0	144,747	160,990	49,331	-188,964	-99,937
Oct	0	23,297	3,338	-102,920	868	-1,624	0	114,535	117,030	35,711	-190,235	0
Nov	0	9,206	1,154	0	840	0	0	57,777	43,629	13,397	-126,003	0
Dec	0	4,713	591	0	868	0	0	41,309	22,335	6,858	-76,673	0
Jan	0	1,643	206	0	868	0	0	29,546	7,787	2,391	-42,440	0
Feb	0	0	0	0	784	0	0	21,000	0	0	-21,784	0
Mar	0	3,224	404	0	868	0	0	35,603	15,277	4,691	-60,067	0
Apr	0	42,293	5,303	-99,600	840	-2,853	0	184,562	200,364	61,378	-188,964	-203,323
May	0	24,114	3,456	-102,920	868	-5,115	0	117,738	129,336	39,778	-195,263	-11,991
Jun	0	35,184	5,042	-99,600	840	-5,530	0	160,362	176,665	53,750	-188,964	-137,748
Jul	0	33,344	4,778	-102,920	868	-6,154	0	153,905	166,260	50,469	-195,263	-105,289
TOTAL	**0**	**241,526**	**33,517**	**-710,480**	**10,220**	**-29,345**	**0**	**1,214,855**	**1,209,226**	**369,491**	**-1,669,883**	**-669,127**

CHECK = 0 0.0

Notes:

1 Input data are only required in the orange shaded cells. Other information is automatically transferred from other sheets or calculated on this sheet.

2 The "Check" box must be zero and green coloured for a correct water balance.

3 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

4 The table must start with the same month as the runoff sheets.

5 This sheet is protected. The password is simply Golder.

Sheet 10-15
Monthly Flows
Reclaim Tank

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	Flows (m^3/month)			
	+F4b	+F2b	-P8b	D1
	Inflow from Process Plant Collecting Pond	Inflow from TMF Reclaim Pond	Outflow to Plant Site (make-up water)	Outflow to Effluent Treatment Facility
	(From Sheet 10-14)	(From Sheet 10-17)	Calculated	Calculated
Aug	110,839	551,085	-626,956	-34,968
Sep	99,937	540,635	-606,732	-33,840
Oct	0	661,924	-626,956	-34,968
Nov	0	640,572	-606,732	-33,840
Dec	0	661,924	-626,956	-34,968
Jan	0	661,924	-626,956	-34,968
Feb	0	597,867	-566,283	-31,584
Mar	0	661,062	-626,956	-34,106
Apr	203,323	437,249	-606,732	-33,840
May	11,991	649,933	-626,956	-34,968
Jun	137,748	502,824	-606,732	-33,840
Jul	105,289	556,635	-626,956	-34,968
TOTAL	**669,127**	**7,123,636**	**-7,381,907**	**-410,857**

CHECK = 0 0.0

Notes:

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3 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

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Sheet 10-16
Monthly Flows
Reclaim Tank

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Month	Flows (m^3/month)		
	+F4a	+F2a	-P8a
	Inflow from Process Plant Collection Pond	Inflow from the TMF Reclaim Pond	Outflow to Plant
	(From Sheet 10-15)	(From Sheet 10-17)	Calculated
Aug	195,263	0	-195,263
Sep	188,964	0	-188,964
Oct	190,235	5,028	-195,263
Nov	126,003	62,961	-188,964
Dec	76,673	118,590	-195,263
Jan	42,440	152,822	-195,263
Feb	21,784	154,582	-176,366
Mar	60,067	135,196	-195,263
Apr	188,964	0	-188,964
May	195,263	0	-195,263
Jun	188,964	0	-188,964
Jul	195,263	0	-195,263
TOTAL	**1,669,883**	**629,179**	**-2,299,062**

CHECK = 0 0.0

Notes:

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2 The "Check" box must be zero and green coloured for a correct water balance.

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Sheet 10-17
Monthly Flows
Tailings Management Area Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	D
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	27-Sep-12	**Configuration:**	Ultimate

Minimum pond volume, m^3	**1,800,000**
Design storm event volume, m^3	**2,136,518**
Maximum pond volume, m^3	**6,000,000**
Maximum operating pond volume, m^3	**3,863,482**

Month	**Flows (m^3/month)**									
	+P2	-P4	+R5	+R7	+R8	+R9	**+F1a,b,c,d,e**	-E1	-S3a,b,c,d,e	**-F2**
	Water in tailings discharged from the thickener to the tailings facility	Water retained in the deposited tailings	Runoff from waste rock (containment dyke upstream slopes)	Runoff from unsaturated tailings	Direct precipitation on reclaim pond and saturated tailings	Runoff from Natural Ground	Inflow from Pumping Stations 1 - 5	Evaporation from reclaim pond and saturated tailings	Seepage out of pumping stations	Outflow from reclaim pond to Reclaim Tank and Process Water Tank
	H / S_2 - H (From Various)	(From Various)	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-1)	(From Sheet 9-1)	(From Various)	(From Various)	(From Sheet 7)	(Calculated)
Aug	1,001,538	-647,253	7,881	405,650	57,070	31,658	34,639	-59,678	0	-551,085
Sep	969,231	-626,374	7,382	379,934	53,452	37,064	38,676	-36,786	0	-540,635
Oct	1,001,538	-647,253	5,512	283,706	39,914	16,606	19,701	-19,418	0	-666,952
Nov	969,231	-626,374	2,382	106,270	13,801	15,311	15,298	0	0	-703,533
Dec	1,001,538	-647,253	1,220	54,402	7,065	7,838	7,831	0	0	-780,514
Jan	1,001,538	-647,253	425	18,966	2,463	2,733	2,730	0	0	-814,747
Feb	904,615	-584,615	0	0	0	0	0	0	0	-752,450
Mar	1,001,538	-647,253	834	37,212	4,833	5,362	5,357	0	0	-796,258
Apr	969,231	-626,374	10,945	488,212	63,402	70,341	70,158	-34,110	0	-437,249
May	1,001,538	-647,253	5,705	293,660	41,314	45,836	44,074	-61,159	0	-649,933
Jun	969,231	-626,374	8,324	428,462	60,279	25,079	29,623	-66,113	0	-502,824
Jul	1,001,538	-647,253	7,889	406,064	57,128	19,807	24,742	-73,572	0	-556,635
TOTAL	**11,792,308**	**-7,620,879**	**58,500**	**2,902,538**	**400,719**	**277,635**	**292,829**	**-350,836**	**0**	**-7,752,815**

CHECK = 0 0.0

Notes:

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11/27/2012

Sheet 11
Summary of All Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	Project #:	11-1118-0117 (2000)	Date:	27-Sep-12	Revision #	D	Annual Precipitation:	758 mm	Model year:	Ultimate

ID	Element	Description	August	September	October	November	December	January	February	March	April	May	June	July	Annual
			Flow (m^3)												
Flows associated with processing the ore			31	30	31	30	31	31	28	31	30	31	30	31	
P1		Discharge from the mill to the tailings thickener	2,412,686	2,334,857	2,412,686	2,334,857	2,412,686	2,412,686	2,179,200	2,412,686	2,334,857	2,412,686	2,334,857	2,412,686	28,407,429
P2		Water in tailings discharged from thickener to TMF	1,001,538	969,231	1,001,538	969,231	1,001,538	1,001,538	904,615	1,001,538	969,231	1,001,538	969,231	1,001,538	11,792,308
P3		Overflow from the thickener to the mill	1,411,147	1,365,626	1,411,147	1,365,626	1,411,147	1,411,147	1,274,585	1,411,147	1,365,626	1,411,147	1,365,626	1,411,147	16,615,121
P4		Water retained in the deposited tailings	647,253	626,374	647,253	626,374	647,253	647,253	584,615	647,253	626,374	647,253	626,374	647,253	7,620,879
P5		Moisture going into the mill with the ore	37,959	36,735	37,959	36,735	37,959	37,959	34,286	37,959	36,735	37,959	36,735	37,959	446,939
P6		Fresh water required in the mill (gland seal, reagent mixing)	223,200	216,000	223,200	216,000	223,200	223,200	201,600	223,200	216,000	223,200	216,000	223,200	2,628,000
P7		Losses in the mill	81,840	79,200	81,840	79,200	81,840	81,840	73,920	81,840	79,200	81,840	79,200	81,840	963,600
P8		Make-up water required in the mill (from Process Plant Collecting Pond or elsewhere)	822,219	795,696	822,219	795,696	822,219	822,219	742,650	822,219	795,696	822,219	795,696	822,219	9,680,969
P8a		Make-up water to the mill from the Process Water Tank	195,263	188,964	195,263	188,964	195,263	195,263	176,366	195,263	188,964	195,263	188,964	195,263	2,299,062
P8b		Make-up water to the mill from the Reclaim Tank	626,956	606,732	626,956	606,732	626,956	626,956	566,283	626,956	606,732	626,956	606,732	626,956	7,381,907
P8c		Make-up water for the mill from Elsewhere	0	0	0	0	0	0	0	0	0	0	0	0	0
Runoff from precipitation															
R1	Open pit mine	Runoff from natural ground	0	0	0	0	0	0	0	0	0	0	0	0	0
R2		Runoff from open pit walls	130,522	122,247	91,285	35,277	18,059	6,296	0	12,353	162,062	94,488	137,862	130,655	941,105
R3a	Waste Rock Stockpile	Runoff from Waste Rock	13,826	12,950	9,670	4,179	2,140	746	0	1,463	19,200	10,009	14,604	13,840	102,628
R3b			6,049	5,666	4,231	1,828	936	326	0	640	8,400	4,379	6,389	6,055	44,900
R3c			1,728	1,619	1,209	522	267	93	0	183	2,400	1,251	1,825	1,730	12,829
R3d			12,962	12,140	9,066	3,918	2,006	699	0	1,372	18,000	9,384	13,691	12,975	96,214
R4a		Infiltration through Waste Rock	46,845	43,875	32,763	10,457	5,353	1,866	0	3,662	48,039	33,912	49,480	46,893	323,146
R4b			27,074	25,357	18,935	6,043	3,094	1,079	0	2,116	27,764	19,599	28,596	27,101	186,758
R4c			5,168	4,840	3,614	1,154	591	206	0	404	5,299	3,741	5,458	5,173	35,647
R4d			33,252	31,144	23,256	7,423	3,800	1,325	0	2,599	34,100	24,072	35,122	33,286	229,379
R5	Tailings Management Area	Runoff from waste rock (containment dykes upstream slope)	7,881	7,382	5,512	2,382	1,220	425	0	834	10,945	5,705	8,324	7,889	58,500
R6a		Runoff from waste rock (containment dykes downstream slope)	715	670	500	216	111	39	0	76	993	518	755	716	5,308
R6b			3,289	3,080	2,300	994	509	177	0	348	4,567	2,381	3,474	3,292	24,411
R6c			1,019	955	713	308	158	55	0	108	1,416	738	1,077	1,020	7,566
R6d			266	249	186	80	41	14	0	28	369	193	281	266	1,975
R6e			3,029	2,837	2,118	915	469	163	0	321	4,206	2,193	3,199	3,032	22,481
R7		Runoff from unsaturated tailings	405,650	379,934	283,706	106,270	54,402	18,966	0	37,212	488,212	293,660	428,462	406,064	2,902,538
R8		Precipitation onto the pond and saturated tailings	57,070	53,452	39,914	13,801	7,065	2,463	0	4,833	63,402	41,314	60,279	57,128	400,719
R9		Runoff from natural ground	31,658	37,064	16,606	15,311	7,838	2,733	0	5,362	70,341	45,836	25,079	19,807	277,635
R10	Detonator Storage Area	Runoff from prepared ground	105	99	74	29	15	5	0	10	134	76	111	105	763
R11	Emulsion Plant	Runoff from prepared ground	1,403	1,314	981	388	199	69	0	136	1,781	1,016	1,482	1,405	10,173
R12	Security Building	Runoff from prepared ground	912	854	638	252	129	45	0	88	1,158	660	963	913	6,613
R13	Process Plant Collection Pond	Runoff from natural ground	0	0	0	0	0	0	0	0	0	0	0	0	0
R14		Runoff from prepared ground	33,310	31,199	23,297	9,206	4,713	1,643	0	3,224	42,293	24,114	35,184	33,344	241,526
R15		Precipitation onto the pond	4,773	4,471	3,338	1,154	591	206	0	404	5,303	3,456	5,042	4,778	33,517
R16a	Pumping Stations	Runoff from natural ground	1,650	1,932	866	798	409	142	0	279	3,666	2,389	1,307	1,032	14,471
R16b			5,400	6,322	2,833	2,612	1,337	466	0	915	11,999	7,819	4,278	3,379	47,359
R16c			7,549	8,838	3,960	3,651	1,869	652	0	1,278	16,772	10,929	5,980	4,723	66,200
R16d			621	727	326	301	154	54	0	105	1,381	900	492	389	5,449
R16e			11,110	13,007	5,828	5,373	2,751	959	0	1,882	24,686	16,086	8,801	6,951	97,434
R16f			5,520	6,463	2,896	2,670	1,367	476	0	935	12,265	7,992	4,373	3,454	48,410
R16g			421	493	221	204	104	36	0	71	935	609	333	263	3,691
R16h			132	155	69	64	33	11	0	22	294	192	105	83	1,160
R16i			1,118	1,309	587	541	277	97	0	189	2,485	1,619	886	700	9,809
R16j			245	286	128	118	61	21	0	41	543	354	194	153	2,145
R16k			2,221	2,600	1,165	1,074	550	192	0	376	4,935	3,215	1,759	1,389	19,476
R16l			1,343	1,572	704	650	332	116	0	227	2,984	1,944	1,064	840	11,777
R16m			489	573	257	237	121	42	0	83	1,087	708	387	306	4,289
R16n			212	249	111	103	53	18	0	36	472	308	168	133	1,863
R16o			790	925	414	382	196	68	0	134	1,755	1,143	626	494	6,926
R16p			0	0	0	0	0	0	0	0	0	0	0	0	0
R16q			0	0	0	0	0	0	0	0	0	0	0	0	0
R17a		Direct Precipitation	40	38	28	10	5	2	0	3	45	29	43	40	283
R17b			40	38	28	10	5	2	0	3	45	29	43	40	283
R17c			40	38	28	10	5	2	0	3	45	29	43	40	283
R17d			40	38	28	10	5	2	0	3	45	29	43	40	283
R17e			40	38	28	10	5	2	0	3	45	29	43	40	283
R17f			40	38	28	10	5	2	0	3	45	29	43	40	283
R17g			40	38	28	10	5	2	0	3	45	29	43	40	283
R17h			40	38	28	10	5	2	0	3	45	29	43	40	283
R17i			40	38	28	10	5	2	0	3	45	29	43	40	283
R17j			40	38	28	10	5	2	0	3	45	29	43	40	283
R17k			40	38	28	10	5	2	0	3	45	29	43	40	283
R17l			40	38	28	10	5	2	0	3	45	29	43	40	283
R17m			40	38	28	10	5	2	0	3	45	29	43	40	283
R17n			40	38	28	10	5	2	0	3	45	29	43	40	283
R17o			40	38	28	10	5	2	0	3	45	29	43	40	283
R17p			40	38	28	10	5	2	0	3	45	29	43	40	283
R17q			40	38	28	10	5	2	0	3	45	29	43	40	283
R18a	Overburden Stockpile	Runoff from stockpile	3,443	4,031	1,806	1,665	852	297	0	583	7,650	4,985	2,727	2,154	30,194
R18b			1,461	1,710	766	706	362	126	0	247	3,245	2,115	1,157	914	12,810
R18c			5,425	6,352	2,846	2,624	1,343	468	0	919	12,054	7,855	4,298	3,394	47,579
R18d			2,787	3,263	1,462	1,348	690	241	0	472	6,193	4,035	2,208	1,744	24,443
R18e			1,789	2,094	938	865	443	154	0	303	3,974	2,590	1,417	1,119	15,685
R19a		Infiltration through stockpile	6,036	4,397	5,160	162	83	29	0	57	745	486	7,793	8,057	33,005
R19b			1,576	1,148	1,347	42	22	8	0	15	195	127	2,035	2,104	8,618
R19c			4,343	3,164	3,712	117	60	21	0	41	536	349	5,606	5,796	23,745
R19d			2,985	2,174	2,551	80	41	14	0	28	368	240	3,853	3,984	16,319
R19e			1,828	1,331	1,562	49	25	9	0	17	226	147	2,359	2,439	9,993
R20a	Ore Stockiple	Runoff from stockpile	2,486	2,329	1,739	752	385	134	0	263	3,453	1,800	2,626	2,489	18,455
R20b			1,689	1,582	1,181	510	261	91	0	179	2,345	1,223	1,784	1,690	12,535
R20c			281	263	196	85	43	15	0	30	390	203	296	281	2,084
R21a		Infiltration through stockpile	3,924	3,676	2,745	876	448	156	0	307	4,024	2,841	4,145	3,928	27,071
R21b			9,818	9,196	6,867	2,192	1,122	391	0	767	10,069	7,108	10,370	9,828	67,728
R21c			739	692	517	165	84	29	0	58	757	535	780	739	5,095
R22	Office/Truck shop/Fuel Bay	Runoff from prepared ground	10391.51443	9732.747668	7,268	2,872	1,470	513	0	1,006	13,194	7,523	10,976	10,402	75,347
Evaporation															
E1		TMF reclaim pond and saturated tailings	59,678	36,786	19,418	0	0	0	0	0	34,110	61,159	66,113	73,572	350,836
E2a		Pumping Station 1	42	26	14	0	0	0	0	0	24	43	47	52	248
E2b		Pumping Station 2	42	26	14	0	0	0	0	0	24	43	47	52	248
E2c		Pumping Station 3	42	26	14	0	0	0	0	0	24	43	47	52	248
E2d		Pumping Station 4	42	26	14	0	0	0	0	0	24	43	47	52	248
E2e		Pumping Station 5	42	26	14	0	0	0	0	0	24	43	47	52	248
E2f		Pumping Station 6	42	26	14	0	0	0	0	0	24	43	47	52	248
E2g		Pumping Station 7	42	26	14	0	0	0	0	0	24	43	47	52	248
E2h		Pumping Station 8	42	26	14	0	0	0	0	0	24	43	47	52	248
E2i		Pumping Station 9	42	26	14	0	0	0	0	0	24	43	47	52	248
E2j		Pumping Station 10	42	26	14	0	0	0	0	0	24	43	47	52	248
E2k		Intermediate Collection Pond	42	26	14	0	0	0	0	0	24	43	47	52	248
E2l		Pumping Station 11	42	26	14	0	0	0	0	0	24	43	47	52	248
E2m		Pumping Station 12	42	26	14	0	0	0	0	0	24	43	47	52	248
E2n		Pumping Station 13	42	26	14	0	0	0	0	0	24	43	47	52	248
E2o		Pumping Station 14	42	26	14	0	0	0	0	0	24	43	47	52	248
E2p		Detonator Storage Area	42	26	14	0	0	0	0	0	24	43	47	52	248
E2q		Emulsion Plant	42	26	14	0	0	0	0	0	24	43	47	52	248
E3		Process Plant Collection Pond	4,992	3,077	1,624	0	0	0	0	0	2,853	5,115	5,530	6,154	29,345
Seepage															
S1		Into open pit mine	23,250	22,500	23,250	22,500	23,250	23,250	21,000	23,250	22,500	23,250	22,500	23,250	273,750
S2		From Tailings Management Area	0	0	0	0	0	0	0	0	0	0	0	0	0
S2a		Into TMA to Pumping Station 1	0	0	0	0	0	0	0	0	0	0	0	0	0
S2b		Into TMA to Pumping Station 2	0	0	0	0	0	0	0	0	0	0	0	0	0
S2c		Into TMA to Pumping Station 3	0	0	0	0	0	0	0	0	0	0	0	0	0
S2d		Into TMA to Pumping Station 4	0	0	0	0	0	0	0	0	0	0	0	0	0
S2e		Into TMA to Pumping Station 5	0	0	0	0	0	0	0	0	0	0	0	0	0
S3a		From Pumping Station 1	0	0	0	0	0	0	0	0	0	0	0	0	0
S3b		From Pumping Station 2	0	0	0	0	0	0	0	0	0	0	0	0	0
S3c		From Pumping Station 3	0	0	0	0	0	0	0	0	0	0	0	0	0
S3d		From Pumping Station 4	0	0	0	0	0	0	0	0	0	0	0	0	0
S3e		From Pumping Station 5	0	0	0	0	0	0	0	0	0	0	0	0	0
S3f		From Pumping Station 6	0	0	0	0	0	0	0	0	0	0	0	0	0
S3g		From Pumping Station 7	0	0	0	0	0	0	0	0	0	0	0	0	0
S3h		From Pumping Station 8	0	0	0	0	0	0	0	0	0	0	0	0	0
S3i		From Pumping Station 9	0	0	0	0	0	0	0	0	0	0	0	0	0
S3j		From Pumping Station 10	0	0	0	0	0	0	0	0	0	0	0	0	0
S3k		From Intermediate Collection Pond	0	0	0	0	0	0	0	0	0	0	0	0	0
S3l		From Pumping Station 11	0	0	0	0	0	0	0	0	0	0	0	0	0
S3m		From Pumping Station 12	0	0	0	0	0	0	0	0	0	0	0	0	0
S3n		From Pumping Station 13	0	0	0	0	0	0	0	0	0	0	0	0	0
S3o		From Pumping Station 14	0	0	0	0	0	0	0	0	0	0	0	0	0
S3p		From Detonator Storage Area	0	0	0	0	0	0	0	0	0	0	0	0	0
S3q		From Emulsion Plant	0	0	0	0	0	0	0	0	0	0	0	0	0
S4		From Process Plant Collecting Pond	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous flows															
M1		Water for dust control during the months April to October	102,920	99,600	102,920	0	0	0	0	0	99,600	102,920	99,600	102,920	710,480
M2		Potable water (used to calculate treated sewage flow)	1,085	1,050	1,085	1,050	1,085	1,085	980	1,085	1,050	1,085	1,050	1,085	12,775
M3		Treated sewage	868	840	868	840	868	868	784	868	840	868	840	868	10,220
Surface flows between elements															
F0		Pumped outflow from the open pit to the Process Plant Collecting Pond	153,772	144,747	114,535	57,777	41,309	29,546	21,000	35,603	184,562	117,738	160,362	153,905	1,214,855
F1a		Pumped outflow from Sump 1 to TMF Reclaim Pond	2,363	2,613	1,380	1,024	524	183	0	359	4,680	2,893	2,058	1,737	19,813
F1b		Pumped outflow from Sump 2 to TMF Reclaim Pond	8,687	9,414	5,147	3,616	1,851	645	0	1,266	16,587	10,186	7,748	6,659	71,805
F1c		Pumped outflow from Sump 3 to TMF Reclaim Pond	8,566	9,804	4,687	3,969	2,032	708	0	1,390	18,209	11,653	7,052	5,732	73,802
F1d		Pumped outflow from Sump 4 to TMF Reclaim Pond	886	988	526	391	200	70	0	137	1,771	1,078	769	643	7,459
F1e		Pumped outflow from Sump 5 to TMF Reclaim Pond	14,137	15,856	7,960	6,299	3,224	1,124	0	2,206	28,912	18,264	11,996	9,971	119,950
F2		Pumped outflow from TMF Reclaim Pond to Reclaim or Process Tank	551,085	540,635	666,952	703,533	780,514	814,747	752,450	796,258	437,249	649,933	502,824	556,635	7,752,815
F2a		Pumped outflow from TMF Reclaim Pond to the Process Water Tank	0	0	5,028	62,961	118,590	152,822	154,582	135,196	0	0	0	0	629,179
F2b		Pumped Outflow from the TMF Reclaim Pond to the Reclaim Tank	551,085	540,635	661,924	640,572	661,924	661,924	597,867	661,062	437,249	649,933	502,824	556,635	7,123,636
F3a		Pumped outflow from Sump 6 to Intermediate Collection Pond	110,729	105,361	76,261	28,333	14,504	5,057	0	9,921	130,114	85,156	115,120	108,219	788,774
F3b		Pumped outflow from Sump 7 to Sump 8	9,898	8,933	7,201	2,041	1,045	364	0	715	9,351	6,066	10,849	10,463	66,925
F3c		Pumped outflow from Sump 8 to Sump 10	13,066	11,958	9,399	2,863	1,466	511	0	1,003	13,106	8,485	14,142	13,551	89,548
F3d		Pumped outflow from Sump 9 to Sump 6	40,011	37,781	27,780	9,851	5,043	1,758	0	3,449	45,231	29,859	41,928	39,572	282,264
F3e		Pumped outflow from Sump 14 to Sump 11	7,684	7,395	5,252	2,068	1,058	369	0	724	9,475	6,121	7,905	7,385	55,436
F3f		Pumped outflow from Sump 10 to Sump 11	23,077	21,771	16,099	5,732	2,934	1,023	0	2,007	26,260	17,029	24,236	22,883	163,052
F3g		Pumped outflow from Sump 11 to Sump 13	38,512	36,754	26,553	10,086	5,163	1,800	0	3,532	46,217	29,722	39,972	37,515	275,827
F3h		Pumped outflow from Sump 12 to Sump 13	11,994	11,362	8,319	2,948	1,509	526	0	1,032	13,521	9,024	12,537	11,813	84,587
F3i		Pumped outflow from Sump 13 to Process Plant Collection Pond	51,736	49,331	35,711	13,397	6,858	2,391	0	4,691	61,378	39,778	53,750	50,469	369,491
F3j		Pumped outflow from the ICP to the Process Plant Collection Pond	169,554	160,990	117,030	43,629	22,335	7,787	0	15,277	200,364	129,336	176,665	166,260	1,209,226
F4		Outflow from Process Plant Collection Pond to the Reclaim and Process Water Tank	306,102	288,901	190,235	126,003	76,673	42,440	21,784	60,067	392,287	207,254	326,712	300,552	2,339,010
F4a		Outflow from Process Plant Collection Pond to the Process Water Tank	195,263	188,964	190,235	126,003	76,673	42,440	21,784	60,067	188,964	195,263	188,964	195,263	1,669,883
F4b		Outflow from Process Plant Collection Pond to the Reclaim Tank	110,839	99,937	0	0	0	0	0	0	203,323	11,991	137,748	105,289	669,127
Discharge to the environment															
D1		Outflow from the Reclaim Tank to the environment	34,968	33,840	34,968	33,840	34,968	34,968	31,584	34,106	33,840	34,968	33,840	34,968	410,857
D2		Outflow from the emulsion plant bunded area to the environment	1,401	1,326	996	398	203	71	0	139	1,802	1,002	1,478	1,393	10,209
D3		Outflow from the detonator storage bunded area to the environment	103	110	88	39	20	7	0	14	154	62	107	94	798

Note: Input data are not required on this sheet, The information is automatically transferred from the other sheets. The sheet is protected. The password is simply Golder.
A negative number means the flow does not exist (note that this convention is not consistent with that used in the rest of the model)

Closure End of Year 1

Sheet 1

Preliminary

Site Wide Deterministic
Flow (Water Balance) Model
Closure Condition
Average Climatic Conditions

Mine	Osisko Hammond Reef Gold Project
Owner(s)	Osisko Hammond Reef Gold Ltd.
Operator	Osisko Hammond Reef Gold Ltd.
Location	Atikokan, Ontario
Product	Gold
Revision #	A
Date	November 7, 2012
Level of study	Feasibility
Configuration	Closure - End of Year 1
Golder Project #	11-1118-0117 (2000)

Data are only input into the orange shaded cells. Relevant data is automatically transferred to other sheets.
Each sheet is password protected except for the orange shaded cells. The password is simply Golder.

Golder Associates

Sheet 2
Table of Contents

Preliminary

Sheet #

Note: This sheet is protected. The password is simply Golder.

Sheet 3

Model Set-up

- The flow model is developed on linked Excel spreadsheets. Input data are only required in the orange shaded cells. The calculations are automatically carried out and linked to the relevant cells on other sheets.
- The flow logic and a list of flows specific to this mine site are shown on the sheet entitled "4 Flow Logic Diagram".
- Precipitation, evaporation, sublimation, seepage and runoff coefficients are input in the "5 Hydrological Data" sheet. The data on this sheet can be easily manipulated to model the impact of varying climatic conditions.
- The watersheds at the mine site, their surface area and the percentage covered by different land surface types are input in the sheet entitled "6 Watershed Areas".
- Runoff from the different land surface types in the watersheds at the mine site is calculated on the "7 Runoff from Precipitation" sheet.
- The sheets that follow ("8-1 Waste Rock Stockpile", "8-2 TMF", "8-3 Detonator Storage Area", "8-4 Emulsion Plant", "8-5 Process Plant", "8-6 Overburden", "8-7 Low-grade ore stockpile", "8-8 ICP", and "8-9 Open Pit") show the monthly inflows and outflows to the different watersheds on the mine site.
- All the monthly inflows and outflows to the different watersheds on the mine site are summarized on the sheet entitled "9 Summary of Flows" at the end of the workbook.

Water Management Assumptions

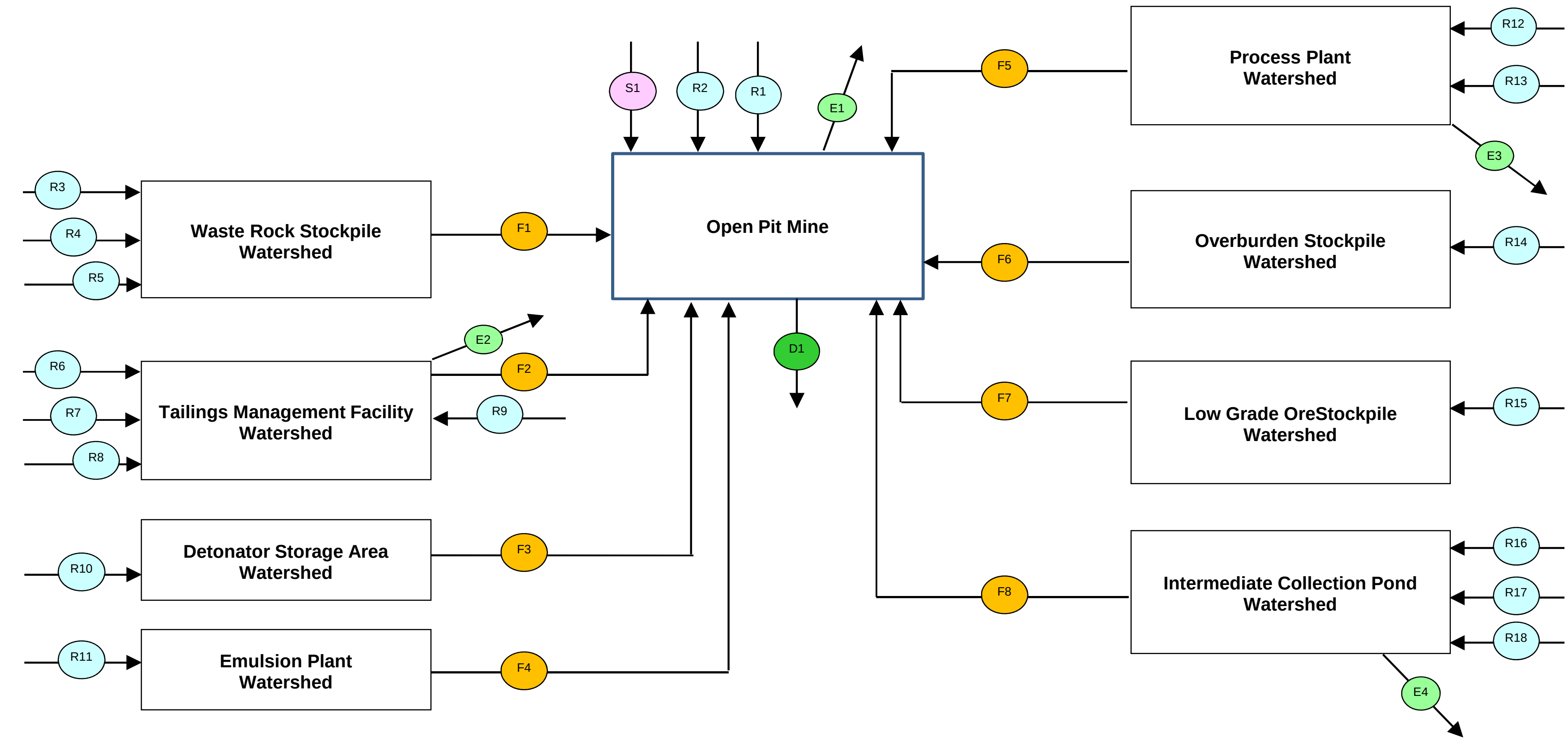
- It is assumed that the runoff from all the site watersheds will initially be conveyed either by gravity or pumping to the open pit to promote backflooding.
- The reclaim pond in the Tailings Management Area has a maximum storage capacity of 4,000,000 m³ based on its configuration. A minimum pond volume of 410,000 m³ has been assumed based on a water elevation of 430 m in the pond.

Note: This sheet is protected. The password is simply Golder.

Sheet 4
Flow Logic Diagram and List of Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1



Area	Flow No.	Description	
Flows associated with runoff from precipitation (R)	R1	Open pit mine	Runoff from pit walls
	R2		Direct precipitation to pond
	R3	Waste Rock Stockpile	Runoff from waste rock
	R4		Runoff from remediated prepared ground
	R5		Runoff from natural ground
	R6	Tailings Management Facility	Runoff from natural ground
	R7		Direct precipitation to pond
	R8		Runoff from waste rock
	R9		Runoff from re-vegetated tailings
	R10	Detonator Storage Area	Runoff from remediated prepared ground
	R11	Emulsion Plant	Runoff from remediated prepared ground
	R12	Process Plant Site	Runoff from remediated prepared ground
	R13		Direct precipitation to pond
	R14	Overburden Stockpile	Runoff from overburden stockpile
	R15	Low Grade Ore Stockpile	Runoff from ore stockpile
	R16	Intermediate Collection Pond	Runoff from natural ground
	R17		Runoff from remediated prepared ground
	R18		Direct precipitation to pond

Area	Flow No.	Description
Evaporation from ponds (E)	E1	Pit Lake
	E2	Tailings Management Facility Reclaim Pond
	E3	Process Plant Pond
	E4	Intermediate Collection Pond
Surface flows between elements (F)	F1	Waste Rock Stockpile to Open Pit
	F2	TMF to Open Pit
	F3	Detonator Storage Area to Open Pit
	F4	Emulsion Plant to Open Pit
	F5	Process Plant watershed to Open Pit
	F6	Overburden Stockpile to Open Pit
	F7	Low Grade Ore Stockpile to Open Pit
	F8	Intermediate Collection Pond to Open Pit
Discharge to environment (D)	D1	Outflow to Marmion Reservoir
Seepage Flows (S)	S1	Seepage into Open Pit

Sheet 5
Hydrological Data

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Level of Study:**	Feasibility	**Date:**	7-Nov-12
Project #:	11-1118-0117 (2000)	**Revision No:**	A	**Configuration:**	Closure - End of Year 1

Meteorological Station(s)	-	Location	Atikokan (Climate ID: 6020379)
	-	Elevation (m)	395.3
	-	Mean annual precipitation (mm)	739.6
	-	Distance from the site (km)	24

Month	**Precipitation** (Note 1)			**Sublimation** (Note 2)		**Factored Runoff** (Notes 3 and 4)					
	Annual selected for flow modelling (mm/yr) →		**758.0**	**Rate estimate (mm/d)** →	**0.3**	From natural ground		From Ponds		From Waste Rock	
	Mean (mm)	**Monthly Distribu-tion** (% of total)	**Precip-itation** (mm)	Months with sublimation (% of mm/d)	(mm)	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)
Aug	97.8	13.2	100.2	0	0.0	0.40	40.1	1.00	100.2	0.85	85.2
Sep	91.6	12.4	93.9	0	0.0	0.50	46.9	1.00	93.9	0.85	79.8
Oct	68.4	9.2	70.1	0	0.0	0.30	21.0	1.00	70.1	0.85	59.6
Nov	48.2	6.5	49.4	100	9.0	0.80	32.3	1.00	40.4	0.85	34.3
Dec	27.9	3.8	28.6	100	9.3	0.80	15.4	1.00	19.3	0.85	16.4
Jan	28.8	3.9	29.5	100	9.3	0.80	16.2	1.00	20.2	0.85	17.2
Feb	24.7	3.3	25.3	100	8.4	0.80	13.5	1.00	16.9	0.85	14.4
Mar	37.4	5.1	38.3	100	9.3	0.80	23.2	1.00	29.0	0.85	24.7
Apr	42.9	5.8	44.0	100	9.0	0.80	28.0	1.00	35.0	0.85	29.7
May	70.8	9.6	72.6	0	0.0	0.80	58.0	1.00	72.6	0.85	61.7
Jun	103.3	14.0	105.9	0	0.0	0.30	31.8	1.00	105.9	0.85	90.0
Jul	97.9	13.2	100.3	0	0.0	0.25	25.1	1.00	100.3	0.85	85.3
TOTAL	**739.7**	**100.0**	**758.0**		**54.3**	**0.52**	**351.6**	**1.00**	**703.7**	**0.85**	**598.1**

Month	From Overburden Stockpile		From Low Grade Ore Stockpile		From Remediated Prepared Ground		From Vegetated Tailings		From Pit Walls		Monthly runoff **(Note 4)**
	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)	Runoff factor	Factored runoff used in the flow model (mm)	Expressed as a % of accumu-lation (%)
Aug	0.40	40.1	0.40	40.1	0.55	55.1	0.40	40.1	0.85	85.2	100
Sep	0.50	46.9	0.50	46.9	0.60	56.3	0.50	46.9	0.85	79.8	100
Oct	0.30	21.0	0.30	21.0	0.50	35.0	0.30	21.0	0.85	59.6	100
Nov	0.80	32.3	0.80	32.3	0.80	32.3	0.55	22.2	0.95	38.4	60
Dec	0.80	15.4	0.80	15.4	0.80	15.4	0.55	10.6	0.95	18.3	35
Jan	0.80	16.2	0.80	16.2	0.80	16.2	0.55	11.1	0.95	19.2	10
Feb	0.80	13.5	0.80	13.5	0.80	13.5	0.55	9.3	0.95	16.1	0
Mar	0.80	23.2	0.80	23.2	0.80	23.2	0.55	16.0	0.95	27.6	10
Apr	0.80	28.0	0.80	28.0	0.80	28.0	0.55	19.2	0.95	33.2	100
May	0.80	58.0	0.80	58.0	0.75	54.4	0.55	39.9	0.85	61.7	100
Jun	0.30	31.8	0.30	31.8	0.50	52.9	0.30	31.8	0.85	90.0	100
Jul	0.25	25.1	0.25	25.1	0.48	47.7	0.25	25.1	0.85	85.3	100
TOTAL	**0.52**	**351.6**	**0.52**	**351.6**	**0.62**	**430.1**	**0.43**	**293.2**	**0.88**	**614.2**	

Month	Days/ month	Lake Evaporation (mm)
Aug	31	104.8
Sep	30	64.6
Oct	31	34.1
Nov	30	0.0
Dec	31	0.0
Jan	31	0.0
Feb	28	0.0
Mar	31	0.0
Apr	30	59.9
May	31	107.4
Jun	30	116.1
Jul	31	129.2
TOTAL	365	616.1

NOTES:

1. For years that are wetter and drier than the mean year, it usually has to be assumed that the monthly distribution of precipitation is the same as the distribution in the mean year.
2. "Sublimation" is the term used to describe the process of snow and ice changing into water vapour in the air without first melting into water. The process is due to a combination of factors such as radiation from the sun, temperature, pressure and other atmospheric conditions.
3. The "runoff factor" is the percentage of the precipitation that runs off and ends up in the pond(s). It takes into account evapo-transpiration and infiltration. From natural ground it might be in the order of 20 to 70 % depending on the degree of ground saturation, the intensity of rainfall and the time of year. It will be greater from prepared surfaces and pit walls. For modeling purposes it can be assumed that 100 % of the precipitation that falls on the pond and wet tailings beach ends up in the pond. The runoff from a dry tailings beach is considerably less depending on the degree of saturation of the tailings. Flow measurements are seldom available to correlate with precipitation to establish runoff factors at a new mine site.
4. A flow model must be able to account for winter snow accumulation by entering a runoff distribution as a percentage of the total accumulated to date. For example if there is no runoff in January, February and March and 100% runoff in April then the total accumulation of snow over these three months will enter the inflow side of the water balance in April. For the flow model to function properly the precipitation and evaporation data has to start and end on the table in months that 100% of the factored runoff is discharged.
5. Information are only required in the orange shaded cells (data input cells). Values used in the flow model.
6. This sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 6
Watershed Areas

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Watershed		**Sub Watersheds**			**Flow Number**
Facility	Area (ha)	Collecting area	% of total	(m^2)	
Open pit mine	153.22	Pit Walls	13.3	203,438	R1
		Pond	86.7	1,328,746	R2
		TOTAL	**100.0**	**1,532,184**	
Waste Rock Stockpile (includes Security Building)	192.40	Waste Rock	89.6	1,724,500	R3
		Remediated prepared ground	0.7	13,000	R4
		Natural ground	9.7	186,506	R5
		TOTAL	**89.6**	**1,924,006**	
Tailings Management Facility	957.2	Natural ground	15.1	1,446,541	R6
		Pond	6.0	571,456	R7
		From Waste Rock Dams	8.4	808,180	R8
		From Vegetated Tailings	70.5	6,746,016	R9
		TOTAL	**100.0**	**9,572,193**	
Detonator Storage Area	0.19	Remediated prepared ground	100	1,902	R10
		TOTAL	**100.0**	**1,902**	
Emulsion Plant	2.04	Remediated prepared ground	100	20,402	R11
		TOTAL	**100.0**	**20,402**	
Process Plant Site	53.23	Remediated prepared ground	89.2	474,820	R12
		Pond	10.8	57,470	R13
		TOTAL	**100.0**	**474,820**	
Overburden Stockpile	39.29	From Overburden	100	392,906	R14
		TOTAL	**100.0**	**392,906**	
Low Grade Ore Stockpile	27.45	From Low Grade Ore Stockpile	100	274,506	R15
		TOTAL	**100.0**	**274,506**	
Office/Truck shop/Fuel bay to Intermediate Collection Pond	20.39	Remediated natural ground	27.2	55,400	R16
		Remediated prepared ground	72.6	148,125	R17
		Pond	0.2	402	R18
		TOTAL	**100.0**	**203,927**	

Note: The sub-watersheds are subdivided by percentages which will change as the mine develops.

Data are only input into the orange shaded cells. The calculations are carried out in the other cells and the relevant data are automantically transferred to other sheets. The sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 7
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet				
Mine:	Osisko Hammond Reef Gold Project		Revision #:	A
Project #:	11-1118-0117 (2000)		Level of Study:	Feasibility
Date:	7-Nov-12		Configuration:	Closure - End of Year 1

	Open Pit - Runoff Flows (m^3 / mo)						Waste Rock Stockpile - Runoff Flows (m^3 / mo)								
Runoff #	R1 - Natural ground			R2 - Ponds			R3 - Waste Rock			R4 - Remediated Prepared Ground			R5 - Natural Ground		
Area (m^2)	203,438			1,328,746			1,724,500			13,000			186,506		
Month	Available runoff [1]	Accumulation left over each month [2]	R1 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R2 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R3 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R4 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R5 (note 3)
Aug	17,330	0	17,330	133,166	0	133,166	146,904	0	146,904	717	0	717	7,477	0	7,477
Sep	16,232	0	16,232	124,724	0	124,724	137,591	0	137,591	732	0	732	8,753	0	8,753
Oct	12,121	0	12,121	93,135	0	93,135	102,743	0	102,743	456	0	456	3,922	0	3,922
Nov	7,806	3,123	4,684	53,671	21,469	32,203	59,208	23,683	35,525	420	168	252	6,027	2,411	3,616
Dec	3,728	4,453	2,398	25,632	30,615	16,485	28,276	33,774	18,186	201	240	129	2,878	3,438	1,851
Jan	3,906	7,523	836	26,857	51,725	5,747	29,628	57,061	6,340	210	405	45	3,016	5,808	645
Feb	3,268	10,792	0	22,471	74,196	0	24,789	81,850	0	176	581	0	2,523	8,331	0
Mar	5,610	14,761	1,640	38,567	101,487	11,276	42,546	111,956	12,440	302	794	88	4,331	11,396	1,266
Apr	6,757	0	21,518	46,455	0	147,941	51,247	0	163,204	364	0	1,158	5,216	0	16,612
May	12,546	0	12,546	96,403	0	96,403	106,348	0	106,348	707	0	707	10,825	0	10,825
Jun	18,305	0	18,305	140,655	0	140,655	155,166	0	155,166	688	0	688	5,923	0	5,923
Jul	17,348	0	17,348	133,302	0	133,302	147,055	0	147,055	619	0	619	4,678	0	4,678
TOTAL	124,957		124,957	935,039		935,039	1,031,501		1,031,501	5,591		5,591	65,568		65,568

	Tailings Management Facility - Runoff Flows (m^3 / mo)											
Runoff #	R6 - Natural Ground			R7 - Ponds			R8 - Waste Rock			R9 - Vegetated Tailings		
Area (m^2)	1,446,541			571,456			808,180			6,746,016		
Month	Available runoff [1]	Accumulation left over each month [2]	R6 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R7 (note 3)	Available runoff [1]	Accumulation left over	R8 (note 3)	Available runoff [1]	Accumulation left over each	R9 (note 3)
Aug	57,989	0	57,989	57,271	0	57,271	68,846	0	68,846	270,433	0	270,433
Sep	67,891	0	67,891	53,640	0	53,640	64,482	0	64,482	316,611	0	316,611
Oct	30,417	0	30,417	40,055	0	40,055	48,150	0	48,150	141,853	0	141,853
Nov	46,743	18,697	28,046	23,083	9,233	13,850	27,748	11,099	16,649	149,868	59,947	89,921
Dec	22,323	26,663	14,357	11,024	13,167	7,090	13,251	15,828	8,523	71,573	85,488	46,032
Jan	23,391	45,049	5,005	11,551	22,246	2,472	13,885	26,742	2,971	74,995	144,434	16,048
Feb	19,570	64,619	0	9,664	31,910	0	11,617	38,359	0	62,745	207,180	0
Mar	33,589	88,387	9,821	16,587	43,647	4,850	19,939	52,468	5,830	107,693	283,385	31,487
Apr	40,458	0	128,845	19,979	0	63,625	24,017	0	76,485	129,717	0	413,103
May	83,959	0	83,959	41,460	0	41,460	49,840	0	49,840	269,189	0	269,189
Jun	45,937	0	45,937	60,492	0	60,492	72,718	0	72,718	214,231	0	214,231
Jul	36,280	0	36,280	57,330	0	57,330	68,917	0	68,917	169,193	0	169,193
TOTAL	508,548	243,415	508,548	402,134	120,201	402,134	483,409	144,495	483,409	1,978,102	780,435	1,978,102

	Detonator Storage Area - Runoff Flows (m^3 / mo)			Emulsion Plant - Runoff Flows (m^3 / mo)		
Runoff #	R10 - Remediated prepared ground			R11 - Remediated prepared ground		
Area (m^2)	1,902			20,402		
Month	Available runoff [1]	Accumulation left over each	R10 (note 3)	Available runoff [1]	Accumulation left over each	R11 (note 3)
Aug	105	0	105	1,125	0	1,125
Sep	107	0	107	1,149	0	1,149
Oct	67	0	67	715	0	715
Nov	61	25	37	659	264	396
Dec	29	35	19	315	376	202
Jan	31	59	7	330	635	71
Feb	26	85	0	276	911	0
Mar	44	116	13	474	1,247	139
Apr	53	0	169	571	0	1,817
May	103	0	103	1,110	0	1,110
Jun	101	0	101	1,080	0	1,080
Jul	91	0	91	972	0	972
TOTAL	818		818	8,775		8,775

	Process Plant Control Pond - Runoff Flows (m^3 / mo)						Overburden Stockpile Runoff Flows (m^3 / mo)			Mineralized Rock Stockpile Runoff Flows (m^3 / mo)			Intermediate Collection Pond Runoff Flows (m^3 / mo)								
Runoff #	R12 - Remediated Prepared Ground			R13 - Ponds			R14 - From Overburden Stockpile			R15 - From Ore Stockpile			R16 - From Natural Ground			R17 - From Remediated Prepared Ground			R18 - Ponds		
Area (m^2)	474,820			57,470			392,906			274,506			55,400			148,125			402		
Month	Available runoff [1]	Accumulation left over each month [2]	R12 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R13 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R14 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R15 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R16 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R17 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R18 (note 3)
Aug	26,172	0	26,172	5,760	0	5,760	15,751	0	15,751	11,004	0	11,004	2,221	0	2,221	8,165	0	8,165	40	0	40
Sep	26,742	0	26,742	5,394	0	5,394	18,440	0	18,440	12,883	0	12,883	2,600	0	2,600	8,342	0	8,342	38	0	38
Oct	16,641	0	16,641	4,028	0	4,028	8,262	0	8,262	5,772	0	5,772	1,165	0	1,165	5,191	0	5,191	28	0	28
Nov	15,343	6,137	9,206	2,321	929	1,393	12,696	5,079	7,618	8,870	3,548	5,322	1,790	716	1,074	4,787	1,915	2,872	16	6	10
Dec	7,328	8,752	4,713	1,109	1,324	713	6,063	7,242	3,900	4,236	5,060	2,725	855	1,021	550	2,286	2,730	1,470	8	9	5
Jan	7,678	14,787	1,643	1,162	2,237	249	6,353	12,236	1,360	4,439	8,549	950	896	1,725	192	2,395	4,613	513	8	16	2
Feb	6,424	21,211	0	972	3,209	0	5,316	17,552	0	3,714	12,263	0	749	2,475	0	2,004	6,617	0	7	22	0
Mar	11,025	29,013	3,224	1,668	4,389	488	9,123	24,007	2,667	6,374	16,773	1,864	1,286	3,385	376	3,439	9,051	1,006	12	31	3
Apr	13,280	0	42,293	2,009	0	6,399	10,989	0	34,997	7,678	0	24,451	1,549	0	4,935	4,143	0	13,194	14	0	45
May	25,837	0	25,837	4,170	0	4,170	22,805	0	22,805	15,933	0	15,933	3,215	0	3,215	8,060	0	8,060	29	0	29
Jun	25,131	0	25,131	6,083	0	6,083	12,477	0	12,477	8,717	0	8,717	1,759	0	1,759	7,840	0	7,840	43	0	43
Jul	22,627	0	22,627	5,765	0	5,765	9,854	0	9,854	6,885	0	6,885	1,389	0	1,389	7,059	0	7,059	40	0	40
TOTAL	204,227		204,227	40,441		40,441	138,131		138,131	96,506		96,506	19,476		19,476	63,711		63,711	283		283

Notes:
1. Available runoff = area x factored runoff from Sheet 8
2. Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %
3. R = (available runoff + accumulation left over) x monthly %
4. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
5. The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.
6. The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.
7. This sheet is protected. The password is simply Golder.

Sheet 8-1
Monthly Flows
Waste Rock Stockpile Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Month	Flows (m^3/month)			
	+R3	+R4	+R5	-F2
	Runoff from Waste Rock	Runoff from remediated prepared ground	Runoff from natural ground	Pumped flow to Open Pit
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(Calculated)
Aug	146,904	717	7,477	-155,098
Sep	137,591	732	8,753	-147,077
Oct	102,743	456	3,922	-107,120
Nov	35,525	252	3,616	-39,393
Dec	18,186	129	1,851	-20,166
Jan	6,340	45	645	-7,031
Feb	0	0	0	0
Mar	12,440	88	1,266	-13,794
Apr	163,204	1,158	16,612	-180,974
May	106,348	707	10,825	-117,880
Jun	155,166	688	5,923	-161,777
Jul	147,055	619	4,678	-152,352
TOTAL	**1,031,501**	**5,591**	**65,568**	**-1,102,661**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-2
Monthly Flows

Preliminary

Tailings Management Facility Watershed

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Closure - End of Year 1

Month	Flows (m^3/month)					
	+R6	+R7	+R8	+R9	-E2	-F3
	Runoff from natural ground	Direct preciptation to ponds	Runoff from waste rock dams	Runoff from re-vegetated tailings	Evaporation from Pit Lake	Pumped flow to Open Pit
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	57,989	57,271	68,846	270,433	-59,889	-394,650
Sep	67,891	53,640	64,482	316,611	-36,916	-465,708
Oct	30,417	40,055	48,150	141,853	-19,487	-240,988
Nov	28,046	13,850	16,649	89,921	0	-148,465
Dec	14,357	7,090	8,523	46,032	0	-76,002
Jan	5,005	2,472	2,971	16,048	0	-26,497
Feb	0	0	0	0	0	0
Mar	9,821	4,850	5,830	31,487	0	-51,987
Apr	128,845	63,625	76,485	413,103	-34,230	-647,828
May	83,959	41,460	49,840	269,189	-61,374	-383,073
Jun	45,937	60,492	72,718	214,231	-66,346	-327,032
Jul	36,280	57,330	68,917	169,193	-73,832	-257,887
TOTAL	**508,548**	**402,134**	**483,409**	**1,978,102**	**-352,074**	**-3,020,118**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-3
Monthly Flows
Detonator Storage Area Watershed

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Closure - End of Year 1

Month	Flows (m^3/month)	
	+R10	-F4
	From Remediated prepared ground	Pumped flow to Open Pit
	(From Sheet 8)	(Calculated)
Aug	105	-105
Sep	107	-107
Oct	67	-67
Nov	37	-37
Dec	19	-19
Jan	7	-7
Feb	0	0
Mar	13	-13
Apr	169	-169
May	103	-103
Jun	101	-101
Jul	91	-91
TOTAL	**818**	**-818**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-4
Monthly Flows
Emulsion Plant Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Month	**Flows (m^3/month)**	
	+R11	-F5
	From Remediated prepared ground	Pumped flow to Open Pit
	(From Sheet 8)	(Calculated)
Aug	1,125	-1,125
Sep	1,149	-1,149
Oct	715	-715
Nov	396	-396
Dec	202	-202
Jan	71	-71
Feb	0	0
Mar	139	-139
Apr	1,817	-1,817
May	1,110	-1,110
Jun	1,080	-1,080
Jul	972	-972
TOTAL	**8,775**	**-8,775**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-5
Monthly Flows
Process Plant Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Month	Flows (m^3/month)			
	+R12	+R13	-E3	-F6
	From remediated prepared ground	Direct Precipitation to Pond	Evaporation from Process Pond	Pumped flow to Open Pit
	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	26,172	5,760	-6,023	-25,909
Sep	26,742	5,394	-3,713	-28,424
Oct	16,641	4,028	-1,960	-18,709
Nov	9,206	1,393	0	-10,599
Dec	4,713	713	0	-5,426
Jan	1,643	249	0	-1,892
Feb	0	0	0	0
Mar	3,224	488	0	-3,711
Apr	42,293	6,399	-3,442	-45,249
May	25,837	4,170	-6,172	-23,834
Jun	25,131	6,083	-6,672	-24,542
Jul	22,627	5,765	-7,425	-20,967
TOTAL	**204,227**	**40,441**	**-35,407**	**-209,262**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-6
Monthly Flows
Overburden Stockpile Watershed

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Closure - End of Year 1

Month	Flows (m^3/month)	
	+R14	-F7
	From remediated prepared ground	Pumped flow to Open Pit
	(From Sheet 8)	(Calculated)
Aug	15,751	-15,751
Sep	18,440	-18,440
Oct	8,262	-8,262
Nov	7,618	-7,618
Dec	3,900	-3,900
Jan	1,360	-1,360
Feb	0	0
Mar	2,667	-2,667
Apr	34,997	-34,997
May	22,805	-22,805
Jun	12,477	-12,477
Jul	9,854	-9,854
TOTAL	138,131	-138,131

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-7
Monthly Flows

Low Grade Ore Stockpile Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Month	Flows (m^3/month)	
	+R15	-F8
	From remediated prepared ground	Pumped flow to Open Pit
	(From Sheet 8)	(Calculated)
Aug	11,004	-11,004
Sep	12,883	-12,883
Oct	5,772	-5,772
Nov	5,322	-5,322
Dec	2,725	-2,725
Jan	950	-950
Feb	0	0
Mar	1,864	-1,864
Apr	24,451	-24,451
May	15,933	-15,933
Jun	8,717	-8,717
Jul	6,885	-6,885
TOTAL	**96,506**	**-96,506**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-8
Monthly Flows

Preliminary

Intermediate Collection Pond Watershed

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Closure - End of Year 1

Month	Flows (m^3/month)				
	+R16	+R17	+R18	-E4	-F9
	From remediated prepared ground	From remediated prepared ground	From remediated prepared ground	Evaporation from ICP	Pumped flow to Open Pit
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	2,221	8,165	40	-42	-10,384
Sep	2,600	8,342	38	-26	-10,954
Oct	1,165	5,191	28	-14	-6,371
Nov	1,074	2,872	10	0	-3,956
Dec	550	1,470	5	0	-2,025
Jan	192	513	2	0	-706
Feb	0	0	0	0	0
Mar	376	1,006	3	0	-1,385
Apr	4,935	13,194	45	-24	-18,149
May	3,215	8,060	29	-43	-11,262
Jun	1,759	7,840	43	-47	-9,595
Jul	1,389	7,059	40	-52	-8,436
TOTAL	**19,476**	**63,711**	**283**	**-248**	**-83,223**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-9
Monthly Flows
Open Pit Watershed

Preliminary

From cover sheet			
Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	7-Nov-12	**Configuration:**	Closure - End of Year 1

Month	Flows (m^3/month)													
	+R1	+R2	+S1	-E1	+F1	+F2	+F3	+F4	+F5	+F6	+F7	+F8	-	-D1
	From Pit Walls	Direct Precipitation to Pond	Seepage into Open Pit	Evaporation from Pit Lake	From Waste Rock Stockpile Watershed	From TMF Watershed	From Detonator Storage Watershed	From Emulsion Plant Watershed	From Process Plant Watershed	From Overburden Stockpile Watershed	From Low Grade Ore Stockpile Watershed	From Intermediate Collection Pond Watershed	Volume retained in the Open Pit	Overflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(Note 5)	(From Sheet 6)	(From Sheet 9-1)	(From Sheet 9-2)	(From Sheet 9-3)	(From Sheet 9-4)	(From Sheet 9-15	(From Sheet 9-6)	(From Sheet 9-7)	(From Sheet 9-8)	(Calculated)	(Calculated)
Aug	17,330	133,166	16,148	-139,253	155,098	394,650	105	1,125	25,909	15,751	11,004	10,384	641,417	0
Sep	16,232	124,724	15,627	-85,837	147,077	465,708	107	1,149	28,424	18,440	12,883	10,954	755,488	0
Oct	12,121	93,135	16,148	-45,310	107,120	240,988	67	715	18,709	8,262	5,772	6,371	464,097	0
Nov	4,684	32,203	15,627	0	39,393	148,465	37	396	10,599	7,618	5,322	3,956	268,299	0
Dec	2,398	16,485	16,148	0	20,166	76,002	19	202	5,426	3,900	2,725	2,025	145,495	0
Jan	836	5,747	16,148	0	7,031	26,497	7	71	1,892	1,360	950	706	61,242	0
Feb	0	0	14,585	0	0	0	0	0	0	0	0	0	14,585	0
Mar	1,640	11,276	16,148	0	13,794	51,987	13	139	3,711	2,667	1,864	1,385	104,625	0
Apr	21,518	147,941	15,627	-79,592	180,974	647,828	169	1,817	45,249	34,997	24,451	18,149	1,059,128	0
May	12,546	96,403	16,148	-142,707	117,880	383,073	103	1,110	23,834	22,805	15,933	11,262	558,389	0
Jun	18,305	140,655	15,627	-154,267	161,777	327,032	101	1,080	24,542	12,477	8,717	9,595	565,641	0
Jul	17,348	133,302	16,148	-171,674	152,352	257,887	91	972	20,967	9,854	6,885	8,436	452,569	0
TOTAL	**124,957**	**935,039**	**190,129**	**-818,640**	**1,102,661**	**3,020,118**	**818**	**8,775**	**209,262**	**138,131**	**96,506**	**83,223**	**5,090,976**	**0**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.
5. Seepage rate is based on a maximum inflow rate of 375 m^3/day for each of the East and West pits at the their ultimate configuration. A combined daily rate of 520.9 m^3/day for the end of closure Year 1 was calculated by assuming a linear reduction in the seepage rate from the maximum rate at the ultimate configuration to 0 m^3/h at elevation 431m (Mitta Lake elevation under existing conditions). The pit flooding model predicts that at the end of closure year 1 the pit water elevations will be 194.9 and 288.9m for the West and East Pits respectively.

Sheet 9
Summary of All Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	Project #:	11-1118-0117 (2000)	Date:	7-Nov-12	Revision #	A	Annual Precipitation:	758 mm	Model year:	Closure - End of Year 1

ID	Element	Description	August	September	October	November	December	January	February	March	April	May	June	July	Annual
			Flow (m³)												
Flows associated with processing the ore			31	30	31	30	31	31	28	31	30	31	30	31	
Runoff from precipitation															1
R1	Open Pit Mine	Runoff from pit walls	17,330	16,232	12,121	4,684	2,398	836	0	1,640	21,518	12,546	18,305	17,348	124,957
R2		Direct precipitation to ponds	133,166	124,724	93,135	32,203	16,485	5,747	0	11,276	147,941	96,403	140,655	133,302	935,039
R3	Waste Rock Stockpile	Runoff from waste rock	146,904	137,591	102,743	35,525	18,186	6,340	0	12,440	163,204	106,348	155,166	147,055	1,031,501
R4		Runoff from remediated prepared ground	717	732	456	252	129	45	0	88	1,158	707	688	619	5,591
R5		Runoff from natural ground	7,477	8,753	3,922	3,616	1,851	645	0	1,266	16,612	10,825	5,923	4,678	65,568
R6	Tailings Management Facility	Runoff from natural ground	57,989	67,891	30,417	28,046	14,357	5,005	0	9,821	128,845	83,959	45,937	36,280	508,548
R7		Direct precipitation to ponds	57,271	53,640	40,055	13,850	7,090	2,472	0	4,850	63,625	41,460	60,492	57,330	402,134
R8		Runoff from waste rock	68,846	64,482	48,150	16,649	8,523	2,971	0	5,830	76,485	49,840	72,718	68,917	483,409
R9		Runoff from re-vegetated tailings	270,433	316,611	141,853	89,921	46,032	16,048	0	31,487	413,103	269,189	214,231	169,193	1,978,102
R10	Detonator Storage Area	Runoff from remediated prepared ground	105	107	67	37	19	7	0	13	169	103	101	91	818
R11	Emulsion Plant	Runoff from remediated prepared ground	1,125	1,149	715	396	202	71	0	139	1,817	1,110	1,080	972	8,775
R12	Proces Plant Site	Runoff from remediated prepared ground	26,172	26,742	16,641	9,206	4,713	1,643	0	3,224	42,293	25,837	25,131	22,627	204,227
R13		Direct precipitation to ponds	5,760	5,394	4,028	1,393	713	249	0	488	6,399	4,170	6,083	5,765	40,441
R14	Overburden Stockpile	Runoff from overburden stockpile	15,751	18,440	8,262	7,618	3,900	1,360	0	2,667	34,997	22,805	12,477	9,854	138,131
R15	Low Grade Ore Stockpile	Runoff from stockpile	11,004	12,883	5,772	5,322	2,725	950	0	1,864	24,451	15,933	8,717	6,885	96,506
R16	Intermediate Collection Pond	Runoff from natural ground	2,221	2,600	1,165	1,074	550	192	0	376	4,935	3,215	1,759	1,389	19,476
R17		Runoff from remediated prepared ground	8,165	8,342	5,191	2,872	1,470	513	0	1,006	13,194	8,060	7,840	7,059	63,711
R18		Direct precipitation to ponds	40	38	28	10	5	2	0	3	45	29	43	40	283
Evaporation															
E1	Pit Lake		139,253	85,837	45,310	0	0	0	0	0	79,592	142,707	154,267	171,674	818,640
E2	Tailings Management Facility Reclaim Pond		59,889	36,916	19,487	0	0	0	0	0	34,230	61,374	66,346	73,832	352,074
E3	Process Plant Pond		6,023	3,713	1,960	0	0	0	0	0	3,442	6,172	6,672	7,425	35,407
E4	Intermediate Collection Pond		42	26	14	0	0	0	0	0	24	43	47	52	248
Surface flows between elements															
F1	Waste Rock Stockpile to Open Pit		155,098	147,077	107,120	39,393	20,166	7,031	0	13,794	180,974	117,880	161,777	152,352	1,102,661
F2	TMF to Open Pit		394,650	465,708	240,988	148,465	76,002	26,497	0	51,987	647,828	383,073	327,032	257,887	3,020,118
F3	Detonator Storage Area to Open Pit		105	107	67	37	19	7	0	13	169	103	101	91	818
F4	Emulsion Plant to Open Pit		1,125	1,149	715	396	202	71	0	139	1,817	1,110	1,080	972	8,775
F5	Process Plant watershed to Open Pit		25,909	28,424	18,709	10,599	5,426	1,892	0	3,711	45,249	23,834	24,542	20,967	209,262
F6	Overburden Stockpile to Open Pit		15,751	18,440	8,262	7,618	3,900	1,360	0	2,667	34,997	22,805	12,477	9,854	138,131
F7	Low Grade Ore Stockpile to Open Pit		11,004	12,883	5,772	5,322	2,725	950	0	1,864	24,451	15,933	8,717	6,885	96,506
F8	Intermediate Collection Pond to Open Pit		10,384	10,954	6,371	3,956	2,025	706	0	1,385	18,149	11,262	9,595	8,436	83,223
Discharge to the environment															
D1	Outflow to Marmion Reservoir		0	0	0	0	0	0	0	0	0	0	0	0	0
Open Pit															
-	Volume retained in Open Pit		641,417	755,488	464,097	268,299	145,495	61,242	14,585	104,625	1,059,128	558,389	565,641	452,569	5,090,976

Note: Input data are not required on this sheet, The information is automatically transferred from the other sheets. The sheet is protected. The password is simply Golder.
A negative number means the flow does not exist (note that this convention is not consistent with that used in the rest of the model)

Post Closure

Sheet 1

Preliminary

Site Wide Deterministic
Flow (Water Balance) Model
Ultimate Configuration
Average Climatic Conditions

Mine	Osisko Hammond Reef Gold Project
Owner(s)	Osisko Hammond Reef Gold Ltd.
Operator	Osisko Hammond Reef Gold Ltd.
Location	Atikokan, Ontario
Product	Gold
Revision #	A
Date	November 7, 2012
Level of study	Feasibility
Configuration	Post-Closure Conditions
Golder Project #	11-1118-0117 (2000)

Data are only input into the orange shaded cells. Relevant data is automatically transferred to other sheets.
Each sheet is password protected except for the orange shaded cells. The password is simply Golder.

Golder Associates

Sheet 2
Table of Contents

Preliminary

Sheet #

Note: This sheet is protected. The password is simply Golder.

Sheet 3

Model Set-up

- The flow model is developed on linked Excel spreadsheets. Input data are only required in the orange shaded cells. The calculations are automatically carried out and linked to the relevant cells on other sheets.
- The flow logic and a list of flows specific to this mine site are shown on the sheet entitled "4 Flow Logic Diagram".
- Precipitation, evaporation, sublimation, seepage and runoff coefficients are input in the "5 Hydrological Data" sheet. The data on this sheet can be easily manipulated to model the impact of varying climatic conditions.
- The watersheds at the mine site, their surface area and the percentage covered by different land surface types are input in the sheet entitled "6 Watershed Areas".
- Runoff from the different land surface types in the watersheds at the mine site is calculated on the "7 Runoff from Precipitation"
- The sheets that follow ("8-1 Open Pit", "8-2 Waste Rock Stockpile", "8-3 TMF", "8-4 Detonator Storage Area", "8-5 Emulsion Plant", "8-6 Process Plant", "8-7 Overburden", "8-8 Ore", "8-9 ICP", and "8-10 Environment") show the monthly inflows and outflows to the different watersheds on the mine site.
- All the monthly inflows and outflows to the different watersheds on the mine site are summarized on the sheet entitled "9 Summary of Flows" at the end of the workbook.

Water Management Assumptions

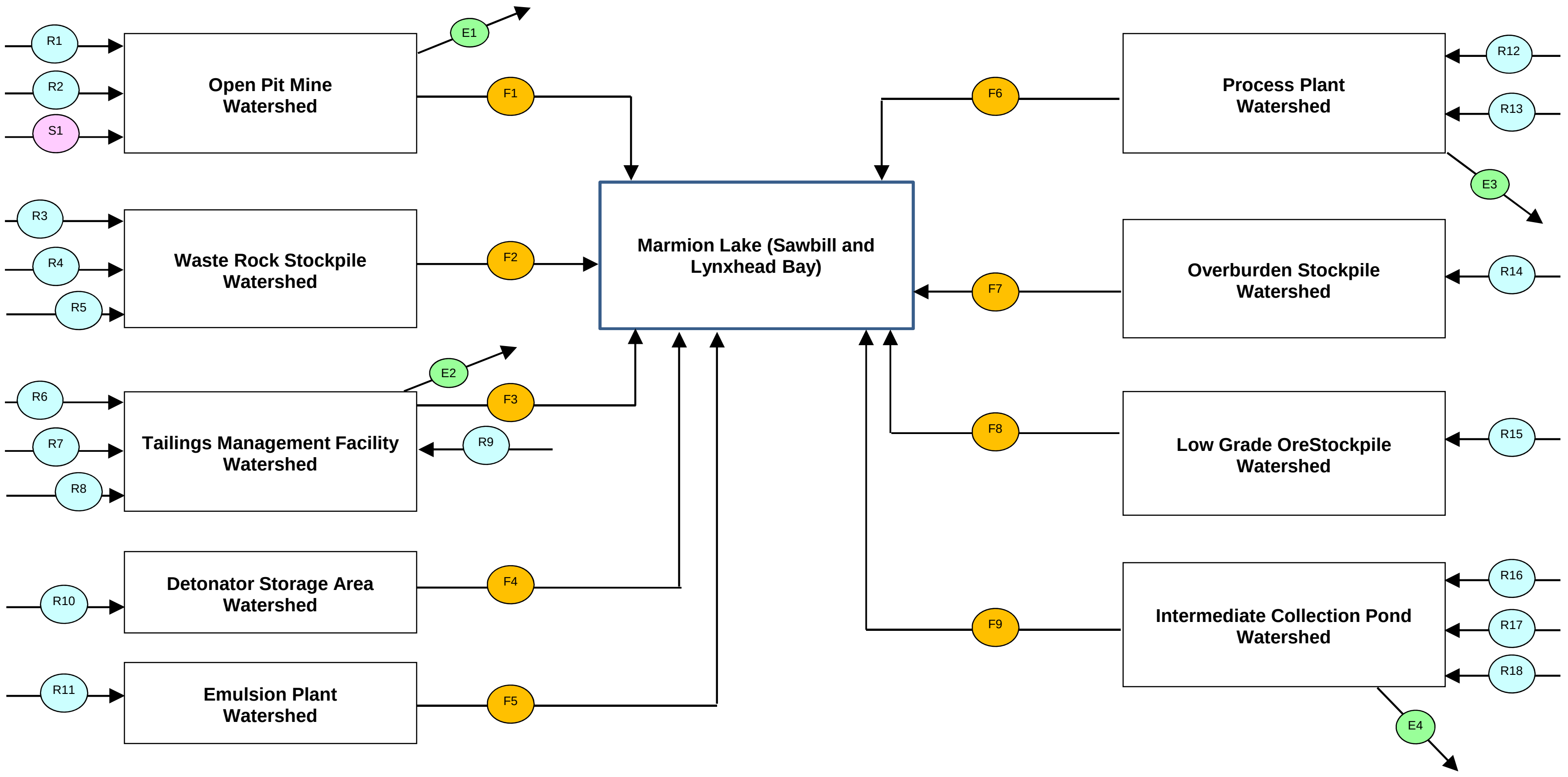
- It is assumed that under long-term post-closure conditions, the runoff from all site components will drain naturally by gravity into Marmion Lake, as the water quality will be deemed suitable for direct discharge.
- It is assumed that the Open pit has been flooded to elevation 420 m and that spillover will occur intermittantly based on inflows associated with runoff from precipitation, seepage, and evaporation rates

Note: This sheet is protected. The password is simply Golder.

Sheet 4
Flow Logic Diagram and List of Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions



Area	Flow No.	Description	
Flows associated with runoff from precipitation (R)	R1	Open pit mine	Runoff from pit walls
	R2		Direct precipitation to pond
	R3	Waste Rock Stockpile	Runoff from waste rock
	R4		Runoff from remediated prepared ground
	R5		Runoff from natural ground
	R6	Tailings Management Facility	Runoff from natural ground
	R7		Direct precipitation to pond
	R8		Runoff from waste rock
	R9		Runoff from re-vegetated tailings
	R10	Detonator Storage Area	Runoff from natural ground
	R11	Emulsion Plant	Runoff from natural ground
	R12	Process Plant Site	Runoff from remediated prepared ground
	R13		Direct precipitation to pond
	R14	Overburden Stockpile	Runoff from overburden stockpile
	R15	Low Grade Ore Stockpile	Runoff from ore stockpile
	R16	Intermediate Collection Pond	Runoff from natural ground
	R17		Runoff from remediated prepared ground
	R18		Direct precipitation to pond

Area	Flow No.	Description
Evaporation from ponds (E)	E1	Pit Lake
	E2	Tailings Management Facility Reclaim Pond
	E3	Process Plant Pond
	E4	Intermediate Collection Pond
Surface flows between elements (F)	F1	Open Pit Mine to environment
	F2	Waste Rock Stockpile to environment
	F3	TMF to environment
	F4	Detonator Storage Area to environment
	F5	Emulsion Plant to environment
	F6	Process Plant watershed to environment
	F7	Overburden Stockpile to environment
	F8	Low Grade Ore Stockpile to environment
	F9	Intermediate Collection Pond
Seepage Flows (S)	S1	Seepage into Open Pit
Discharge to environment (D)	D1	Inflow to Mitta Lake

Sheet 5
Hydrological Data

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Level of Study:**	Feasibility	**Date:**	7-Nov-12
Project #:	11-1118-0117 (2000)	**Revision No:**	A	**Configuration:**	Post-Closure Conditions

Meteorological Station(s)	-	Location	Atikokan (Climate ID: 6020379)
	-	Elevation (m)	395.3
	-	Mean annual precipitation (mm)	739.6
	-	Distance from the site (km)	24

Month	**Precipitation** (Note 1)			**Sublimation** (Note 2)		**Factored Runoff** (Notes 3 and 4)														
	Annual selected for flow modelling (mm/yr) →		**758.0**	**Rate estimate (mm/d)** →	**0.3**	From natural ground		From Ponds		From Waste Rock		From Overburden Stockpile		From Low Grade Ore Stockpile		From Remediated Prepared Ground		From Vegetated Tailings		From Pit
	Mean	**Monthly Distribu-tion**	**Precip-itation**	Months with sublimation (% of mm/d)		Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor	Factored runoff used in the flow model	Runoff factor
	(mm)	(% of total)	(mm)		(mm)		(mm)		(mm)		(mm)		(mm)		(mm)		(mm)		(mm)	
Aug	97.8	13.2	100.2	0	0.0	0.40	40.1	1.00	100.2	0.85	85.2	0.40	40.1	0.40	40.1	0.55	55.1	0.40	40.1	0.85
Sep	91.6	12.4	93.9	0	0.0	0.50	46.9	1.00	93.9	0.85	79.8	0.50	46.9	0.50	46.9	0.60	56.3	0.50	46.9	0.85
Oct	68.4	9.2	70.1	0	0.0	0.30	21.0	1.00	70.1	0.85	59.6	0.30	21.0	0.30	21.0	0.50	35.0	0.30	21.0	0.85
Nov	48.2	6.5	49.4	100	9.0	0.80	32.3	1.00	40.4	0.85	34.3	0.80	32.3	0.80	32.3	0.80	32.3	0.55	22.2	0.95
Dec	27.9	3.8	28.6	100	9.3	0.80	15.4	1.00	19.3	0.85	16.4	0.80	15.4	0.80	15.4	0.80	15.4	0.55	10.6	0.95
Jan	28.8	3.9	29.5	100	9.3	0.80	16.2	1.00	20.2	0.85	17.2	0.80	16.2	0.80	16.2	0.80	16.2	0.55	11.1	0.95
Feb	24.7	3.3	25.3	100	8.4	0.80	13.5	1.00	16.9	0.85	14.4	0.80	13.5	0.80	13.5	0.80	13.5	0.55	9.3	0.95
Mar	37.4	5.1	38.3	100	9.3	0.80	23.2	1.00	29.0	0.85	24.7	0.80	23.2	0.80	23.2	0.80	23.2	0.55	16.0	0.95
Apr	42.9	5.8	44.0	100	9.0	0.80	28.0	1.00	35.0	0.85	29.7	0.80	28.0	0.80	28.0	0.80	28.0	0.55	19.2	0.95
May	70.8	9.6	72.6	0	0.0	0.80	58.0	1.00	72.6	0.85	61.7	0.80	58.0	0.80	58.0	0.75	54.4	0.55	39.9	0.85
Jun	103.3	14.0	105.9	0	0.0	0.30	31.8	1.00	105.9	0.85	90.0	0.30	31.8	0.30	31.8	0.50	52.9	0.30	31.8	0.85
Jul	97.9	13.2	100.3	0	0.0	0.25	25.1	1.00	100.3	0.85	85.3	0.25	25.1	0.25	25.1	0.48	47.7	0.25	25.1	0.85
TOTAL	**739.7**	**100.0**	**758.0**		**54.3**	**0.52**	**351.6**	**1.00**	**703.7**	**0.85**	**598.1**	**0.52**	**351.6**	**0.52**	**351.6**	**0.62**	**430.1**	**0.43**	**293.2**	**0.88**

Month	**Days/ month**	**Lake Evaporation**
		(mm)
Aug	31	104.8
Sep	30	64.6
Oct	31	34.1
Nov	30	0.0
Dec	31	0.0
Jan	31	0.0
Feb	28	0.0
Mar	31	0.0
Apr	30	59.9
May	31	107.4
Jun	30	116.1
Jul	31	129.2
TOTAL	365	616.1

NOTES:

1. For years that are wetter and drier than the mean year, it usually has to be assumed that the monthly distribution of precipitation is the same as the distribution in the mean year.
2. "Sublimation" is the term used to describe the process of snow and ice changing into water vapour in the air without first melting into water. The process is due to a combination of factors such as radiation from the sun, temperature, pressure and other atmospheric conditions.
3. The "runoff factor" is the percentage of the precipitation that runs off and ends up in the pond(s). It takes into account evapo-transpiration and infiltration. From natural ground it might be in the order of 20 to 70 % depending on the degree of ground saturation, the intensity of rainfall and the time of year. It will be greater from prepared surfaces and pit walls. For modeling purposes it can be assumed that 100 % of the precipitation that falls on the pond and wet tailings beach ends up in the pond. The runoff from a dry tailings beach is considerably less depending on the degree of saturation of the tailings. Flow measurements are seldom available to correlate with precipitation to establish runoff factors at a new mine site.
4. A flow model must be able to account for winter snow accumulation by entering a runoff distribution as a percentage of the total accumulated to date. For example if there is no runoff in January, February and March and 100% runoff in April then the total accumulation of snow over these three months will enter the inflow side of the water balance in April. For the flow model to function properly the precipitation and evaporation data has to start and end on the table in months that 100% of the factored runoff is discharged.
5. Information are only required in the orange shaded cells (data input cells). Values used in the flow model.
6. This sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 6
Watershed Areas

Preliminary

Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Watershed		**Sub Watersheds**			**Flow Number**
Facility	Area (ha)	Collecting area	% of total	(m^2)	
Open pit mine	153.22	Pit Walls	13.3	203,438	R1
		Pond	86.7	1,328,746	R2
		TOTAL	**100.0**	**203,438**	
Waste Rock Stockpile (includes Security Building)	192.40	Waste Rock	89.6	1,724,500	R3
		Remediated prepared ground	0.7	13,000	R4
		Natural ground	9.7	186,506	R5
		TOTAL	**89.6**	**1,924,006**	
Tailings Management Facility	957.2	Natural ground	15.1	1,446,541	R6
		Pond	6.0	571,456	R7
		From Waste Rock Dams	8.4	808,180	R8
		From Vegetated Tailings	70.5	6,746,016	R9
		TOTAL	**100.0**	**9,572,193**	
Detonator Storage Area	0.19	Remediated prepared ground	100	1,902	R10
		TOTAL	**100.0**	**1,902**	
Emulsion Plant	2.04	Remediated prepared ground	100	20,402	R11
		TOTAL	**100.0**	**20,402**	
Process Plant Site	52.25	Remediated prepared ground	90.9	474,820	R12
		Pond	9.1	47,630	R13
		TOTAL	**100.0**	**474,820**	
Overburden Stockpile	39.29	From Overburden	100	392,906	R14
		TOTAL	**100.0**	**392,906**	
Low Grade Ore Stockpile	27.45	From Low Grade Ore	100	274,506	R15
		TOTAL	**100.0**	**274,506**	
Office/Truck shop/Fuel bay to Intermediate Collection Pond	20.39	Remediated natural ground	27.2	55,400	R16
		Remediated prepared ground	72.6	148,125	R17
		Pond	0.2	402	R18
		TOTAL	**100.0**	**55,400**	

Note: The sub-watersheds are subdivided by percentages which will change as the mine develops.

Data are only input into the orange shaded cells. The calculations are carried out in the other cells and the relevant data are automantically transferred to other sheets. The sheet is protected except for the orange shaded cells. The password is simply Golder.

Sheet 7
Flows Associated with Runoff from Precipitation

Preliminary

From cover sheet			
Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
Date:	7-Nov-12	Configuration:	Post-Closure Conditions

	Open Pit - Runoff Flows (m^3 / mo)						Waste Rock Stockpile - Runoff Flows (m^3 / mo)								
Runoff #	R1 - Natural ground			R2 - Ponds			R3 - Waste Rock			R4 - Remediated Prepared Ground			R5 - Natural Ground		
Area (m^2)	203,438			1,328,746			1,724,500			13,000			186,506		
Month	Available runoff [1]	Accumulation left over each month [2]	R1 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R2 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R3 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R4 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R5 (note 3)
Aug	17,330	0	17,330	133,166	0	133,166	146,904	0	146,904	717	0	717	7,477	0	7,477
Sep	16,232	0	16,232	124,724	0	124,724	137,591	0	137,591	732	0	732	8,753	0	8,753
Oct	12,121	0	12,121	93,135	0	93,135	102,743	0	102,743	456	0	456	3,922	0	3,922
Nov	7,806	3,123	4,684	53,671	21,469	32,203	59,208	23,683	35,525	420	168	252	6,027	2,411	3,616
Dec	3,728	4,453	2,398	25,632	30,615	16,485	28,276	33,774	18,186	201	240	129	2,878	3,438	1,851
Jan	3,906	7,523	836	26,857	51,725	5,747	29,628	57,061	6,340	210	405	45	3,016	5,808	645
Feb	3,268	10,792	0	22,471	74,196	0	24,789	81,850	0	176	581	0	2,523	8,331	0
Mar	5,610	14,761	1,640	38,567	101,487	11,276	42,546	111,956	12,440	302	794	88	4,331	11,396	1,266
Apr	6,757	0	21,518	46,455	0	147,941	51,247	0	163,204	364	0	1,158	5,216	0	16,612
May	12,546	0	12,546	96,403	0	96,403	106,348	0	106,348	707	0	707	10,825	0	10,825
Jun	18,305	0	18,305	140,655	0	140,655	155,166	0	155,166	688	0	688	5,923	0	5,923
Jul	17,348	0	17,348	133,302	0	133,302	147,055	0	147,055	619	0	619	4,678	0	4,678
TOTAL	124,957		124,957	935,039		935,039	1,031,501		1,031,501	5,591		5,591	65,568		65,568

	Tailings Management Facility - Runoff Flows (m^3 / mo)												Detonator Storage Area - Runoff Flows (m^3 / mo)			Emulsion Plant - Runoff Flows (m^3 / mo)		
Runoff #	R6 - Natural Ground			R7 - Ponds			R8 - Waste Rock			R9 - Vegetated Tailings			R10 - Remediated prepared ground			R11 - Remediated prepared ground		
Area (m^2)	1,446,541			571,456			808,180			6,746,016			1,902			20,402		
Month	Available runoff [1]	Accumulation left over each month [2]	R6 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R7 (note 3)	Available runoff [1]	Accumulation left over	R8 (note 3)	Available runoff [1]	Accumulation left over each	R9 (note 3)	Available runoff [1]	Accumulation left over each	R10 (note 3)	Available runoff [1]	Accumulation left over each	R11 (note 3)
Aug	57,989	0	57,989	57,271	0	57,271	68,846	0	68,846	270,433	0	270,433	105	0	105	1,125	0	1,125
Sep	67,891	0	67,891	53,640	0	53,640	64,482	0	64,482	316,611	0	316,611	107	0	107	1,149	0	1,149
Oct	30,417	0	30,417	40,055	0	40,055	48,150	0	48,150	141,853	0	141,853	67	0	67	715	0	715
Nov	46,743	18,697	28,046	23,083	9,233	13,850	27,748	11,099	16,649	149,868	59,947	89,921	61	25	37	659	264	396
Dec	22,323	26,663	14,357	11,024	13,167	7,090	13,251	15,828	8,523	71,573	85,488	46,032	29	35	19	315	376	202
Jan	23,391	45,049	5,005	11,551	22,246	2,472	13,885	26,742	2,971	74,995	144,434	16,048	31	59	7	330	635	71
Feb	19,570	64,619	0	9,664	31,910	0	11,617	38,359	0	62,745	207,180	0	26	85	0	276	911	0
Mar	33,589	88,387	9,821	16,587	43,647	4,850	19,939	52,468	5,830	107,693	283,385	31,487	44	116	13	474	1,247	139
Apr	40,458	0	128,845	19,979	0	63,625	24,017	0	76,485	129,717	0	413,103	53	0	169	571	0	1,817
May	83,959	0	83,959	41,460	0	41,460	49,840	0	49,840	269,189	0	269,189	103	0	103	1,110	0	1,110
Jun	45,937	0	45,937	60,492	0	60,492	72,718	0	72,718	214,231	0	214,231	101	0	101	1,080	0	1,080
Jul	36,280	0	36,280	57,330	0	57,330	68,917	0	68,917	169,193	0	169,193	91	0	91	972	0	972
TOTAL	508,548	243,415	508,548	402,134	120,201	402,134	483,409	144,495	483,409	1,978,102	780,435	1,978,102	818		818	8,775		8,775

	Process Plant Control Pond - Runoff Flows (m^3 / mo)						Overburden Stockpile Runoff Flows (m^3 / mo)			Ore Stockpile Runoff Flows (m^3 / mo)			Intermediate Collection Pond Runoff Flows (m^3 / mo)								
Runoff #	R12 - Remediated Prepared Ground			R13 - Ponds			R14 - From Overburden Stockpile			R15 - From Ore Stockpile			R16 - From Natural Ground			R17 - From Remediated Prepared Ground			R18 - Ponds		
Area (m^2)	474,820			47,630			392,906			274,506			55,400			148,125			402		
Month	Available runoff [1]	Accumulation left over each month [2]	R12 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R13 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R14 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R15 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R16 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R17 (note 3)	Available runoff [1]	Accumulation left over each month [2]	R18 (note 3)
Aug	26,172	0	26,172	4,773	0	4,773	15,751	0	15,751	11,004	0	11,004	2,221	0	2,221	8,165	0	8,165	40	0	40
Sep	26,742	0	26,742	4,471	0	4,471	18,440	0	18,440	12,883	0	12,883	2,600	0	2,600	8,342	0	8,342	38	0	38
Oct	16,641	0	16,641	3,338	0	3,338	8,262	0	8,262	5,772	0	5,772	1,165	0	1,165	5,191	0	5,191	28	0	28
Nov	15,343	6,137	9,206	1,924	770	1,154	12,696	5,079	7,618	8,870	3,548	5,322	1,790	716	1,074	4,787	1,915	2,872	16	6	10
Dec	7,328	8,752	4,713	919	1,097	591	6,063	7,242	3,900	4,236	5,060	2,725	855	1,021	550	2,286	2,730	1,470	8	9	5
Jan	7,678	14,787	1,643	963	1,854	206	6,353	12,236	1,360	4,439	8,549	950	896	1,725	192	2,395	4,613	513	8	16	2
Feb	6,424	21,211	0	805	2,660	0	5,316	17,552	0	3,714	12,263	0	749	2,475	0	2,004	6,617	0	7	22	0
Mar	11,025	29,013	3,224	1,382	3,638	404	9,123	24,007	2,667	6,374	16,773	1,864	1,286	3,385	376	3,439	9,051	1,006	12	31	3
Apr	13,280	0	42,293	1,665	0	5,303	10,989	0	34,997	7,678	0	24,451	1,549	0	4,935	4,143	0	13,194	14	0	45
May	25,837	0	25,837	3,456	0	3,456	22,805	0	22,805	15,933	0	15,933	3,215	0	3,215	8,060	0	8,060	29	0	29
Jun	25,131	0	25,131	5,042	0	5,042	12,477	0	12,477	8,717	0	8,717	1,759	0	1,759	7,840	0	7,840	43	0	43
Jul	22,627	0	22,627	4,778	0	4,778	9,854	0	9,854	6,885	0	6,885	1,389	0	1,389	7,059	0	7,059	40	0	40
TOTAL	204,227		204,227	33,517		33,517	138,131		138,131	96,506		96,506	19,476		19,476	63,711		63,711	283		283

Notes:

1. Available runoff = area x factored runoff from Sheet 8
2. Accumulation left over each month = (available runoff + previous month's accumulation) - (available runoff + previous month's accumulation) x monthy %
3. R = (available runoff + accumulation left over) x monthly %
4. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
5. The blue shaded cells are the calculated monthly runoff flows that are summarized on the "Summary of Flows" sheet at the end of the model.
6. The table must start in a month with 100 % runoff - not a month when freezing prevents partial or zero runoff.
7. This sheet is protected. The password is simply Golder.

Sheet 8-1
Monthly Flows
Open Pit Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**				
	+R1	+R2	+S1	-E1	-F1
	From Pit Walls	Direct Precipitation to Pond	Seepage inflow	Evaporation from Pit Lake	Outflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(Note 5)	(From Sheet 6)	(Calculated)
Aug	17,330	133,166	908	-139,253	-12,152
Sep	16,232	124,724	879	-85,837	-55,998
Oct	12,121	93,135	908	-45,310	-60,853
Nov	4,684	32,203	879	0	-37,766
Dec	2,398	16,485	908	0	-19,791
Jan	836	5,747	908	0	-7,491
Feb	0	0	820	0	-820
Mar	1,640	11,276	908	0	-13,825
Apr	21,518	147,941	879	-79,592	-90,747
May	12,546	96,403	908	-142,707	32,851
Jun	18,305	140,655	879	-154,267	-5,572
Jul	17,348	133,302	908	-171,674	20,115
TOTAL	**124,957**	**935,039**	**10,695**	**-818,640**	**-252,049**

		Discharge rate to Marmion Reservoir (m3/h)
	Month	**Average year**
626222.6433	Aug	842
740452.3136	Sep	1028
448503.1681	Oct	603
253312.6249	Nov	352
130133.1201	Dec	175
45960.28434	Jan	62
820.4	Feb	1
89301.79466	Mar	120
1043874.078	Apr	1450
543492.1561	May	731
550994.0412	Jun	765
437613.3407	Jul	588
4910679.965	Average Annual	561

Month	**Discharge rate from pit (m^3/h)**								
	Average	**Wet return period**				**Dry Return Period**			
		10	**25**	**50**	**100**	**10**	**25**	**50**	**100**
August	16	54	68	77	85	-20	-34	-42	-50
September	78	114	128	137	145	42	29	21	14
October	82	108	118	124	130	56	47	41	36
November	52	64	68	71	74	41	37	34	32
December	27	33	35	37	38	20	18	17	15
January	10	12	13	14	14	8	7	6	6
February	1	1	1	1	1	1	1	1	1
March	19	23	25	26	27	14	13	12	11
April	126	185	207	222	235	68	48	34	22
May	-44	-17	-7	0	6	-71	-80	-86	-92
June	8	49	64	74	83	-32	-47	-56	-64
July	-27	11	25	34	42	-64	-77	-86	-93
Average Annual	29	53	62	68	73	5	-3	-9	-14

Month	**Site Discharge Rate (m^3/h)**								
	Average	**Wet return period**				**Dry Return Period**			
		10	**25**	**50**	**100**	**10**	**25**	**50**	**100**
August	842	1049	1126	1177	1223	638	566	519	478
September	1029	1253	1335	1391	1440	810	732	681	637
October	603	732	779	811	840	477	433	403	378
November	352	432	461	481	499	274	246	228	212
December	175	219	235	246	256	132	117	107	98
January	62	78	84	88	91	46	41	37	34
February	1	1	1	1	1	1	1	1	1
March	120	151	162	170	177	90	79	72	66
April	1451	1856	2006	2106	2196	1054	913	821	740
May	730	918	988	1034	1076	546	481	438	400
June	765	966	1040	1090	1134	569	499	453	413
July	588	760	824	867	904	419	359	320	286
Average Annual	561	702	755	790	821	422	373	341	312

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.
5. Seepage rate is based on a maximum inflow rate of 740 m^3/day for the East and West pits combined at the their ultimate configuration. A combined daily rate of 29.3 m^3/day post closure was calculated by assuming a linear reduction in the seepage rate from the maximum rate at the ultimate configuration to 0 m^3/h at elevation 431m (Mitta Lake elevation under existing conditions). Post closure the proposed maximum pit water elevation is 420m.

Sheet 8-2
Monthly Flows

Waste Rock Stockpile Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	Flows (m^3/month)			
	+R3	+R4	+R5	-F2
	Runoff from Waste Rock	Runoff from remediated prepared ground	Runoff from natural ground	Outflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(Calculated)
Aug	146,904	717	7,477	-155,098
Sep	137,591	732	8,753	-147,077
Oct	102,743	456	3,922	-107,120
Nov	35,525	252	3,616	-39,393
Dec	18,186	129	1,851	-20,166
Jan	6,340	45	645	-7,031
Feb	0	0	0	0
Mar	12,440	88	1,266	-13,794
Apr	163,204	1,158	16,612	-180,974
May	106,348	707	10,825	-117,880
Jun	155,166	688	5,923	-161,777
Jul	147,055	619	4,678	-152,352
TOTAL	**1,031,501**	**5,591**	**65,568**	**-1,102,661**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-3
Monthly Flows

Preliminary

Tailings Management Facility Watershed

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Post-Closure Conditions

Month	Flows (m^3/month)					
	+R6	+R7	+R8	+R9	-E2	-F3
	Runoff from natural ground	Direct preciptation to ponds	Runoff from waste rock dams	Runoff from re-vegetated tailings	Evaporation from Pit Lake	Outflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	57,989	57,271	68,846	270,433	-59,889	-394,650
Sep	67,891	53,640	64,482	316,611	-36,916	-465,708
Oct	30,417	40,055	48,150	141,853	-19,487	-240,988
Nov	28,046	13,850	16,649	89,921	0	-148,465
Dec	14,357	7,090	8,523	46,032	0	-76,002
Jan	5,005	2,472	2,971	16,048	0	-26,497
Feb	0	0	0	0	0	0
Mar	9,821	4,850	5,830	31,487	0	-51,987
Apr	128,845	63,625	76,485	413,103	-34,230	-647,828
May	83,959	41,460	49,840	269,189	-61,374	-383,073
Jun	45,937	60,492	72,718	214,231	-66,346	-327,032
Jul	36,280	57,330	68,917	169,193	-73,832	-257,887
TOTAL	**508,548**	**402,134**	**483,409**	**1,978,102**	**-352,074**	**-3,020,118**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Golder Associates

Sheet 8-4
Monthly Flows
Detonator Storage Area Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**	
	+R10	-F4
	From Remediated prepared ground	Outflow to Marmion Reservoir
	(From Sheet 8)	(Calculated)
Aug	105	-105
Sep	107	-107
Oct	67	-67
Nov	37	-37
Dec	19	-19
Jan	7	-7
Feb	0	0
Mar	13	-13
Apr	169	-169
May	103	-103
Jun	101	-101
Jul	91	-91
TOTAL	**818**	**-818**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-5
Monthly Flows
Emulsion Plant Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**	
	+R11	-F5
	From Remediated prepared ground	Outflow to Marmion Reservoir
	(From Sheet 8)	(Calculated)
Aug	1,125	-1,125
Sep	1,149	-1,149
Oct	715	-715
Nov	396	-396
Dec	202	-202
Jan	71	-71
Feb	0	0
Mar	139	-139
Apr	1,817	-1,817
May	1,110	-1,110
Jun	1,080	-1,080
Jul	972	-972
TOTAL	**8,775**	**-8,775**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-6
Monthly Flows
Process Plant Watershed

Preliminary

From cover sheet	**Mine:**	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**			
	+R12	+R13	-E3	-F6
	From remediated prepared ground	Direct Precipitation to Pond	Evaporation from Process Pond	Outflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	26,172	4,773	-4,992	-25,954
Sep	26,742	4,471	-3,077	-28,136
Oct	16,641	3,338	-1,624	-18,355
Nov	9,206	1,154	0	-10,360
Dec	4,713	591	0	-5,304
Jan	1,643	206	0	-1,849
Feb	0	0	0	0
Mar	3,224	404	0	-3,628
Apr	42,293	5,303	-2,853	-44,743
May	25,837	3,456	-5,115	-24,177
Jun	25,131	5,042	-5,530	-24,643
Jul	22,627	4,778	-6,154	-21,251
TOTAL	**204,227**	**33,517**	**-29,345**	**-208,400**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

Sheet 8-7
Monthly Flows
Overburden Stockpile Watershed

Preliminary

From cover sheet	Mine:	Osisko Hammond Reef Gold Project	Revision #:	A
	Project #:	11-1118-0117 (2000)	Level of Study:	Feasibility
	Date:	7-Nov-12	Configuration:	Post-Closure Conditions

Month	Flows (m^3/month)	
	+R14	-F7
	From remediated prepared ground	Outflow to Marmion Reservoir
	(From Sheet 8)	(Calculated)
Aug	15,751	-15,751
Sep	18,440	-18,440
Oct	8,262	-8,262
Nov	7,618	-7,618
Dec	3,900	-3,900
Jan	1,360	-1,360
Feb	0	0
Mar	2,667	-2,667
Apr	34,997	-34,997
May	22,805	-22,805
Jun	12,477	-12,477
Jul	9,854	-9,854
TOTAL	138,131	-138,131

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-8
Monthly Flows
Mineralized Rock Stockpile Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**	
	+R15	-F8
	From remediated prepared ground	Outflow to Marmion Reservoir
	(From Sheet 8)	(Calculated)
Aug	11,004	-11,004
Sep	12,883	-12,883
Oct	5,772	-5,772
Nov	5,322	-5,322
Dec	2,725	-2,725
Jan	950	-950
Feb	0	0
Mar	1,864	-1,864
Apr	24,451	-24,451
May	15,933	-15,933
Jun	8,717	-8,717
Jul	6,885	-6,885
TOTAL	**96,506**	**-96,506**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-9
Monthly Flows
Intermediate Collection Pond Watershed

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**				
	+R16	+R17	+R18	-E4	-F9
	From remediated prepared ground	From remediated prepared ground	From remediated prepared ground	Evaporation from ICP	Outflow to Marmion Reservoir
	(From Sheet 8)	(From Sheet 8)	(From Sheet 8)	(From Sheet 6)	(Calculated)
Aug	2,221	8,165	40	-42	-10,384
Sep	2,600	8,342	38	-26	-10,954
Oct	1,165	5,191	28	-14	-6,371
Nov	1,074	2,872	10	0	-3,956
Dec	550	1,470	5	0	-2,025
Jan	192	513	2	0	-706
Feb	0	0	0	0	0
Mar	376	1,006	3	0	-1,385
Apr	4,935	13,194	45	-24	-18,149
May	3,215	8,060	29	-43	-11,262
Jun	1,759	7,840	43	-47	-9,595
Jul	1,389	7,059	40	-52	-8,436
TOTAL	**19,476**	**63,711**	**283**	**-248**	**-83,223**

Notes:

1 Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.

2 All the flows are summarized on the "Summary of Flows" sheet at the end of the model.

3 The table must start with the same month as the runoff sheets.

4 This sheet is protected. The password is simply Golder.

Sheet 8-10
Monthly Flows
Discharge to Environment

Preliminary

From cover sheet				
	Mine:	Osisko Hammond Reef Gold Project	**Revision #:**	A
	Project #:	11-1118-0117 (2000)	**Level of Study:**	Feasibility
	Date:	7-Nov-12	**Configuration:**	Post-Closure Conditions

Month	**Flows (m^3/month)**									
	+F1	+F2	+F3	+F4	+F5	+F6	+F7	+F8	+F9	-D1
	From Open Pit Mine Watershed	From Waste Rock Stockpile Watershed	From TMF Watershed	From Detonator Storage Watershed	From Emulsion Plant Watershed	From Process Plant Watershed	From Overburden Stockpile Watershed	From Low Grade Ore Stockpile Watershed	From Intermediate Collection Pond Watershed	Outflow to Marmion Reservoir
	(Sheet 9-1)	(Sheet 9-2)	(Sheet 9-3)	(Sheet 9-4)	(Sheet 9-5)	(Sheet 9-6)	(Sheet 9-7)	(Sheet 9-8)	(Sheet 9-9)	(Calculated)
Aug	12,152	155,098	394,650	105	1,125	25,954	15,751	11,004	10,384	-626,223
Sep	55,998	147,077	465,708	107	1,149	28,136	18,440	12,883	10,954	-740,452
Oct	60,853	107,120	240,988	67	715	18,355	8,262	5,772	6,371	-448,503
Nov	37,766	39,393	148,465	37	396	10,360	7,618	5,322	3,956	-253,313
Dec	19,791	20,166	76,002	19	202	5,304	3,900	2,725	2,025	-130,133
Jan	7,491	7,031	26,497	7	71	1,849	1,360	950	706	-45,960
Feb	820	0	0	0	0	0	0	0	0	-820
Mar	13,825	13,794	51,987	13	139	3,628	2,667	1,864	1,385	-89,302
Apr	90,747	180,974	647,828	169	1,817	44,743	34,997	24,451	18,149	-1,043,874
May	-32,851	117,880	383,073	103	1,110	24,177	22,805	15,933	11,262	-543,492
Jun	5,572	161,777	327,032	101	1,080	24,643	12,477	8,717	9,595	-550,994
Jul	-20,115	152,352	257,887	91	972	21,251	9,854	6,885	8,436	-437,613
TOTAL	**252,049**	**1,102,661**	**3,020,118**	**818**	**8,775**	**208,400**	**138,131**	**96,506**	**83,223**	**-4,910,680**

Notes:

1. Input data are not required on this sheet. The information is automatically transferred from other sheets or calculated on this sheet.
2. All the flows are summarized on the "Summary of Flows" sheet at the end of the model.
3. The table must start with the same month as the runoff sheets.
4. This sheet is protected. The password is simply Golder.

11/27/2012

Sheet 9
Summary of All Flows

Preliminary

Mine:	Osisko Hammond Reef Gold Project	Project #:	11-1118-0117 (2000)	Date:	7-Nov-12	Revision #	A	Annual Precipitation:	758 mm	Model year:	Post-Closure Conditions

			Flow (m³)												
			August	September	October	November	December	January	February	March	April	May	June	July	Annual
Flows associated with processing the ore			31	30	31	30	31	31	28	31	30	31	30	31	365
Runoff from precipitation															1
R1	Open Pit Mine	Runoff from pit walls	17,330	16,232	12,121	4,684	2,398	836	0	1,640	21,518	12,546	18,305	17,348	124,957
R2		Direct precipitation to ponds	133,166	124,724	93,135	32,203	16,485	5,747	0	11,276	147,941	96,403	140,655	133,302	935,039
R3	Waste Rock Stockpile	Runoff from waste rock	146,904	137,591	102,743	35,525	18,186	6,340	0	12,440	163,204	106,348	155,166	147,055	1,031,501
R4		Runoff from remediated prepared ground	717	732	456	252	129	45	0	88	1,158	707	688	619	5,591
R5		Runoff from natural ground	7,477	8,753	3,922	3,616	1,851	645	0	1,266	16,612	10,825	5,923	4,678	65,568
R6	Tailings Management Facility	Runoff from natural ground	57,989	67,891	30,417	28,046	14,357	5,005	0	9,821	128,845	83,959	45,937	36,280	508,548
R7		Direct precipitation to ponds	57,271	53,640	40,055	13,850	7,090	2,472	0	4,850	63,625	41,460	60,492	57,330	402,134
R8		Runoff from waste rock	68,846	64,482	48,150	16,649	8,523	2,971	0	5,830	76,485	49,840	72,718	68,917	483,409
R9		Runoff from re-vegetated tailings	270,433	316,611	141,853	89,921	46,032	16,048	0	31,487	413,103	269,189	214,231	169,193	1,978,102
R10	Detonator Storage Area	Runoff from natural ground	105	107	67	37	19	7	0	13	169	103	101	91	818
R11	Emulsion Plant	Runoff from natural ground	1,125	1,149	715	396	202	71	0	139	1,817	1,110	1,080	972	8,775
R12	Proces Plant Site	Runoff from remediated prepared ground	26,172	26,742	16,641	9,206	4,713	1,643	0	3,224	42,293	25,837	25,131	22,627	204,227
R13		Direct precipitation to ponds	4,773	4,471	3,338	1,154	591	206	0	404	5,303	3,456	5,042	4,778	33,517
R14	Overburden Stockpile	Runoff from overburden stockpile	15,751	18,440	8,262	7,618	3,900	1,360	0	2,667	34,997	22,805	12,477	9,854	138,131
R15	Low Grade Ore Stockpile	Runoff from stockpile	11,004	12,883	5,772	5,322	2,725	950	0	1,864	24,451	15,933	8,717	6,885	96,506
R16	Intermediate Collection Pond	Runoff from natural ground	2,221	2,600	1,165	1,074	550	192	0	376	4,935	3,215	1,759	1,389	19,476
R17		Runoff from remediated prepared ground	8,165	8,342	5,191	2,872	1,470	513	0	1,006	13,194	8,060	7,840	7,059	63,711
R18		Direct precipitation to ponds	40	38	28	10	5	2	0	3	45	29	43	40	283
Evaporation															
E1	Pit Lake		139,253	85,837	45,310	0	0	0	0	0	79,592	142,707	154,267	171,674	818,640
E2	Tailings Management Facility Reclaim Pond		59,889	36,916	19,487	0	0	0	0	0	34,230	61,374	66,346	73,832	352,074
E3	Process Plant Pond		4,992	3,077	1,624	0	0	0	0	0	2,853	5,115	5,530	6,154	29,345
E4	Intermediate Collection Pond		42	26	14	0	0	0	0	0	24	43	47	52	248
Surface flows between elements															
F1	Open Pit Mine to environment		12,152	55,998	60,853	37,766	19,791	7,491	820	13,825	90,747	-32,851	5,572	-20,115	252,049
F2	Waste Rock Stockpile to environment		155,098	147,077	107,120	39,393	20,166	7,031	0	13,794	180,974	117,880	161,777	152,352	1,102,661
F3	TMF to environment		394,650	465,708	240,988	148,465	76,002	26,497	0	51,987	647,828	383,073	327,032	257,887	3,020,118
F4	Detonator Storage Area to environment		105	107	67	37	19	7	0	13	169	103	101	91	818
F5	Emulsion Plant to environment		1,125	1,149	715	396	202	71	0	139	1,817	1,110	1,080	972	8,775
F6	Process Plant watershed to environment		25,954	28,136	18,355	10,360	5,304	1,849	0	3,628	44,743	24,177	24,643	21,251	208,400
F7	Overburden Stockpile to environment		15,751	18,440	8,262	7,618	3,900	1,360	0	2,667	34,997	22,805	12,477	9,854	138,131
F8	Low Grade Ore Stockpile to environment		11,004	12,883	5,772	5,322	2,725	950	0	1,864	24,451	15,933	8,717	6,885	96,506
F9	Intermediate Collection Pond		10,384	10,954	6,371	3,956	2,025	706	0	1,385	18,149	11,262	9,595	8,436	83,223
Seepage															
S1	Seepage into Open Pit		908	879	908	879	908	908	820	908	879	908	879	908	10,695
Discharge to the environment															
D1	Outflow to Marmion Reservoir		626,223	740,452	448,503	253,313	130,133	45,960	820	89,302	1,043,874	543,492	550,994	437,613	4,910,680

Note: Input data are not required on this sheet, The information is automatically transferred from the other sheets. The sheet is protected. The password is simply Golder.
A negative number means the flow does not exist (note that this convention is not consistent with that used in the rest of the model)

APPENDIX 4.I

Site Operations Water Quality Model Results

TABLE 1
Input Water Chemistry
Freshet Rivers

Parameter	Units	HRWQ-2	HRWQ2	HRWQ-3	HRWQ3	HRWQ-4	HRWQ-4 DUP	HRWQ4	HRWQ4 DUP3	HRWQ-6	HRWQ6	HRWQ-8	HRWQ8	HRWQ-14	HRWQ14	HRWQ-21	HRWQ21	HRWQ-25	HRWQ25	Freshet Rivers - Average
		Jun-11	Apr-12	Jun-11	Apr-12	Jun-11	Jun-11	Apr-12	Apr-12	Jun-11	Apr-12	Jun-11	Apr-12	Jun-11	Apr-12	Jun-11	Apr-12	Jun-11	Apr-12	
pH	**units**	6.4	7.12	6.9	7.07	7.3	7.3	6.59	6.59	6.6	6.72	6.4	7.12	7.1	6.79	6.9	6.92	6.5	7.02	6.8
Alkalinity	**mg/L as $CaCO_3$**	22	28.6	87	33.1	14	22	13.8	14.3	49	34.1	8.3	21.4	28	20.9	17	20	25	20.4	32
Acidity	**mg/L as $CaCO_3$**	2	2.4	4	3.8	3	2.4	5.2	4.6	11	6	11	3.4	2.2	2.4	2.2	2.6	3	2.2	4.4
Conductivity	**mV**	51	72.7	180	100	54	49	42.3	43	101	85.4	26	55.9	71	59	45	58	52	53.7	78
S(6)	**mg/L**	1.5	1.34	1.5	3.89	1.2	1.1	2.01	2.03	2.6	3.17	0.36	1.52	2.4	3.24	1.8	1.71	0.56	1.35	2.2
Cl	**mg/L**	0.92	1.05	4.5	4.29	***0.1***	0.34	0.28	0.34	0.28	0.24	0.12	0.14	***0.1***	0.19	1.3	1.97	0.54	0.48	1.1
N(5)	**mg/L**	0.11	***0.03***	***0.03***	***0.03***	1.7	***0.03***	0.072	0.073	0.048	***0.03***	***0.03***	***0.03***	0.15	***0.03***	***0.03***	0.044	0.084	***0.03***	0.06
N(-3)	**mg/L**	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	0.02
Cr(6)	**ug/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hg[(a)]	**mg/L**	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	0.000005
Ag	**mg/L**	***0.000007***	***0.00005***	***0.000007***	***0.00005***	***0.000007***	0.000009	***0.00005***	***0.00005***	***0.000007***	***0.00005***	0.000013	***0.00005***	***0.000007***	***0.00005***	***0.000007***	***0.00005***	0.00001	***0.00005***	0.00004
Al	**mg/L**	0.036	0.2	0.043	0.0346	0.052	0.07	0.0996	0.0968	0.23	0.0768	0.074	0.0672	0.033	0.0778	0.036	0.0428	0.068	0.0955	0.25
As	**mg/L**	0.00033	0.00039	0.00034	0.00028	0.00022	0.00032	0.00028	0.00027	0.00027	0.00025	0.00058	0.00033	0.00034	0.00037	0.00024	0.00025	0.0005	0.00048	0.0004
Ba	**mg/L**	0.0084	0.0186	0.012	0.00614	0.0041	0.005	0.00365	0.00354	0.0074	0.00524	0.005	0.00421	0.0056	0.00419	0.0039	0.00401	0.0053	0.00418	0.01
Be	**mg/L**	***0.00004***	***0.00006***	***0.00004***	***0.00006***	***0.00004***	***0.00004***	***0.00006***	***0.00006***	***0.00004***	***0.00006***	***0.00004***	***0.00006***	***0.00004***	***0.00006***	***0.00004***	***0.00006***	***0.00004***	***0.00006***	0.00005
B	**mg/L**	0.0054	0.0055	0.0024	0.0024	0.0031	0.0043	***0.002***	***0.002***	0.0021	0.002	0.0029	0.0027	0.0032	0.004	0.0026	0.0035	0.0037	0.0038	0.003
Bi	**mg/L**	***0.00002***	***0.0002***	***0.00002***	***0.0002***	***0.00002***	***0.00002***	***0.0002***	***0.0002***	***0.00002***	***0.0002***	***0.00002***	***0.0002***	***0.00002***	***0.0002***	***0.00002***	***0.0002***	***0.00002***	***0.0002***	0.0001
Ca	**mg/L**	7.5	9.14	26	14.1	7.1	8.8	6.45	6.1	17	12.4	4.7	8.32	10	9.93	4.8	6.32	8.7	7.33	11
Cd	**mg/L**	***0.000009***	0.00003	***0.000009***	***0.00001***	***0.000009***	***0.000009***	***0.00001***	***0.00001***	***0.000009***	***0.00001***	***0.000009***	***0.00001***	***0.000009***	0.000021	***0.000009***	***0.00001***	***0.000009***	***0.00001***	0.00002
Co	**mg/L**	0.000026	0.000071	0.0003	***0.00005***	0.000059	0.000082	0.00006	0.000066	0.00017	0.000102	0.00017	0.000057	0.000027	***0.00005***	0.000028	0.00005	0.000046	0.00009	0.0005
Cr	**mg/L**	***0.0009***	***0.0005***	***0.0009***	***0.0005***	***0.0009***	***0.0009***	***0.0005***	***0.0005***	***0.0009***	***0.0005***	***0.0009***	***0.0005***	***0.0009***	***0.0005***	***0.0009***	***0.0005***	***0.0009***	***0.0005***	0.0009
Cu	**mg/L**	***0.0007***	0.00122	0.00072	0.00101	***0.0007***	0.00071	***0.0007***	***0.0007***	***0.0007***	***0.0007***	***0.0007***	***0.0007***	0.00096	***0.0007***	***0.0007***	0.00076	***0.0007***	***0.0007***	0.001
Fe	**mg/L**	0.063	0.294	0.45	0.088	0.16	0.2	0.167	0.159	0.35	0.136	0.56	0.272	0.027	0.052	0.21	0.322	0.13	0.197	1.3
K	**mg/L**	0.56	0.745	0.52	0.255	0.13	0.19	0.184	0.175	0.25	0.229	0.061	0.31	0.25	0.247	0.36	0.359	0.36	0.513	0.37
Mg	**mg/L**	1.1	1.43	5	1.84	0.89	1.1	0.81	0.773	1.7	1.31	0.73	0.768	1	0.842	1.3	1.15	1.4	1.34	1.8
Mn	**mg/L**	0.013	0.0774	0.15	0.00972	0.012	0.016	0.0069	0.00634	0.062	0.11	0.038	0.0211	0.0054	***0.0005***	0.0062	0.0325	0.0082	0.0213	0.15
Mo	**mg/L**	0.0002	0.00057	0.00098	***0.0002***	***0.00009***	0.00014	***0.0002***	***0.0002***	0.00017	***0.0002***	***0.00009***	***0.0002***	0.0002	0.00025	***0.00009***	***0.0002***	***0.00009***	***0.0002***	0.0003
Na	**mg/L**	1	1.56	2.9	2.14	0.75	0.9	0.84	0.804	1.1	0.957	0.6	0.616	0.81	0.735	1.4	1.3	0.76	0.909	1.2
Ni	**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***	***0.001***	***0.001***	***0.001***	0.001
P	**mg/L**	0.01	0.0135	0.0089	0.0054	0.008	0.0069	0.0071	0.0065	0.017	0.0093	0.012	0.013	0.012	0.0058	0.016	0.0094	0.026	0.0078	0.03
Pb	**mg/L**	***0.00006***	0.00011	***0.00006***	***0.0001***	***0.00006***	***0.00006***	***0.0001***	***0.0001***	0.00015	***0.0001***	0.00018	***0.0001***	0.000064	***0.0001***	***0.00006***	0.0001	***0.00006***	0.00012	0.0003
Sb	**mg/L**	***0.00003***	***0.0001***	***0.00003***	***0.0001***	***0.00003***	0.000088	***0.0001***	***0.0001***	***0.00003***	***0.0001***	***0.00003***	***0.0001***	0.000036	***0.0001***	0.000037	***0.0001***	***0.00003***	***0.0001***	0.00007
Se[(b)]	**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***	***0.0005***	***0.0005***	***0.0005***	0.0005
Si	**mg/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8
Sn	**mg/L**	***0.00004***	***0.0001***	0.000043	***0.0001***	***0.00004***	0.000054	***0.0001***	***0.0001***	0.000041	***0.0001***	***0.00004***	***0.0001***	***0.00004***	***0.0001***	0.00013	***0.0001***	***0.00004***	***0.0001***	0.00008
Sr	**mg/L**	0.024	0.032	0.074	0.0396	0.016	0.02	0.0141	0.0138	0.044	0.0339	0.0094	0.0128	0.026	0.0212	0.01	0.0125	0.027	0.0199	0.03
Ti	**mg/L**	0.00096	0.00795	0.0014	0.00058	0.00096	0.0016	0.00228	0.00204	0.0068	0.00151	0.00094	0.0012	***0.0006***	0.00057	***0.0006***	0.00091	***0.0006***	0.00103	0.006
Tl	**mg/L**	***0.000004***	***0.00003***	***0.000004***	***0.00003***	***0.000004***	***0.000004***	***0.00003***	***0.00003***	***0.000004***	***0.00003***	***0.000004***	***0.00003***	***0.000004***	***0.00003***	***0.000004***	***0.00003***	***0.000004***	***0.00003***	0.00002
U	**mg/L**	0.000037	0.000069	0.000093	0.000023	0.000054	0.000075	0.000061	0.000058	0.00016	0.000081	***0.000003***	0.00002	0.000014	0.00002	0.000026	0.000028	0.000056	0.000052	0.00008
V	**mg/L**	0.000035	0.00042	0.00084	***0.0002***	0.00018	0.0003	0.00023	0.00022	0.00062	0.00022	0.00012	***0.0002***	0.000062	***0.0002***	0.00025	0.00028	0.00013	0.00026	0.0006
Zn	**mg/L**	***0.003***	***0.002***	***0.003***	***0.002***	***0.003***	***0.003***	***0.002***	***0.002***	***0.003***	***0.002***	***0.003***	***0.002***	0.0061	***0.002***	***0.003***	***0.002***	***0.003***	***0.002***	0.003

Notes:
Refer to the Water and Sediment Quality TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
[(b)] Selenium values below the detection limit were assumed to equal highest observed value in baseline water quality monitoring data
"-" A dash indicates no value

TABLE 2
Input Water Chemistry
Non-Freshet Rivers

Parameter	Units	HRWQ-2	HRWQ-2	HRWQ-2	HRWQ-3	HRWQ-3	HRWQ-3	HRWQ-4	HRWQ-4	HRWQ-4	HRWQ-4 (D)	HRWQ-6	HRWQ-6	HRWQ-6	HRWQ-8	HRWQ-8	HRWQ-8	HRWQ-14	HRWQ-14	HRWQ-14	HRWQ-21	HRWQ-21	HRWQ-21	HRWQ-25	HRWQ-25	HRWQ-25	Non-freshet Rivers - Average
		Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	Aug-12	Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	Sep-10	Nov-10	Aug-12	
pH	units	6.7	7.2	7.75	6.8	7.3	6.75	7	7.7	7.08	7.08	7.2	7.5	6.43	6.5	6.3	6.83	6.3	7.2	6.31	6.6	6.7	7.37	6.8	7.4	6.6	6.9
Alkalinity	mg/L as $CaCO_3$	19	23	31.6	57	56	123	27	22	58.6	58.9	47	47	67.6	8.2	8.8	18.8	30	28	39.7	19	19	17.2	22	23	31.5	35
Acidity	mg/L as $CaCO_3$	-	-	2.2	-	-	5	-	-	2.8	2.6	-	-	10.6	-	-	2	-	-	2.6	-	-	2	-	-	2	3.7
Conductivity	mV	44	52	72.9	119	120	289	60	50	121	120	97	96	138	27	23	46.6	67	66	83.5	51	50	45.9	49	46	69.4	78
S(6)	mg/L	1.2	1.4	1.33	1.7	2.6	0.34	0.4	0.88	***0.3***	***0.3***	1.1	1.8	***0.3***	***0.3***	0.5	***0.3***	1.1	2.2	0.84	1.6	2	1.27	***0.3***	0.82	***0.3***	1.0
Cl	mg/L	0.81	0.5	1.14	0.61	0.58	14.5	0.41	0.34	0.27	0.32	0.46	0.18	***0.1***	0.42	0.25	***0.1***	0.38	0.33	0.14	1.3	1.4	1.26	***0.1***	0.31	0.25	1.1
N(5)	mg/L	0.034	0.088	0.137	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	0.031	0.033	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	0.037	***0.03***	***0.03***	0.033	***0.03***	***0.03***	***0.03***	0.108	0.04
N(-3)	mg/L	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	0.02
Cr(6)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hg[(a)]	mg/L	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	0.000005
Ag	mg/L	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	***0.0001***	***0.0002***	***0.00005***	0.0001
Al	mg/L	0.014	0.032	0.0375	0.026	0.02	0.0288	0.11	0.065	0.0528	0.0523	0.02	0.026	0.0437	0.092	0.078	0.0548	0.084	0.054	0.047	0.042	0.032	0.0579	0.12	0.11	0.0488	0.054
As	mg/L	***0.001***	0.00034	0.0004	***0.001***	0.00042	0.00044	***0.001***	0.00028	0.0004	0.00041	***0.001***	0.0002	0.00031	***0.001***	0.00052	0.00122	***0.001***	0.00032	0.00038	***0.001***	0.00034	0.00046	***0.001***	0.00048	0.00099	0.0006
Ba	mg/L	***0.01***	***0.01***	0.017	0.011	***0.01***	0.0243	***0.01***	***0.01***	0.00814	0.00767	***0.01***	***0.01***	0.00736	***0.01***	***0.01***	0.00359	***0.01***	***0.01***	0.00917	***0.01***	***0.01***	0.00552	***0.01***	***0.01***	0.0068	0.01
Be	mg/L	***0.001***	***0.0001***	***0.00006***	***0.001***	0.0002	***0.00006***	***0.001***	***0.0001***	***0.00006***	***0.00006***	***0.001***	***0.0001***	***0.00006***	***0.001***	***0.0001***	***0.00006***	***0.001***	***0.0001***	***0.00006***	***0.001***	***0.0001***	***0.00006***	***0.001***	***0.0001***	***0.00006***	0.0004
B	mg/L	***0.05***	0.006	0.006	***0.05***	***0.002***	0.007	***0.05***	***0.002***	0.0024	0.0023	***0.05***	0.002	0.0027	***0.05***	0.002	***0.002***	***0.05***	0.006	0.0034	***0.05***	0.002	0.0036	***0.05***	0.004	0.0036	0.019
Bi	mg/L	***0.001***	***0.001***	***0.0002***	***0.001***	0.002	***0.0002***	***0.001***	***0.001***	***0.0002***	***0.0002***	***0.001***	***0.001***	***0.0002***	***0.001***	***0.001***	***0.0002***	***0.001***	***0.001***	***0.0002***	***0.001***	***0.001***	***0.0002***	***0.001***	***0.001***	***0.0002***	0.0008
Ca	mg/L	6.4	8.3	10.1	21	20	41.5	11	9.2	19	18.3	16	17	24.5	5	3.9	9.69	12	11	15.1	6.6	6.5	5.82	8.2	7.7	9.95	13
Cd	mg/L	***0.00009***	***0.00002***	***0.00001***	***0.00009***	0.00022	***0.00001***	***0.00009***	***0.00002***	***0.00001***	***0.00001***	***0.00009***	***0.00002***	***0.00001***	***0.00009***	***0.00002***	0.000017	***0.00009***	***0.00002***	***0.00001***	***0.00009***	***0.00002***	***0.00001***	***0.00009***	***0.00002***	***0.00001***	0.00005
Co	mg/L	***0.0005***	***0.00005***	***0.00005***	***0.0005***	0.0001	0.00121	***0.0005***	***0.00005***	0.000151	0.000132	***0.0005***	***0.00005***	0.000067	***0.0005***	***0.00005***	0.000129	***0.0005***	***0.00005***	0.000141	***0.0005***	***0.00005***	0.000051	***0.0005***	***0.00005***	0.000284	0.0003
Cr	mg/L	***0.001***	***0.0001***		***0.001***	0.0003		***0.001***	***0.0001***			***0.001***	***0.0001***		***0.001***	0.0002		***0.001***	0.0001		***0.001***	0.0002		***0.001***	***0.0001***		0.0006
Cu	mg/L	***0.001***	0.0004	0.00111	***0.001***	0.00075	***0.0007***	***0.001***	0.0003	***0.0007***	***0.0007***	***0.001***	0.0003	***0.0007***	***0.001***	0.00015	***0.0007***	***0.001***	0.0003	***0.0007***	***0.001***	0.00065	0.00098	***0.001***	0.00035	***0.0007***	0.0007
Fe	mg/L	0.079	0.23	0.02	0.47	0.2	1.5	0.3	0.28	0.623	0.599	0.063	0.11	0.191	0.83	0.54	1.64	0.22	0.11	0.121	0.64	0.32	0.421	0.31	0.26	0.475	0.4
K	mg/L	***1***	***1***	0.894	***1***	***1***	0.447	***1***	***1***	0.281	0.281	***1***	***1***	***0.05***	***1***	***1***	***0.05***	***1***	***1***	0.052	***1***	***1***	0.456	***1***	***1***	0.48	0.78
Mg	mg/L	1	1.2	1.52	3.3	3.4	7.88	1.3	1.1	2.33	2.23	1.7	1.7	2.3	0.76	0.59	1.34	1.1	1	1.18	1.5	1.4	1.37	1.5	1.4	1.82	1.8
Mn	mg/L	0.0092	0.043	0.00897	0.076	0.031	1.05	0.015	0.03	0.071	0.0683	0.019	0.091	0.0602	0.027	0.018	0.0377	0.021	0.012	0.0924	0.058	0.01	0.0278	0.036	0.032	0.129	0.08
Mo	mg/L	***0.001***	***0.0002***	0.00072	***0.001***	0.0004	0.00096	***0.001***	***0.0002***	0.00068	0.00065	***0.001***	0.0004	0.00021	***0.001***	***0.0002***	***0.0002***	***0.001***	0.0002	0.00026	***0.001***	***0.0002***	***0.0002***	***0.001***	***0.0002***	***0.0002***	0.0006
Na	mg/L	0.86	0.98	1.82	1.2	1.4	5.35	0.9	0.84	0.9	0.901	1	1.1	1.19	0.58	0.55	0.576	0.81	0.81	0.837	1.4	1.4	1.43	0.7	0.72	0.942	1.2
Ni	mg/L	***0.002***	***0.0001***	***0.001***	***0.002***	0.0001	***0.001***	***0.002***	***0.0001***	***0.001***	***0.001***	***0.002***	***0.0001***	***0.001***	***0.002***	0.0002	***0.001***	***0.002***	***0.0001***	***0.001***	***0.002***	0.0002	***0.001***	***0.002***	***0.0001***	***0.001***	0.001
P	mg/L	0.0077	0.013	-	0.0054	***0.005***	-	0.0082	0.0068	-	-	0.0064	0.0059	-	0.0067	0.0085	-	0.0077	0.0069	-	0.018	0.014	-	0.0062	0.0074	-	0.008
Pb	mg/L	***0.001***	0.0001	***0.0001***	***0.001***	0.00025	***0.0001***	***0.001***	0.00005	***0.0001***	***0.0001***	***0.001***	***0.00005***	***0.0001***	***0.001***	0.00015	0.00013	***0.001***	***0.00005***	***0.0001***	***0.001***	0.0001	***0.0001***	***0.001***	0.00005	***0.0001***	0.0004
Sb	mg/L	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	***0.005***	***0.0002***	***0.0001***	0.002
Se[(b)]	mg/L	***0.0005***	0.0002	***0.0005***	***0.0005***	0.0005	***0.0005***	***0.0005***	0.0002	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	***0.0005***	0.0003	***0.0005***	***0.0005***	0.0005	***0.0005***	***0.0005***	0.0002	***0.0005***	0.0004
Si	mg/L	***1***	0.4	-	5.6	4.3	-	6.2	4.2	-	-	3.6	2	-	6.1	3.5	-	4	2.8	-	3.3	2.4	-	1.6	1.3	-	3.3
Sn	mg/L	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	***0.001***	***0.001***	***0.0001***	0.0007
Sr	mg/L	0.019	0.024	0.0311	0.058	0.051	0.13	0.025	0.02	0.0422	0.0394	0.046	0.046	0.0702	0.013	0.0096	0.0238	0.031	0.028	0.034	0.015	0.014	0.0123	0.025	0.022	0.0312	0.03
Ti	mg/L	***0.002***	***0.002***	***0.0005***	***0.002***	***0.002***	0.00093	0.003	***0.002***	0.00179	0.00159	***0.002***	***0.002***	0.00078	***0.002***	***0.002***	0.00132	***0.002***	***0.002***	***0.0005***	***0.002***	***0.002***	0.00145	***0.002***	***0.002***	***0.0005***	0.002
Tl	mg/L	***0.0003***	***0.00002***	***0.00003***	***0.0003***	0.0002	***0.00003***	***0.0003***	***0.00002***	***0.00003***	***0.00003***	***0.0003***	***0.00002***	***0.00003***	***0.0003***	***0.00002***	***0.00003***	***0.0003***	***0.00002***	***0.00003***	***0.0003***	***0.00002***	***0.00003***	***0.0003***	***0.00002***	***0.00003***	0.0001
U	mg/L	***0.005***	***0.002***	0.000046	***0.005***	***0.002***	0.000059	***0.005***	***0.002***	0.000076	0.000071	***0.005***	***0.002***	0.000061	***0.005***	***0.002***	0.00001	***0.005***	***0.002***	0.000015	***0.005***	***0.002***	0.000033	***0.005***	***0.002***	0.000026	0.002
V	mg/L	***0.001***	***0.00005***	***0.0002***	***0.001***	0.0003	0.00022	***0.001***	0.0002	0.00045	0.00049	***0.001***	0.0001	***0.0002***	***0.001***	0.0001	0.00035	***0.001***	0.00015	0.00035	***0.001***	0.0004	0.00059	***0.001***	0.00015	0.00021	0.0005
Zn	mg/L	0.0052	0.0022	***0.002***	***0.003***	0.0016	***0.002***	0.0034	0.0018	0.0065	0.0068	***0.003***	0.0012	***0.002***	***0.003***	0.002	0.0026	***0.003***	0.0018	***0.002***	***0.003***	0.0016	***0.002***	***0.003***	0.0026	0.0033	0.003

Notes:
Refer to the Water and Sediment Quality TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
[(b)] Selenium values below the detection limit were assumed to equal highest observed value in baseline water quality monitoring data
"-" A dash indicates no value

TABLE 3
Input Water Chemistry
Groundwater

Parameter	Units	BR0220-1	BR0220-2	BR0220-3	BR-0220A	BR-0220B	BR-0220C	BR-0220D	BR-0220E	BR-0231A	BR-0231B	BR-0231C	BR-0231D	Average 0220	Average 0231	Average Groundwater
pH	units	7.57	7.58	7.60	7.56	7.58	7.60	7.58	7.61	7.55	7.74	7.75	7.77	7.59	7.70	7.6
Alkalinity	mg/L as $CaCO_3$	223	221	215	218	218	216	216	216	167	178	178	177	218	175	196
Acidity	mg/L as $CaCO_3$	7.4	7.4	6.8	6.4	5.4	5.6	5.4	5.6	3.8	3.6	4.6	4.2	6.3	4.1	5.2
Conductivity	mV	424	440	426	405	408	405	404	404	323	340	340	341	415	336	375
S(6)	mg/L	1.67	2.38	3.13	1.18	1.17	1.28	1.27	1.33	4.03	4.28	4.41	4.40	1.68	4.28	3.0
Cl	mg/L	2.56	2.49	2.36	2.30	2.32	2.33	2.34	2.38	1.15	1.12	1.10	1.21	2.39	1.15	1.8
N(5)	mg/L	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	***0.03***	0.03	0.03	0.03
N(-3)	mg/L	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	0.114	0.049	0.08
Cr(6)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hg[(a)]	mg/L	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	***0.000005***	0.000005	0.000005	0.000005
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
Al	mg/L	***0.005***	***0.005***	***0.005***	0.047	***0.01***	***0.01***	***0.01***	0.010	0.015	***0.01***	***0.01***	***0.01***	0.013	0.011	0.012
As	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
Ba	mg/L	0.267	0.258	0.237	0.261	0.259	0.257	0.249	0.252	0.317	0.181	0.177	0.176	0.255	0.213	0.23
Be	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
B	mg/L	0.057	0.055	0.052	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05175	0.05	0.05
Bi	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
Ca	mg/L	53.3	54.4	52.7	49.8	50.6	50.0	49.0	49.7	45.9	40.6	40.5	40.7	51.2	41.9	47
Cd	mg/L	***0.000017***	0.000020	0.000021	***0.00009***	***0.00009***	***0.00009***	***0.00009***	***0.00009***	***0.00009***	***0.00009***	***0.00009***	***0.00009***	0.0000635	0.00009	0.00008
Co	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
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	0.001
Cu	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
Fe	mg/L	***0.02***	***0.02***	***0.02***	1.35	1.10	1.06	1.03	1.06	0.283	0.326	0.326	0.331	0.71	0.32	0.51
K	mg/L	2.73	2.76	2.58	3.0	3.0	2.9	2.9	2.9	2.4	2.7	2.7	2.7	2.8	2.6	2.7
Mg	mg/L	19.1	19.7	18.2	15.5	16.1	16.2	15.8	16.2	11.8	13.5	13.6	13.6	17.1	13.1	15
Mn	mg/L	0.222	0.250	0.257	0.506	0.323	0.300	0.279	0.288	0.708	0.376	0.382	0.381	0.303	0.462	0.38
Mo	mg/L	0.0134	0.0120	0.0122	0.0321	0.0296	0.0274	0.0246	0.0250	0.0063	0.0117	0.0117	0.0118	0.0220	0.0104	0.02
Na	mg/L	16.2	16.4	15.2	15.8	15.2	14.9	14.8	15.0	5.63	11.5	11.8	12.0	15.4	10.2	13
Ni	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
P	mg/L	0.0111	0.0094	0.0079	0.314	0.0133	0.0123	***0.005***	0.0058	***0.005***	0.0058	***0.005***	***0.005***	0.0474	0.0052	0.03
Pb	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
Sb	mg/L	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	***0.0006***	0.0006	0.0006	0.0006
Se[(b)]	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
Si	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***			
Sn	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
Sr	mg/L	0.980	1.03	0.963	0.802	0.877	0.873	0.871	0.881	0.310	0.506	0.510	0.513	0.910	0.460	0.68
Ti	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
Tl	mg/L	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	***0.0003***	0.0003	0.0003	0.0003
U	mg/L	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.005	0.005	0.005
V	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
Zn	mg/L	***0.003***	***0.003***	***0.003***	0.0061	0.0052	0.0041	***0.003***	0.0033	0.0066	***0.003***	***0.003***	***0.003***	0.0038	0.0039	0.004

Notes:
Refer to the Hydrogeology TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
[(b)] Selenium values below the detection limit were assumed to equal highest observed value in baseline water quality monitoring data
"-" A dash indicates no value

TABLE 4
Input Water Chemistry
Unsaturated Tailings runoff

Parameter	Units	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	HCT Tailings First Flush Average	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	HCT Tailings Steady State Average
		Week 0	Week 1	Week 2	Week 4	Week 4	Week 5	-	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	-
pH	**units**	7.9	7.64	7.81	7.5	7.5	7.45	7.6	7.27	7.46	7.25	7.44	7.3	7.3	7.3
Alkalinity	**mg/L as $CaCO_3$**	44	55	43	32	12	18	34	22	23	22	22	23	25	23
Acidity	**mg/L as $CaCO_3$**	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	**mV**	404	269	122	102	37	8	157	54	50	60	59	64	53	57
S(6)	**mg/L**	150	79	32	15	8.5	1.3	48	11	9.5	8	7.2	6.5	5.4	7.9
Cl	**mg/L**	2.9	0.7	***0.2***	***0.2***	***0.2***	***0.2***	0.73	***0.2***					***0.2***	0.2
N(5)	**mg/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N(-3)	**mg/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cr(6)	**ug/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hg[a]	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	**mg/L**	0.02	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	0.012	0.01	-	-	-	-	0.01	0.01
As	**mg/L**	0.0008	0.0005	0.0003	***0.0002***	***0.0002***	***0.0002***	0.00037	***0.0002***	-	-	-	-	***0.0002***	0.0002
Ba	**mg/L**	0.0179	0.0129	0.0055	0.00284	0.00114	0.00189	0.007	0.0016	-	-	-	-	0.00108	0.0013
Be	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	**mg/L**	0.0067	0.0055	0.0032	0.0016	0.0012	0.001	0.0032	0.0009	-	-	-	-	0.0007	0.0008
Bi	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	**mg/L**	32.7	29.5	17.7	10.9	4.75	6.99	17	6.53	-	-	-	-	5.02	5.8
Cd	**mg/L**	0.000013	0.000009	0.00103	0.000006	***0.000003***	***0.000003***	0.00018	0.000026	-	-	-	-	0.000003	0.000015
Co	**mg/L**	0.000429	0.000539	0.000257	0.000173	0.000061	0.000119	0.00026	0.000102	-	-	-	-	0.00007	0.000086
Cr	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	**mg/L**	0.0018	0.0015	0.001	0.0006	***0.0005***	***0.0005***	0.00098	0.0008	-	-	-	-	***0.0005***	0.00065
Fe	**mg/L**	***0.002***	***0.003***	0.002	***0.003***	***0.003***	***0.003***	0.0027	0.004	-	-	-	-	0.003	0.0035
K	**mg/L**	13.9	7.76	3.29	1.66	0.872	1.08	4.8	0.789	-	-	-	-	0.598	0.69
Mg	**mg/L**	13.3	10.7	6.03	3.38	1.72	2.92	6.3	3.51	-	-	-	-	2.78	3.1
Mn	**mg/L**	0.108	0.12	0.0732	0.0521	0.0134	0.0286	0.066	0.0204	-	-	-	-	0.0125	0.016
Mo	**mg/L**	0.0161	0.00951	0.00472	0.00256	0.00125	0.00174	0.006	0.00214	-	-	-	-	0.0017	0.0019
Na	**mg/L**	20.4	7.14	1.96	0.81	0.38	0.51	5.2	0.36	-	-	-	-	0.27	0.32
Ni	**mg/L**	0.0025	0.0019	0.0013	0.0006	0.0001	0.0003	0.0011	0.0003	-	-	-	-	0.0002	0.00025
P	**mg/L**	***0.009***	***0.009***	***0.009***	***0.009***	***0.009***	***0.009***	0.009	***0.009***	-	-	-	-	***0.009***	0.009
Pb	**mg/L**	0.00007	***0.00002***	0.00006	***0.00002***	***0.00002***	***0.00002***	0.000035	0.00003	-	-	-	-	0.00002	0.000025
Sb	**mg/L**	0.0014	0.0006	0.0003	***0.0002***	0.0002	***0.0002***	0.00048	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[b]	**mg/L**	0.001	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0006	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	**mg/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sn	**mg/L**	0.00062	0.00021	0.00008	0.00009	0.00009	0.0001	0.0002	0.00051	-	-	-	-	0.00018	0.00035
Sr	**mg/L**	0.193	0.148	0.081	0.0452	0.0202	0.0319	0.087	0.0289	-	-	-	-	0.0219	0.025
Ti	**mg/L**	***0.0001***	***0.0001***	***0.0001***	0.0001	***0.0001***	***0.0001***	0.0001	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	**mg/L**	0.00281	0.0027	0.0014	0.000841	0.000315	0.000532	0.0014	0.000844	-	-	-	-	0.000652	0.00075
V	**mg/L**	***0.00003***	0.00006	***0.00003***	0.00003	***0.00003***	0.00004	0.000037	***0.00003***	-	-	-	-	***0.00003***	0.00003
Zn	**mg/L**	0.002	0.002	0.043	***0.001***	0.002	0.002	0.0087	0.002	-	-	-	-	0.002	0.002

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[a] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[b] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 5a
Input Water Chemistry
Tailings Process Water Quality - Aging Testing

Parameter	Units	SGS Lakefield	SGS Lakefield	SGS Lakefield	SGS Lakefield	Aging Tailings - Max	Aging Tailings - 75th Percentile	Aging Tailings - Average
		Day 0	Day 7	Day 15	Day 30	-	-	-
pH	**units**	8.46	8.39	8.36	8.31	8.4	8.4	8.4
Alkalinity	**mg/L as $CaCO_3$**	144	150	162	174	174	165	158
Acidity	**mg/L as $CaCO_3$**	-	-	-	-	-	-	-
Conductivity	**mV**	760	724	872	985	985	900	835
S(6)	**mg/L**	210	240	240	280	280	250	243
Cl	**mg/L**	16	17	24	22	24	23	20
N(5)	**mg/L**	***0.05***	***0.05***	***0.05***	***0.05***	0.05	0.05	0.05
N(-3)	**mg/L**	6.8	5.7	5.2	4.1	6.8	6.0	5.5
Cr(6)	**ug/L**	***0.02***	***0.02***	***0.02***	***0.02***	0.02	0.02	0.02
Hg[(a)]	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	0.00001	0.00001
Ag	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	0.00001	0.00001
Al	**mg/L**	0.04	0.02	0.01	0.04	0.04	0.04	0.028
As	**mg/L**	0.0015	0.0015	0.0014	0.0013	0.0015	0.0015	0.0014
Ba	**mg/L**	0.0329	0.0322	0.0349	0.0384	0.038	0.036	0.035
Be	**mg/L**	0.0231	0.026	0.0244	0.0276	0.028	0.026	0.025
B	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	0.00002	0.00002
Bi	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	0.00001	0.00001
Ca	**mg/L**	24.7	28.2	32.6	40.1	40	34	31
Cd	**mg/L**	0.000009	0.000026	***0.000003***	0.000028	0.000028	0.000027	0.000017
Co	**mg/L**	0.00266	0.00284	0.00283	0.00311	0.0031	0.0029	0.0029
Cr	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	0.0005	0.0005
Fe	**mg/L**	0.046	0.01	***0.003***	0.011	0.0460	0.01975	0.0175
Cu	**mg/L**	0.0027	0.0155	0.0091	0.0044	0.0155	0.0107	0.00793
K	**mg/L**	36.3	39.7	39	46.6	47	41	40
Mg	**mg/L**	13.5	15	17.5	23.6	24	19	17
Mn	**mg/L**	0.052	0.0518	0.0457	0.0192	0.052	0.052	0.042
Mo	**mg/L**	0.0724	0.0832	0.0794	0.0914	0.091	0.085	0.082
Ni	**mg/L**	0.007	0.0078	0.0066	0.0079	0.008	0.008	0.007
Na	**mg/L**	96.5	98.6	101	129	129	108	106
P	**mg/L**	0.016	0.018	0.029	0.01	0.029	0.021	0.018
Pb	**mg/L**	0.00006	0.00008	0.00004	0.00044	0.00044	0.00017	0.00016
Sb	**mg/L**	0.0024	0.0026	0.0021	0.0022	0.0026	0.0025	0.0023
Se[(b)]	**mg/L**	***0.0005***	***0.0005***	0.001	0.001	0.001	0.001	0.0008
Si	**mg/L**	-	-	-	-	-	-	-
Sn	**mg/L**	0.018	0.0423	0.0354	0.0354	0.042	0.037	0.033
Sr	**mg/L**	0.268	0.287	0.319	0.394	0.39	0.34	0.32
Ti	**mg/L**	0.0002	0.0002	0.002	0.0004	0.002	0.0008	0.0007
Tl	**mg/L**	***0.0002***	***0.0002***	***0.0002***	***0.0002***	0.0002	0.0002	0.0002
U	**mg/L**	0.0063	0.00604	0.00723	0.00861	0.0086	0.0076	0.007
V	**mg/L**	0.00014	0.0003	0.00009	0.00014	0.0003	0.00018	0.00017
Zn	**mg/L**	***0.002***	***0.002***	***0.002***	0.002	0.002	0.002	0.002

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 5b
Input Water Chemistry
Tailings Process Water Quality - Cyanide Degradation Testing

Parameter	Units	Treated Slurry using SO_2					Average	75th percentile	Maximum
Cu	mg/L	2.64	2.32	2.23	1.01	1.1	1.86	2.32	2.64
Fe	mg/L	0.1	0.1	0.13	0.14	1.59	0.412	0.14	1.59
Ni	mg/L	0.06	0.08	0.08	0.07	0.09	0.076	0.08	0.09
pH	units	8.5	8.5	8.5	8.5	8.4	8.50	8.50	8.50

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods

TABLE 6
Input Water Chemistry
Fine Grained Granite (Waste Rock)

Parameter	Units	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004 First Flush Average	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004	HCT-004 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	8.34	8.79	8.59	8.16	8.64	8.29	8.5	7.71	7.88	7.4	7.53	7.76	7.33	7.6
Alkalinity	mg/L as $CaCO_3$	23	24	17	21	17	23	21	11	12	10	10	11	10	11
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	7	48	32	42	38	43	35	25	19	23	18	24	18	21
S(6)	mg/L	0.5	0.9	0.8	0.9	1	0.8	0.82	0.5	0.4	0.4	0.4	0.4	0.4	0.42
Cl	mg/L	0.8	1.1	0.5	0.3	***0.2***	***0.2***	0.52	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	0.1	-	-	-	-	***0.1***	0.1
Cr(6)	ug/L	0.6	0.7	0.2	***0.2***	***0.2***	***0.2***	0.35	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.08	0.08	0.09	0.08	0.09	0.06	0.08	0.05	-	-	-	-	0.04	0.045
As	mg/L	0.0004	***0.0002***	***0.0002***	***0.0002***	***0.0002***	0.0002	0.00023	0.0003	-	-	-	-	***0.0002***	0.00025
Ba	mg/L	0.00304	0.00366	0.00241	0.00255	0.0018	0.00217	0.0026	0.00083	-	-	-	-	0.00082	0.00083
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0041	0.0063	0.0025	0.0042	0.0057	0.0109	0.0056	0.0006	-	-	-	-	0.0003	0.00045
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	6.17	5.84	4.88	5.09	4.46	4.86	5.2	3.36	-	-	-	-	3.57	3.5
Cd	mg/L	***0.000003***	***0.000003***	0.000051	0.000011	0.000003	***0.000003***	0.000012	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	mg/L	0.000036	0.000035	0.000105	0.000035	0.000024	0.000027	0.000044	0.000008	-	-	-	-	0.000008	0.000008
Cr	mg/L	0.0005	0.0006	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.00052	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0007	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.00053	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	mg/L	***0.002***	***0.002***	***0.002***	***0.002***	0.013	***0.002***	0.0038	***0.003***	-	-	-	-	***0.003***	0.003
K	mg/L	0.489	0.49	0.316	0.324	0.25	0.2	0.34	0.048	-	-	-	-	0.039	0.044
Mg	mg/L	0.558	1.22	0.934	1.1	0.871	0.942	0.94	0.599	-	-	-	-	0.438	0.52
Mn	mg/L	0.00236	0.00811	0.00938	0.00949	0.00865	0.0112	0.0082	0.00798	-	-	-	-	0.0101	0.009
Mo	mg/L	0.00059	0.0014	0.00107	0.00061	0.00057	0.00036	0.00077	0.00011	-	-	-	-	0.00005	0.00008
Na	mg/L	0.77	1.19	0.66	0.56	0.5	0.27	0.66	0.04	-	-	-	-	0.03	0.035
Ni	mg/L	***0.0001***	0.0002	0.0003	***0.0001***	***0.0001***	0.0002	0.00017	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.047	0.013	***0.009***	***0.009***	0.014	0.039	0.022	***0.009***	-	-	-	-	***0.009***	0.009
Pb	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	mg/L	0.0007	0.0006	0.0003	0.0002	***0.0002***	0.0003	0.00038	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	***0.0005***	0.0008	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	0.17	0.25	0.2	0.24	0.14	0.17	0.2	0.15	-	-	-	-	0.11	0.13
Sn	mg/L	0.001	0.0009	0.00034	0.00041	0.00022	0.00027	0.00052	***0.00001***	-	-	-	-	0.00006	0.000035
Sr	mg/L	0.023	0.0286	0.0201	0.0223	0.0168	0.0181	0.021	0.0087	-	-	-	-	0.0088	0.0088
Ti	mg/L	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.0001	***0.0001***	0.0001	0.0001	-	-	-	-	***0.0001***	0.0001
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.000004	0.000009	0.000013	0.000001	0.000013	0.000009	0.0000082	0.00001	-	-	-	-	0.000012	0.000011
V	mg/L	0.0003	***0.00003***	0.00036	0.00041	0.00041	0.00023	0.00029	0.00014	-	-	-	-	0.00019	0.00017
Zn	mg/L	***0.001***	***0.001***	0.007	0.002	0.001	***0.001***	0.0022	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 7
Input Water Chemistry
Fine Grained Granite (Waste Rock)

Parameter	Units	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095 First Flush Average	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095	HCT-095 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	7.51	7.61	7.51	7.53	7.56	7.8	7.6	7.41	7.07	7.26	7.79	7.08	6.78	7.2
Alkalinity	mg/L as $CaCO_3$	15	26	14	14	12	14	16	7	6	6	7	6	6	6.3
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	6	41	26	33	29	33	28	15	3	14	11	13	3	9.8
S(6)	mg/L	0.5	0.8	1.6	0.9	1.2	1	1.0	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2
Cl	mg/L	0.6	0.7	***0.3***	***0.2***	***0.2***	***0.2***	0.37	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	0.05	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	***0.1***	0.1
Cr(6)	ug/L	0.2	0.2	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.02	***0.01***	0.02	***0.01***	0.02	***0.01***	0.015	0.01	-	-	-	-	***0.01***	0.01
As	mg/L	0.0005	0.0007	0.0006	0.0007	0.0005	0.0005	0.00058	0.0002	-	-	-	-	***0.0002***	0.0002
Ba	mg/L	0.0112	0.00846	0.00602	0.00591	0.00387	0.00393	0.0066	0.00107	-	-	-	-	0.00094	0.001
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0019	0.0035	0.0012	0.0012	0.0018	0.0016	0.0019	***0.0002***	-	-	-	-	***0.0002***	0.0002
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	3.28	2.96	2.08	2.29	1.71	1.82	2.4	1.1	-	-	-	-	1	1.1
Cd	mg/L	***0.000003***	***0.000003***	***0.000003***	***0.000003***	***0.000003***	***0.000003***	0.000003	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	mg/L	0.000027	0.000043	0.000027	0.000024	0.000025	0.000027	0.000029	0.000011	-	-	-	-	0.000004	0.0000075
Cr	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0006	0.0006	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.00053	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	mg/L	***0.002***	***0.002***	***0.002***	***0.002***	0.01	***0.002***	0.0033	0.005	-	-	-	-	***0.003***	0.004
K	mg/L	1.42	1.73	1.31	1.23	1.15	1.09	1.3	0.177	-	-	-	-	0.133	0.16
Mg	mg/L	1.55	2.29	1.68	1.88	1.7	2.03	1.9	1.05	-	-	-	-	0.802	0.93
Mn	mg/L	0.00253	0.00394	0.00283	0.00327	0.00209	0.00197	0.0028	0.0024	-	-	-	-	0.0029	0.0027
Mo	mg/L	0.00066	0.00154	0.00074	0.00053	0.00059	0.00033	0.00073	0.00005	-	-	-	-	0.00002	0.000035
Na	mg/L	0.54	0.68	0.35	0.27	0.23	0.16	0.37	0.01	-	-	-	-	***0.01***	0.01
Ni	mg/L	0.0002	0.0003	0.0002	***0.0001***	***0.0001***	0.0001	0.00017	0.0001	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.054	***0.009***	0.018	***0.009***	0.012	0.015	0.02	0.014	-	-	-	-	***0.009***	0.012
Pb	mg/L	***0.00002***	0.00007	***0.00002***	***0.00002***	0.00004	***0.00002***	0.000032	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	mg/L	0.0008	0.0007	0.0004	0.0003	0.0002	0.0004	0.00047	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	***0.0005***	0.0008	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	0.41	0.48	0.4	0.38	0.24	0.27	0.36	0.13	-	-	-	-	0.1	0.12
Sn	mg/L	0.00131	0.00104	0.00055	0.00071	0.00032	0.00025	0.0007	0.00012	-	-	-	-	0.0001	0.00011
Sr	mg/L	0.0223	0.0246	0.0175	0.0191	0.0149	0.0163	0.019	0.0052	-	-	-	-	0.0044	0.0048
Ti	mg/L	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.0001	***0.0001***	0.0001	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.000003	0.000059	0.000062	0.000029	0.000035	0.000046	0.000039	0.000008	-	-	-	-	0.000004	0.000006
V	mg/L	0.00131	0.002	0.00189	0.00199	0.00208	0.0017	0.0018	0.00041	-	-	-	-	0.00036	0.00039
Zn	mg/L	***0.001***	0.001	***0.001***	***0.001***	***0.001***	***0.001***	0.001	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 8
Input Water Chemistry
Tonalite (Waste Rock)

Parameter	Units	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005 First Flush Average	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005	HCT-005 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	8.93	7.84	8.39	7.96	8.33	7.94	8.2	7.92	7.8	7.75	7.78	7.95	7.53	7.8
Alkalinity	mg/L as $CaCO_3$	33	24	26	24	20	20	25	14	12	12	13	14	12	13
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	74	49	43	46	40	40	49	5	4	24	21	26	4	14
S(6)	mg/L	1	1.2	0.8	0.6	0.5	0.4	0.75	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2
Cl	mg/L	7.2	2.7	0.9	0.2	***0.2***	***0.2***	1.9	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.058	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	0.1	-	-	-	-	***0.1***	0.1
Cr(6)	ug/L	0.4	1	***0.2***	***0.2***	***0.2***	***0.2***	0.37	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.15	0.03	0.25	0.25	0.23	0.2	0.19	0.23	-	-	-	-	0.17	0.2
As	mg/L	0.0108	0.0006	0.0346	0.0274	0.0189	0.0145	0.018	0.0035	-	-	-	-	0.0023	0.0029
Ba	mg/L	0.00225	0.00308	0.00262	0.0025	0.002	0.00196	0.0024	0.00116	-	-	-	-	0.001	0.0011
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0333	0.0067	0.0198	0.0129	0.009	0.0082	0.015	0.0004	-	-	-	-	0.0003	0.00035
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	4.56	5.24	4.99	5.43	5.03	5.39	5.1	5.22	-	-	-	-	4.57	4.9
Cd	mg/L	***0.000003***	***0.000003***	0.000018	0.00001	***0.000003***	***0.000003***	0.0000067	***0.000003***	-	-	-	-	0.000003	0.000003
Co	mg/L	0.000045	0.000057	0.000068	0.000042	0.000036	0.000039	0.000048	0.000015	-	-	-	-	0.000013	0.000014
Cr	mg/L	***0.0005***	0.0011	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0006	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0017	0.0027	0.0013	0.0009	0.0006	***0.0005***	0.0013	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	mg/L	***0.002***	***0.002***	***0.002***	***0.002***	0.01	***0.002***	0.0033	***0.003***	-	-	-	-	***0.003***	0.003
K	mg/L	4.27	4.09	2.3	1.93	1.41	1.17	2.5	0.285	-	-	-	-	0.247	0.27
Mg	mg/L	0.369	1.23	0.387	0.369	0.286	0.264	0.48	0.075	-	-	-	-	0.062	0.069
Mn	mg/L	0.00127	0.0152	0.00514	0.00446	0.00409	0.0045	0.0058	0.00502	-	-	-	-	0.00504	0.005
Mo	mg/L	0.00047	0.00573	0.00033	0.00013	0.00009	0.00005	0.0011	0.00006	-	-	-	-	***0.00001***	0.000035
Na	mg/L	8.86	2.01	3.78	2.57	1.51	1.09	3.3	0.15	-	-	-	-	0.13	0.14
Ni	mg/L	0.0001	0.0007	0.0003	***0.0001***	***0.0001***	0.0002	0.00025	0.0001	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.053	0.025	0.047	***0.009***	0.013	0.052	0.033	***0.009***	-	-	-	-	***0.009***	0.009
Pb	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00003	***0.00002***	0.000022	0.00003	-	-	-	-	0.00004	0.000035
Sb	mg/L	0.0011	0.001	0.0008	0.0005	0.0002	0.0003	0.00065	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	1.59	0.6	1.66	1.63	1.26	1.19	1.3	1.09	-	-	-	-	0.74	0.92
Sn	mg/L	0.00142	0.0015	0.00125	0.00104	0.00088	0.00059	0.0011	0.00009	-	-	-	-	0.00013	0.00011
Sr	mg/L	0.0153	0.0258	0.0172	0.0178	0.0149	0.0146	0.018	0.0096	-	-	-	-	0.0086	0.0091
Ti	mg/L	0.0001	0.0001	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.0001	0.0002	-	-	-	-	0.0002	0.0002
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.000242	0.00181	0.00727	0.00657	0.00481	0.00384	0.0041	0.000727	-	-	-	-	0.000665	0.0007
V	mg/L	0.00274	***0.00003***	0.0041	0.00368	0.00253	0.00193	0.0025	0.00058	-	-	-	-	0.0004	0.00049
Zn	mg/L	***0.001***	***0.001***	0.002	0.002	0.003	***0.001***	0.0017	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 9
Input Water Chemistry
Tonalite (Ore)

Parameter	Units	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027 First Flush Average	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027	HCT-027 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	**units**	8.82	8.04	7.76	7.85	7.77	8.14	8.1	7.47	7.62	7.46	7.3	7.3	7.1	7.38
Alkalinity	**mg/L as $CaCO_3$**	28	23	15	21	13	17	20	9	9	9	9	8	9	8.8
Acidity	**mg/L as $CaCO_3$**	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	**mV**	8	55	36	44	32	38	36	20	16	19	15	19	4	16
S(6)	**mg/L**	2.5	3.1	1.2	1.6	1.2	1.2	1.8	0.4	0.3	0.3	0.3	0.3	0.3	0.32
Cl	**mg/L**	2	1.3	***0.2***	***0.2***	***0.2***	***0.2***	0.68	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	**mg/L**	0.06	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.052	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	**mg/L**	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	***0.1***	0.1
Cr(6)	**ug/L**	***0.2***	0.2	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	**mg/L**	***0.00001***	0.00003	***0.00001***	0.00001	***0.00001***	***0.00001***	0.000013	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	**mg/L**	0.12	0.03	0.06	0.05	0.07	0.06	0.065	0.04	-	-	-	-	0.04	0.04
As	**mg/L**	0.0005	***0.0002***	0.0007	0.0004	0.0006	0.0004	0.00047	***0.0002***	-	-	-	-	***0.0002***	0.0002
Ba	**mg/L**	0.0022	0.00269	0.00179	0.00246	0.00385	0.00148	0.0024	0.00086	-	-	-	-	0.00082	0.00084
Be	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	**mg/L**	0.0058	0.0118	0.0036	0.0041	0.0026	0.0034	0.0052	0.0004	-	-	-	-	0.0003	0.00035
Bi	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	**mg/L**	4.9	5.19	4.24	5.65	4.12	4.49	4.8	3.67	-	-	-	-	3.45	3.6
Cd	**mg/L**	***0.000003***	***0.000003***	0.000005	0.000004	***0.000003***	***0.000003***	0.0000035	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	**mg/L**	0.000044	0.000053	0.000038	0.000043	0.000026	0.000037	0.00004	0.000011	-	-	-	-	0.00001	0.000011
Cr	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	**mg/L**	0.0059	0.009	0.0025	0.0022	***0.0005***	0.0011	0.0035	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	**mg/L**	0.005	0.003	***0.002***	***0.002***	0.011	***0.002***	0.0042	***0.003***	-	-	-	-	***0.003***	0.003
K	**mg/L**	3.94	3.32	1.58	1.62	0.985	0.869	2.1	0.184	-	-	-	-	0.152	0.17
Mg	**mg/L**	0.365	0.723	0.424	0.569	0.32	0.319	0.45	0.081	-	-	-	-	0.065	0.073
Mn	**mg/L**	0.00939	0.0193	0.0167	0.0197	0.00204	0.0204	0.015	0.0183	-	-	-	-	0.019	0.019
Mo	**mg/L**	0.00059	0.0014	0.00022	0.00015	0.00057	0.00005	0.0005	0.00005	-	-	-	-	0.00001	0.00003
Na	**mg/L**	2.92	2.89	0.82	0.76	0.38	0.31	1.3	0.06	-	-	-	-	0.05	0.055
Ni	**mg/L**	***0.0001***	0.0001	0.0002	***0.0001***	***0.0001***	0.0002	0.00013	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	**mg/L**	0.051	***0.009***	0.028	***0.009***	0.017	0.044	0.026	***0.009***	-	-	-	-	***0.009***	0.009
Pb	**mg/L**	0.00004	0.00004	***0.00002***	***0.00002***	0.00003	***0.00002***	0.000028	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	**mg/L**	0.001	0.0008	0.0002	0.0003	0.0002	0.0002	0.00045	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	**mg/L**	0.52	0.65	0.51	0.65	0.4	0.4	0.52	0.34	-	-	-	-	0.27	0.31
Sn	**mg/L**	0.00143	0.0013	0.00091	0.00114	0.00036	0.0007	0.00097	0.00001	-	-	-	-	0.00009	0.00005
Sr	**mg/L**	0.0293	0.0448	0.029	0.0399	0.0244	0.0249	0.032	0.0151	-	-	-	-	0.0139	0.015
Ti	**mg/L**	***0.0001***	0.0002	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.00012	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	**mg/L**	0.000126	0.000412	0.000463	0.000595	0.000057	0.000498	0.00036	0.000258	-	-	-	-	0.000229	0.00024
V	**mg/L**	0.00047	***0.00003***	0.00043	0.00036	0.0021	0.00013	0.00059	0.00018	-	-	-	-	0.00016	0.00017
Zn	**mg/L**	***0.001***	0.001	0.001	0.002	***0.001***	***0.001***	0.0012	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 10
Input Water Chemistry
Pegmatite

Parameter	Units	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065 First Flush Average	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065	HCT-065 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	**units**	8.82	8.04	7.76	7.85	7.77	8.14	8.1	7.47	7.62	7.46	7.3	7.3	7.1	7.38
Alkalinity	**mg/L as $CaCO_3$**	28	23	15	21	13	17	20	9	9	9	9	8	9	8.8
Acidity	**mg/L as $CaCO_3$**	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	**mV**	8	55	36	44	32	38	36	20	16	19	15	19	4	16
S(6)	**mg/L**	2.5	3.1	1.2	1.6	1.2	1.2	1.8	0.4	0.3	0.3	0.3	0.3	0.3	0.32
Cl	**mg/L**	2	1.3	***0.2***	***0.2***	***0.2***	***0.2***	0.68	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	**mg/L**	0.06	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.052	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	**mg/L**	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	***0.1***	0.1
Cr(6)	**ug/L**	***0.2***	0.2	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	**mg/L**	***0.00001***	0.00003	***0.00001***	0.00001	***0.00001***	***0.00001***	0.000013	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	**mg/L**	0.12	0.03	0.06	0.05	0.07	0.06	0.065	0.04	-	-	-	-	0.04	0.04
As	**mg/L**	0.0005	***0.0002***	0.0007	0.0004	0.0006	0.0004	0.00047	***0.0002***	-	-	-	-	***0.0002***	0.0002
Ba	**mg/L**	0.0022	0.00269	0.00179	0.00246	0.00385	0.00148	0.0024	0.00086	-	-	-	-	0.00082	0.00084
Be	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	**mg/L**	0.0058	0.0118	0.0036	0.0041	0.0026	0.0034	0.0052	0.0004	-	-	-	-	0.0003	0.00035
Bi	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	**mg/L**	4.9	5.19	4.24	5.65	4.12	4.49	4.8	3.67	-	-	-	-	3.45	3.6
Cd	**mg/L**	***0.000003***	***0.000003***	0.000005	0.000004	***0.000003***	***0.000003***	0.0000035	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	**mg/L**	0.000044	0.000053	0.000038	0.000043	0.000026	0.000037	0.00004	0.000011	-	-	-	-	0.00001	0.000011
Cr	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	**mg/L**	0.0059	0.009	0.0025	0.0022	***0.0005***	0.0011	0.0035	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	**mg/L**	0.005	0.003	***0.002***	***0.002***	0.011	***0.002***	0.0042	***0.003***	-	-	-	-	***0.003***	0.003
K	**mg/L**	3.94	3.32	1.58	1.62	0.985	0.869	2.1	0.184	-	-	-	-	0.152	0.17
Mg	**mg/L**	0.365	0.723	0.424	0.569	0.32	0.319	0.45	0.081	-	-	-	-	0.065	0.073
Mn	**mg/L**	0.00939	0.0193	0.0167	0.0197	0.00204	0.0204	0.015	0.0183	-	-	-	-	0.019	0.019
Mo	**mg/L**	0.00059	0.0014	0.00022	0.00015	0.00057	0.00005	0.0005	0.00005	-	-	-	-	0.00001	0.00003
Na	**mg/L**	2.92	2.89	0.82	0.76	0.38	0.31	1.3	0.06	-	-	-	-	0.05	0.055
Ni	**mg/L**	***0.0001***	0.0001	0.0002	***0.0001***	***0.0001***	0.0002	0.00013	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	**mg/L**	0.051	***0.009***	0.028	***0.009***	0.017	0.044	0.026	***0.009***	-	-	-	-	***0.009***	0.009
Pb	**mg/L**	0.00004	0.00004	***0.00002***	***0.00002***	0.00003	***0.00002***	0.000028	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	**mg/L**	0.001	0.0008	0.0002	0.0003	0.0002	0.0002	0.00045	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	**mg/L**	0.52	0.65	0.51	0.65	0.4	0.4	0.52	0.34	-	-	-	-	0.27	0.31
Sn	**mg/L**	0.00143	0.0013	0.00091	0.00114	0.00036	0.0007	0.00097	0.00001	-	-	-	-	0.00009	0.00005
Sr	**mg/L**	0.0293	0.0448	0.029	0.0399	0.0244	0.0249	0.032	0.0151	-	-	-	-	0.0139	0.015
Ti	**mg/L**	***0.0001***	0.0002	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.00012	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	**mg/L**	0.000126	0.000412	0.000463	0.000595	0.000057	0.000498	0.00036	0.000258	-	-	-	-	0.000229	0.00024
V	**mg/L**	0.00047	***0.00003***	0.00043	0.00036	0.0021	0.00013	0.00059	0.00018	-	-	-	-	0.00016	0.00017
Zn	**mg/L**	***0.001***	0.001	0.001	0.002	***0.001***	***0.001***	0.0012	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 11
Input Water Chemistry
Chloritic Granite Porphyry

Parameter	Units	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067 First Flush Average	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067	HCT-067 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	**units**	8.82	8.04	7.76	7.85	7.77	8.14	8.1	7.47	7.62	7.46	7.3	7.3	7.1	7.38
Alkalinity	**mg/L as $CaCO_3$**	28	23	15	21	13	17	20	9	9	9	9	8	9	8.8
Acidity	**mg/L as $CaCO_3$**	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	**mV**	8	55	36	44	32	38	36	20	16	19	15	19	4	16
S(6)	**mg/L**	2.5	3.1	1.2	1.6	1.2	1.2	1.8	0.4	0.3	0.3	0.3	0.3	0.3	0.32
Cl	**mg/L**	2	1.3	***0.2***	***0.2***	***0.2***	***0.2***	0.68	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	**mg/L**	0.06	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.052	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	**mg/L**	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	***0.1***	0.1
Cr(6)	**ug/L**	***0.2***	0.2	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[a]	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	**mg/L**	***0.00001***	0.00003	***0.00001***	0.00001	***0.00001***	***0.00001***	0.000013	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	**mg/L**	0.12	0.03	0.06	0.05	0.07	0.06	0.065	0.04	-	-	-	-	0.04	0.04
As	**mg/L**	0.0005	***0.0002***	0.0007	0.0004	0.0006	0.0004	0.00047	***0.0002***	-	-	-	-	***0.0002***	0.0002
Ba	**mg/L**	0.0022	0.00269	0.00179	0.00246	0.00385	0.00148	0.0024	0.00086	-	-	-	-	0.00082	0.00084
Be	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	**mg/L**	0.0058	0.0118	0.0036	0.0041	0.0026	0.0034	0.0052	0.0004	-	-	-	-	0.0003	0.00035
Bi	**mg/L**	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	**mg/L**	4.9	5.19	4.24	5.65	4.12	4.49	4.8	3.67	-	-	-	-	3.45	3.6
Cd	**mg/L**	***0.000003***	***0.000003***	0.000005	0.000004	***0.000003***	***0.000003***	0.0000035	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	**mg/L**	0.000044	0.000053	0.000038	0.000043	0.000026	0.000037	0.00004	0.000011	-	-	-	-	0.00001	0.000011
Cr	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	**mg/L**	0.0059	0.009	0.0025	0.0022	***0.0005***	0.0011	0.0035	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	**mg/L**	0.005	0.003	***0.002***	***0.002***	0.011	***0.002***	0.0042	***0.003***	-	-	-	-	***0.003***	0.003
K	**mg/L**	3.94	3.32	1.58	1.62	0.985	0.869	2.1	0.184	-	-	-	-	0.152	0.17
Mg	**mg/L**	0.365	0.723	0.424	0.569	0.32	0.319	0.45	0.081	-	-	-	-	0.065	0.073
Mn	**mg/L**	0.00939	0.0193	0.0167	0.0197	0.00204	0.0204	0.015	0.0183	-	-	-	-	0.019	0.019
Mo	**mg/L**	0.00059	0.0014	0.00022	0.00015	0.00057	0.00005	0.0005	0.00005	-	-	-	-	0.00001	0.00003
Na	**mg/L**	2.92	2.89	0.82	0.76	0.38	0.31	1.3	0.06	-	-	-	-	0.05	0.055
Ni	**mg/L**	***0.0001***	0.0001	0.0002	***0.0001***	***0.0001***	0.0002	0.00013	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	**mg/L**	0.051	***0.009***	0.028	***0.009***	0.017	0.044	0.026	***0.009***	-	-	-	-	***0.009***	0.009
Pb	**mg/L**	0.00004	0.00004	***0.00002***	***0.00002***	0.00003	***0.00002***	0.000028	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	**mg/L**	0.001	0.0008	0.0002	0.0003	0.0002	0.0002	0.00045	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[b]	**mg/L**	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	**mg/L**	0.52	0.65	0.51	0.65	0.4	0.4	0.52	0.34	-	-	-	-	0.27	0.31
Sn	**mg/L**	0.00143	0.0013	0.00091	0.00114	0.00036	0.0007	0.00097	0.00001	-	-	-	-	0.00009	0.00005
Sr	**mg/L**	0.0293	0.0448	0.029	0.0399	0.0244	0.0249	0.032	0.0151	-	-	-	-	0.0139	0.015
Ti	**mg/L**	***0.0001***	0.0002	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.00012	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	**mg/L**	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	**mg/L**	0.000126	0.000412	0.000463	0.000595	0.000057	0.000498	0.00036	0.000258	-	-	-	-	0.000229	0.00024
V	**mg/L**	0.00047	***0.00003***	0.00043	0.00036	0.0021	0.00013	0.00059	0.00018	-	-	-	-	0.00016	0.00017
Zn	**mg/L**	***0.001***	0.001	0.001	0.002	***0.001***	***0.001***	0.0012	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[a] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[b] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 12
Input Water Chemistry
Altered Granitoid

Parameter	Units	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086 First Flush Average	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086	HCT-086 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	8.13	7.76	8.46	7.62	8.02	8.18	8.0	7.29	7.22	7.23	7.4	7.16	7.01	7.2
Alkalinity	mg/L as $CaCO_3$	21	17	14	14	13	16	16	7	9	7	7	7	7	7.3
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	7	42	28	31	28	33	28	16	14	16	11	15	12	14
S(6)	mg/L	0.7	0.8	0.6	0.5	0.7	0.2	0.58	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2
Cl	mg/L	2.1	1.3	0.6	0.3	0.3	***0.2***	0.8	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	***0.1***	0.1
Cr(6)	ug/L	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.09	0.03	0.05	0.04	0.08	0.06	0.058	0.03	-	-	-	-	0.03	0.03
As	mg/L	0.0009	***0.0002***	0.0002	0.0003	0.0002	0.0003	0.00035	0.0002	-	-	-	-	***0.0002***	0.0002
Ba	mg/L	0.00177	0.00181	0.0018	0.00131	0.0011	0.00108	0.0015	0.00037	-	-	-	-	0.00038	0.00038
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0042	0.0057	0.003	0.0021	0.0032	0.002	0.0034	***0.0002***	-	-	-	-	***0.0002***	0.0002
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	4.53	4.4	3.78	3.77	2.87	3.02	3.7	2.06	-	-	-	-	2.16	2.1
Cd	mg/L	***0.000003***	***0.000003***	***0.000003***	***0.000003***	***0.000003***	***0.000003***	0.000003	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	mg/L	0.000035	0.000047	0.000047	0.000026	0.000019	0.000026	0.000033	0.000008	-	-	-	-	0.000005	0.0000065
Cr	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0025	0.0031	0.0018	0.001	0.0012	0.0009	0.0018	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	mg/L	0.003	0.002	0.005	0.003	0.012	***0.002***	0.0045	***0.003***	-	-	-	-	***0.003***	0.003
K	mg/L	3.12	2.35	1.8	1.4	1.45	1.09	1.9	0.162	-	-	-	-	0.138	0.15
Mg	mg/L	0.272	0.476	0.461	0.437	0.443	0.431	0.42	0.392	-	-	-	-	0.378	0.39
Mn	mg/L	0.00576	0.0123	0.0113	0.0117	0.00738	0.00858	0.0095	0.00712	-	-	-	-	0.00775	0.0074
Mo	mg/L	0.00174	0.00298	0.00141	0.0008	0.00098	0.00022	0.0014	0.00004	-	-	-	-	0.00001	0.000025
Na	mg/L	1.8	1.78	1.11	0.76	0.91	0.44	1.1	0.05	-	-	-	-	0.04	0.045
Ni	mg/L	***0.0001***	0.0001	0.0003	***0.0001***	***0.0001***	***0.0001***	0.00013	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.012	0.055	0.044	***0.009***	0.011	***0.009***	0.023	0.012	-	-	-	-	***0.009***	0.011
Pb	mg/L	***0.00002***	0.00003	0.00019	***0.00002***	***0.00002***	***0.00002***	0.00005	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	mg/L	0.0008	0.0009	0.0006	0.0004	0.0002	0.0003	0.00053	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	0.46	0.42	0.41	0.32	0.26	0.28	0.36	0.17	-	-	-	-	0.14	0.16
Sn	mg/L	0.00167	0.00122	0.00124	0.0011	0.0006	0.00046	0.001	***0.00001***	-	-	-	-	0.00005	0.00003
Sr	mg/L	0.0156	0.018	0.0154	0.0149	0.0119	0.0118	0.015	0.0066	-	-	-	-	0.0068	0.0067
Ti	mg/L	0.0002	***0.0001***	***0.0001***	***0.0001***	0.0001	***0.0001***	0.00012	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.0008	0.00187	0.00288	0.00294	0.00308	0.0024	0.0023	0.000615	-	-	-	-	0.000561	0.00059
V	mg/L	0.00022	0.00012	0.00014	0.00012	0.00013	***0.00003***	0.00013	***0.00003***	-	-	-	-	***0.00003***	0.00003
Zn	mg/L	***0.001***	***0.001***	0.004	***0.001***	***0.001***	***0.001***	0.0015	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 13
Input Water Chemistry
Chloritic Granite (Low Grade Ore)

Parameter	Units	HCT-091	HCT-091	HCT-091	HCT-091	HCT-091	HCT-091	HCT-094 First Flush Average	HCT-091	HCT-091	HCT-091	HCT-091	HCT-091	HCT-091	HCT-091 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	8.84	7.77	8.08	7.63	7.96	7.96	8.0	7.37	7.29	7.25	7.88	7.23	7.12	7.4
Alkalinity	mg/L as $CaCO_3$	28	22	21	18	12	17	20	10	10	10	10	10	10	10
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	7	47	38	41	29	39	34	22	4	17	18	17	18	16
S(6)	mg/L	1.7	3	1.9	1.5	1.2	1.1	1.7	0.3	0.2	0.2	0.2	***0.2***	0.2	0.22
Cl	mg/L	1.5	1.2	0.3	***0.2***	***0.2***	***0.2***	0.6	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	***0.1***	-	-	-	-	0.1	0.1
Cr(6)	ug/L	***0.2***	0.3	***0.2***	***0.2***	***0.2***	***0.2***	0.22	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	0.00003	0.00002	***0.00001***	0.00003	***0.00001***	0.000018	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.09	0.04	0.04	0.05	0.06	0.06	0.057	0.02	-	-	-	-	0.03	0.025
As	mg/L	0.0008	0.0003	0.0003	***0.0002***	0.0002	0.0002	0.00033	***0.0002***	-	-	-	-	***0.0002***	0.0002
Ba	mg/L	0.00373	0.00671	0.01015	0.0124	0.0066	0.00751	0.0079	0.015	-	-	-	-	0.0158	0.015
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0032	0.0069	0.0035	0.0026	0.0021	0.002	0.0034	***0.0002***	-	-	-	-	***0.0002***	0.0002
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	4.24	4.27	4.83	4.99	3.5	3.75	4.3	3.46	-	-	-	-	3.68	3.6
Cd	mg/L	0.000003	***0.000003***	0.00001	0.000003	***0.000003***	***0.000003***	0.0000042	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	mg/L	0.000047	0.000049	0.000047	0.000041	0.000027	0.00003	0.00004	0.00001	-	-	-	-	0.000007	0.0000085
Cr	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0021	0.0038	0.0017	0.0008	0.0006	0.0006	0.0016	***0.0005***	-	-	-	-	***0.0005***	0.0005
Fe	mg/L	***0.002***	***0.002***	***0.002***	***0.002***	0.007	***0.002***	0.0028	***0.003***	-	-	-	-	***0.003***	0.003
K	mg/L	3.9	3.72	2.45	1.81	1.17	1.04	2.3	0.169	-	-	-	-	0.154	0.16
Mg	mg/L	0.346	0.779	0.801	0.793	0.447	0.495	0.61	0.308	-	-	-	-	0.301	0.3
Mn	mg/L	0.00634	0.0151	0.0169	0.018	0.0138	0.0153	0.014	0.0204	-	-	-	-	0.0235	0.022
Mo	mg/L	0.00109	0.00222	0.00097	0.00052	0.00037	0.0003	0.00091	0.00015	-	-	-	-	0.0001	0.00013
Na	mg/L	2.62	3.1	1.49	0.89	0.52	0.43	1.5	0.06	-	-	-	-	0.05	0.055
Ni	mg/L	***0.0001***	0.0001	0.0002	***0.0001***	***0.0001***	0.0001	0.00012	0.0001	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.044	0.014	***0.009***	0.011	0.02	0.028	0.021	***0.009***	-	-	-	-	***0.009***	0.009
Pb	mg/L	0.00005	0.00015	0.00013	0.00011	0.00014	0.00018	0.00013	0.00004	-	-	-	-	0.00005	0.000045
Sb	mg/L	0.0009	0.0009	0.0006	0.0004	***0.0002***	0.0003	0.00055	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	0.001	***0.0005***	***0.0005***	0.0006	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	0.63	0.55	0.6	0.52	0.27	0.32	0.48	0.32	-	-	-	-	0.27	0.3
Sn	mg/L	0.00099	0.00072	0.00046	0.00036	0.00016	0.00012	0.00047	0.00008	-	-	-	-	0.00016	0.00012
Sr	mg/L	0.025	0.0413	0.0437	0.0442	0.0251	0.026	0.034	0.0189	-	-	-	-	0.0195	0.019
Ti	mg/L	0.0002	0.0001	***0.0001***	***0.0001***	***0.0001***	***0.0001***	0.00012	***0.0001***	-	-	-	-	***0.0001***	0.0001
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.000305	0.00263	0.00235	0.00204	0.00136	0.00133	0.0017	0.000531	-	-	-	-	0.000457	0.00049
V	mg/L	0.00023	***0.00003***	0.00022	0.00012	0.0001	***0.00003***	0.00012	0.00004	-	-	-	-	0.00004	0.00004
Zn	mg/L	***0.001***	***0.001***	***0.001***	0.001	***0.001***	0.001	0.001	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
[(a)] Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
[(b)] Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

TABLE 14
Input Water Chemistry
Chloritic Granite (Waste Rock)

Parameter	Units	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117 First Flush Average	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117	HCT-117 Steady State Average
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	-	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	-
pH	units	8.61	8.26	7.94	7.69	7.74	7.86	8.0	7.51	7.38	7.47	7.33	7.47	6.99	7.4
Alkalinity	mg/L as $CaCO_3$	24	17	13	14	12	15	16	8	9	8	9	9	8	8.5
Acidity	mg/L as $CaCO_3$	***2***	***2***	***2***	***2***	***2***	***2***	2.0	***2***	***2***	***2***	***2***	***2***	***2***	2.0
Conductivity	mV	8	46	37	32	28	34	31	18	15	18	13	17	3	14
S(6)	mg/L	1.7	2.2	1.7	0.8	0.6	0.3	1.2	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2
Cl	mg/L	2.8	1.9	0.9	***0.2***	***0.2***	***0.2***	1.0	***0.2***	-	-	-	-	***0.2***	0.2
N(5)	mg/L	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.05	***0.05***	-	-	-	-	***0.05***	0.05
N(-3)	mg/L	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	***0.1***	0.10	0.2	-	-	-	-	***0.1***	0.15
Cr(6)	ug/L	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	***0.2***	0.2	***0.2***	-	-	-	-	***0.2***	0.2
Hg[(a)]	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ag	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Al	mg/L	0.1	0.03	0.03	0.04	0.06	0.04	0.05	0.05	-	-	-	-	0.05	0.05
As	mg/L	0.0007	0.0005	0.0007	0.0005	0.0006	0.0005	0.00058	0.0003	-	-	-	-	***0.0002***	0.00025
Ba	mg/L	0.02439	0.0124	0.01017	0.01001	0.00793	0.00903	0.012	0.00384	-	-	-	-	0.00348	0.0037
Be	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
B	mg/L	0.0262	0.0207	0.0125	0.0075	0.0054	0.0036	0.013	0.0002	-	-	-	-	0.0002	0.0002
Bi	mg/L	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	***0.00001***	0.00001	***0.00001***	-	-	-	-	***0.00001***	0.00001
Ca	mg/L	4.96	4.2	3.76	3.66	3.25	3.74	3.9	2.72	-	-	-	-	2.99	2.9
Cd	mg/L	***0.000003***	***0.000003***	0.000004	***0.000003***	***0.000003***	***0.000003***	0.0000032	***0.000003***	-	-	-	-	***0.000003***	0.000003
Co	mg/L	0.000035	0.000028	0.000027	0.00002	0.000024	0.000025	0.000027	0.000007	-	-	-	-	0.000005	0.000006
Cr	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Cu	mg/L	0.0028	0.0032	0.002	0.0013	0.001	0.0007	0.0018	0.0006	-	-	-	-	***0.0005***	0.00055
Fe	mg/L	0.002	0.002	0.002	0.002	0.01	***0.002***	0.0033	0.004	-	-	-	-	0.004	0.004
K	mg/L	2.42	1.79	1.58	1.25	1.01	0.844	1.5	0.169	-	-	-	-	0.153	0.16
Mg	mg/L	0.317	0.445	0.39	0.385	0.325	0.364	0.37	0.154	-	-	-	-	0.148	0.15
Mn	mg/L	0.0051	0.011	0.00829	0.00903	0.00844	0.0101	0.0087	0.00756	-	-	-	-	0.00848	0.008
Mo	mg/L	0.00124	0.00209	0.00128	0.00038	0.00021	0.00008	0.00088	0.00003	-	-	-	-	***0.00001***	0.00002
Na	mg/L	2.81	2.83	2.1	1.08	0.74	0.47	1.7	0.11	-	-	-	-	0.07	0.09
Ni	mg/L	0.0004	0.0003	0.0003	***0.0001***	***0.0001***	0.0002	0.00023	***0.0001***	-	-	-	-	***0.0001***	0.0001
P	mg/L	0.026	0.019	0.024	***0.009***	0.014	0.039	0.022	***0.009***	-	-	-	-	***0.009***	0.009
Pb	mg/L	0.00002	0.00002	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
Sb	mg/L	0.0011	0.0008	0.0005	0.0004	***0.0002***	0.0004	0.00057	***0.0002***	-	-	-	-	***0.0002***	0.0002
Se[(b)]	mg/L	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.0005	***0.0005***	-	-	-	-	***0.0005***	0.0005
Si	mg/L	0.58	0.51	0.46	0.48	0.35	0.41	0.47	0.32	-	-	-	-	0.27	0.3
Sn	mg/L	0.00246	0.00148	0.00131	0.00154	0.001	0.0009	0.0014	0.00004	-	-	-	-	0.00012	0.00008
Sr	mg/L	0.27	0.338	0.275	0.288	0.235	0.261	0.28	0.0697	-	-	-	-	0.0658	0.068
Ti	mg/L	***0.0001***	0.0001	0.0001	***0.0001***	***0.0001***	***0.0001***	0.0001	0.0002	-	-	-	-	***0.0001***	0.00015
Tl	mg/L	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	***0.00002***	0.00002	***0.00002***	-	-	-	-	***0.00002***	0.00002
U	mg/L	0.000072	0.000208	0.0003	0.000407	0.000472	0.00064	0.00035	0.000402	-	-	-	-	0.000355	0.00038
V	mg/L	0.00041	***0.00003***	0.00038	0.00036	0.0003	0.00008	0.00026	***0.00003***	-	-	-	-	0.00012	0.000075
Zn	mg/L	***0.001***	***0.001***	***0.001***	***0.001***	***0.001***	***0.001***	0.001	***0.001***	-	-	-	-	***0.001***	0.001

Notes:
Refer to the Geology, Geochemistry and Soil TSD for details regarding laboratory testing methods
Bold and italicized numbers represent values below the analytical detection limit
(a) Mercury concentrations below the detection limit were assumed to equal 1/10 of typical detection limit
(b) Selenium concentrations below the detection limit were assumed to equal 1/2 of typical detection limit
"-" A dash indicates no value

APPENDIX 4.II

Site Operations Water Quality Model Results

TABLE 1
Operations Model Results
100 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper
	s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6
Scenario 1 - Steady State																
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.00001	0.0002
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.00001	0.0002
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.00001	0.0002
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00003*	3.8	0.0002	0.00001	0.0002
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.00001	0.0002
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	*0.00001*	1.0	0.0000	0.0003	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.1	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.7	0.000	0.0004	0.0004
Pumping Station 14	6.9	22	***14***	***27***	13	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003
Open Pit	7.0	17	7.9	***15***	7.5	0.002	0.0007	0.0002	0.006	0.004	6.4	*0.00002*	2.0	0.00009	0.00005	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.0	13	5.9	11	5.5	0.003	0.0005	0.0003	0.004	0.003	4.9	*0.00001*	1.3	0.0001	0.0003	0.0004
TMA Reclaim Pond	7.8	121	0.000004	4.5	4.5	0.02	0.002	0.00004	0.0005	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***
Process Control Pond	7.0	17	7.1	***14***	6.7	0.002	0.0007	0.0002	0.007	0.005	6.3	*0.00002*	2.0	0.0001	0.0001	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.8	121	2.0	***18***	16	0.02	0.002	0.00004	0.0006	0.01	24	0.00002	25	**0.002**	0.0002	***0.09***
Scenario 2 - First Flush																
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.000001	0.00009
Pumping Station 2	6.9	25	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0001
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.010	11	*0.00001*	4.6	0.0004	0.000001	0.00008
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.000001	0.00009
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.000001	0.0001
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.00008
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.001	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007
Pumping Station 14	6.8	27	***14***	***27***	13	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002
Open Pit	7.3	24	7.9	***15***	7.5	0.004	0.0009	0.002	0.01	0.006	7.1	*0.00002*	2.3	0.0001	0.00005	0.0005
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.4	21	5.9	11	5.5	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004
TMA Reclaim Pond	7.8	122	0.000004	4.5	4.5	0.02	0.002	0.00001	0.0005	0.01	26	0.00004	26	**0.002**	0.0002	***0.09***
Process Control Pond	7.2	23	7.1	***14***	6.7	0.003	0.0007	0.001	0.009	0.006	7.1	*0.00002*	2	0.0001	0.00003	0.0004
WATER TREAMENT FEED - RECLAIM TANK	7.8	122	2.0	***18***	16	0.02	0.002	0.00002	0.0006	0.01	26	0.00004	26	**0.002**	0.0002	***0.09***
Scenario 3 - 75th Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.05	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0003	0.000001	0.0004
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.000001	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 9	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***
Pumping Station 6	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 15	6.9	31	0.0001	0.15	0.1	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**
Pumping Station 13	6.9	31	0.0001	0.16	0.2	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***
Pumping Station 14	6.8	30	***14***	***27***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***
Open Pit	6.8	31	7.9	***15***	7.50	0.002	0.0008	***0.02***	0.02	0.02	7.8	*0.00004*	9.1	0.0002	0.00002	**0.002**
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.9	11	5.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***
TMA Reclaim Pond	7.7	129	0.000005	4.9	4.9	0.01	0.002	0.00009	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***
Process Control Pond	6.9	31	7.1	***14***	6.7	0.002	0.0009	***0.02***	0.02	0.02	7.9	*0.00004*	8.8	0.0002	0.0002	***0.003***
WATER TREAMENT FEED - RECLAIM TANK	7.7	129	2.0	***18***	16	0.01	0.002	0.0001	0.001	0.02	30	***0.0002***	29	**0.002**	0.0002	***0.11***
Scenario 4 - Maximum Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.05	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0003	0.000001	0.0004
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	*0.00003*	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.000001	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 9	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***
Pumping Station 6	6.9	31	0.0001	0.14	0.1	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.000001	0.0001
Pumping Station 15	6.9	31	0.0001	0.15	0.1	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.010***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**
Pumping Station 13	6.9	31	0.0001	0.16	0.2	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***
Pumping Station 14	6.8	30	***14***	***27***	13	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***
Open Pit	6.8	31	7.9	***15***	7.5	0.002	0.0008	***0.02***	0.02	0.02	7.8	*0.00004*	9.1	0.0002	0.00002	**0.002**
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.9	11	5.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***
TMA Reclaim Pond	7.7	133	0.000005	5.6	5.6	0.01	0.002	0.00003	0.001	0.01	34	***0.0002***	57	**0.003**	0.0003	***0.13***
Process Control Pond	6.9	31	7.1	***14***	6.7	0.002	0.0009	***0.02***	0.02	0.02	7.9	*0.00004*	8.8	0.0002	0.0002	***0.003***
WATER TREAMENT FEED - RECLAIM TANK	8.3	66	2.0	***18***	16	0.01	0.002	0.000001	0.001	0.01	21	***0.0002***	57	**0.003**	0.00009	***0.13***

Solution Description	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-		-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																				
Pumping Station 1	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.00001	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00001	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.95	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.00001	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.96	0.0009	0.003	0.00001	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.001	0.001	-
Pumping Station 6	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.001	0.001	-
Pumping Station 10	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.00001	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.2	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0002	0.00001	0.2	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0002	0.000008	0.39	0.70	0.03	0.0002	0.42	0.0004	0.008	0.00002	0.0005	0.00004	0.50	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
Detonator Storage Area	0.0003	0.000007	0.9	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.25	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.0001	0.00001	34	13	0.04	**0.07**	88	0.009	0.02	0.0001	0.0007	0.00001	200	0.27	0.03	0.00002	0.0002	**0.006**	0.002	***0.90***
Process Control Pond	0.0003	0.000008	0.47	0.76	0.03	0.0002	0.44	0.0004	0.009	0.00003	0.0005	0.00005	0.55	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	34	13	0.04	**0.07**	87	0.009	0.02	0.0001	0.00069	0.00001	200	0.26	0.03	0.00002	0.0002	**0.006**	0.002	***0.90***
Scenario 2 - First Flush																				
Pumping Station 1	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.0004	0.000006	0.89	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.000001	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.000007	1.5	1.37	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0002	0.000008	2.6	1.0	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0001	0.000009	2.6	0.90	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.00006	0.00001	34	14	0.05	**0.07**	88	0.009	0.02	0.0001	0.0007	0.00001	206	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.90***
Process Control Pond	0.0002	0.000008	2.3	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00006	0.00001	34	14	0.05	**0.07**	88	0.0093	0.02	0.0001	0.0007	0.00001	206	0.27	0.03	0.00001	0.0002	**0.006**	0.003	***0.90***
Scenario 3 - 75th Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.00039	0.000007	1.7	1.9	0.11	0.002	3.9	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.000001	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.000001	0.00067	0.00003	2.3	0.09	0.001	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00192*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000008	3.1	2.1	0.06	0.004	6.5	0.0009	0.05	0.00001	*0.00151*	0.00003	2.8	0.24	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.00171*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	0.00007	0.00001	38	16	0.06	**0.07**	92	0.01	0.02	0.0002	0.00097	0.00001	225	0.31	0.03	0.00005	0.0002	**0.007**	0.007	***0.90***
Process Control Pond	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.0014*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.0001	0.00001	38	16	0.06	**0.07**	92	0.01	0.02	0.0002	0.001	0.00001	225	0.31	0.03	0.00005	0.0002	**0.007**	0.007	***0.90***
Scenario 4 - Maximum Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	1.9	0.11	0.002	3.9	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.000001	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.001	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.000001	0.00067	0.00003	2.3	0.09	0.001	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.000001	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.001	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	*0.00192*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000008	3.1	2.1	0.06	0.004	6.5	0.0009	0.05	0.00001	*0.00151*	0.00003	2.8	0.24	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.7	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.9	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.00171*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	0.00008	0.00001	42	19	0.06	**0.08**	109	0.01	0.03	0.0004	0.00095	0.00001	250	0.35	0.03	0.00002	0.0002	**0.007**	0.007	***0.90***
Process Control Pond	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	*0.00144*	0.00004	2.7	0.23	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.0001	0.00001	42	11	0.06	**0.08**	109	0.01	0.03	0.0004	0.001	0.00001	250	0.35	0.03	0.00002	0.0002	**0.007**	0.007	***0.90***

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6
Scenario 1 - Steady State																
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	0.00001	1.0	0.00004	0.0003	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.1	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004
Pumping Station 14	6.9	22	13	26	13	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003
Open Pit	7.0	17	7.6	15	7.1	0.002	0.0007	0.0002	0.006	0.004	6.3	0.00002	2.0	0.00009	0.00006	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.0	13	5.5	11	5.2	0.003	0.0005	0.0003	0.004	0.003	4.9	0.00001	1.3	0.00006	0.0003	0.0004
TMA Reclaim Pond	7.8	120	0.000004	4.4	4.4	0.02	0.002	0.00004	0.0006	0.01	24	0.00002	25	0.002	0.0002	0.09
Process Control Pond	7.0	17	6.8	13	6.4	0.002	0.0007	0.0002	0.007	0.005	6.3	0.00002	2.0	0.00009	0.0001	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.8	119	1.9	18	16	0.01	0.002	0.00004	0.0006	0.01	24	0.00002	25	0.002	0.0002	0.09
Scenario 2 - First Flush																
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009
Pumping Station 2	6.9	25	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.0001
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007
Pumping Station 14	6.8	27	13	26	13	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002
Open Pit	7.3	24	7.6	15	7.1	0.004	0.0009	0.002	0.011	0.006	7.0	0.00002	2.3	0.0001	0.00006	0.0005
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.4	21	5.5	11	5.2	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004
TMA Reclaim Pond	7.8	121	0.000004	4.4	4.4	0.02	0.002	0.00001	0.0006	0.01	26	0.00004	25	0.002	0.0002	0.09
Process Control Pond	7.2	23	6.8	13	6.4	0.003	0.0007	0.001	0.009	0.006	7.1	0.00002	2.4	0.0001	0.00003	0.0004
WATER TREAMENT FEED - RECLAIM TANK	7.8	121	1.9	18	16	0.02	0.002	0.00002	0.0006	0.01	26	0.00004	25	0.002	0.0002	0.09
Scenario 3 - 75th Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	26	13	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.6	15	7.1	0.002	0.0008	0.02	0.02	0.02	7.7	0.00004	9.2	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.5	11	5.2	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	128	0.000005	4.9	4.9	0.01	0.002	0.00008	0.001	0.02	30	0.0002	29	0.002	0.0002	0.11
Process Control Pond	6.9	31	6.8	13	6.4	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	7.7	128	1.9	18	16	0.01	0.002	0.0002	0.001	0.02	30	0.0002	29	0.002	0.0002	0.11
Scenario 4 - Maximum Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.02	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	26	13	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.6	15	7.1	0.002	0.0008	0.02	0.02	0.02	7.7	0.00004	9.2	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.5	11	5.2	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	132	0.000005	5.5	5.5	0.01	0.002	0.00003	0.001	0.01	34	0.0002	57	0.003	0.0003	0.13
Process Control Pond	6.9	31	6.8	13	6.4	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.9	18	16	0.01	0.002	0.000001	0.001	0.01	21	0.0002	56	0.003	0.00009	0.13

Solution Description	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																				
Pumping Station 1	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	0.95	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.96	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0002	0.000009	0.38	0.68	0.03	0.0002	0.40	0.0004	0.008	0.00002	0.0005	0.00004	0.49	0.02	0.0003	0.0002	0.00005	0.001	0.001	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.00007	0.00001	33	13	0.04	0.07	87	0.009	0.02	0.0001	0.0007	0.00001	198	0.26	0.03	0.00002	0.0002	0.006	0.002	0.89
Process Control Pond	0.0003	0.000008	0.46	0.75	0.03	0.0002	0.43	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	33	13	0.04	0.07	86	0.009	0.02	0.0001	0.00069	0.00001	197	0.26	0.03	0.00002	0.0002	0.006	0.002	0.89
Scenario 2 - First Flush																				
Pumping Station 1	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.0004	0.000006	0.89	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0001	0.000009	2.7	1.0	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0001	0.000009	2.6	0.90	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.00006	0.00001	34	14	0.05	0.07	87	0.009	0.02	0.0001	0.0007	0.00001	203.8	0.27	0.03	0.00001	0.0002	0.006	0.003	0.89
Process Control Pond	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.0008	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00006	0.00001	33	14	0.05	0.07	87	0.009	0.02	0.0001	0.0007	0.00001	202	0.27	0.03	0.00001	0.0002	0.006	0.003	0.89
Scenario 3 - 75th Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.78	1.8	0.14	0.001	2.0	0.001	0.006	0.0000006	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.0001	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.1	2.1	0.06	0.004	6.6	0.0009	0.05	0.00001	0.00153	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00007	0.00001	37	16	0.06	0.07	91	0.01	0.02	0.0002	0.00097	0.00001	224	0.3	0.03	0.00004	0.0002	0.007	0.008	0.90
Process Control Pond	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	0.0014	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	37	16	0.06	0.07	90	0.01	0.02	0.0002	0.001	0.00001	223	0.3	0.03	0.00006	0.0002	0.007	0.008	0.89
Scenario 4 - Maximum Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.00081	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.78	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.00051	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.1	2.1	0.06	0.004	6.6	0.0009	0.05	0.00001	0.00153	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00008	0.00001	42	19	0.06	0.08	108	0.01	0.03	0.0004	0.00095	0.00001	248	0.35	0.03	0.00002	0.0002	0.007	0.008	0.89
Process Control Pond	0.0003	0.000008	3.0	2.1	0.06	0.004	6.2	0.0008	0.05	0.00005	0.00145	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00008	0.00001	41	11	0.06	0.08	107	0.01	0.03	0.0004	0.001	0.00001	247	0.35	0.03	0.00004	0.0002	0.007	0.008	0.89

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 3
Operations Model Results
25 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6
Scenario 1 - Steady State																
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002
Pumping Station 2	6.9	25	0.00007	0.04	0.04	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.0001	0.0002	0.0003
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.0001	0.0002	0.0003
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	0.00001	1.0	0.00004	0.0003	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004
Pumping Station 14	6.9	22	13	24	12	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003
Open Pit	7.0	16	7.2	14	6.8	0.002	0.0006	0.0002	0.006	0.004	6.1	0.00002	1.9	0.00008	0.00006	0.0003
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.0	13	5.2	10	4.9	0.003	0.0005	0.0003	0.004	0.003	4.9	0.00001	1.3	0.0001	0.0003	0.0004
TMA Reclaim Pond	7.8	119	0.000004	4.4	4.4	0.01	0.002	0.00004	0.0006	0.01	24	0.00002	25	0.002	0.0002	0.09
Process Control Pond	7.0	17	6.4	12	6.0	0.002	0.0007	0.0002	0.006	0.004	6.2	0.00002	1.9	0.0001	0.0001	0.0003
WATER TREAMENT FEED - RECLAIM TANK	7.8	117	1.8	18	16	0.01	0.002	0.00004	0.0007	0.01	24	0.00002	24	0.002	0.0002	0.09
Scenario 2 - First Flush																
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000009	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	7.5	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007
Pumping Station 14	6.8	27	13	24	12	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002
Open Pit	7.3	24	7.2	14	6.8	0.004	0.0009	0.002	0.01	0.006	6.9	0.00002	2.2	0.0001	0.00007	0.0005
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	7.4	21	5.2	10	4.9	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004
TMA Reclaim Pond	7.8	120	0.000004	4.4	4.4	0.02	0.002	0.00001	0.0006	0.01	26	0.00004	25	0.002	0.0002	0.09
Process Control Pond	7.2	23	6.4	12	6.0	0.003	0.0007	0.001	0.009	0.006	7.0	0.00002	2	0.0001	0.00004	0.0004
WATER TREAMENT FEED - RECLAIM TANK	7.8	118	1.8	18	16	0.01	0.002	0.00004	0.0008	0.01	25	0.00004	25	0.002	0.0002	0.09
Scenario 3 - 75th Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	24	12	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.2	14	6.8	0.002	0.0008	0.02	0.02	0.02	7.6	0.00004	9.3	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.2	10	4.9	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	127	0.000005	4.8	4.8	0.01	0.002	0.00008	0.001	0.02	30	0.0002	29	0.002	0.0002	0.11
Process Control Pond	6.9	31	6.4	12	6.0	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	7.7	126	1.8	18	16	0.01	0.002	0.0004	0.002	0.02	30	0.0002	28	0.002	0.0002	0.11
Scenario 4 - Maximum Percentile Process Water																
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00008	0.002
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006
Pumping Station 14	6.8	30	13	24	12	0.002	0.0006	0.01	0.02	0.02	8.7	0.00003	7.9	0.0003	0.0002	0.003
Open Pit	6.8	31	7.2	14	6.8	0.002	0.0008	0.02	0.02	0.02	7.6	0.00004	9.3	0.0002	0.00002	0.002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008
Intermediate Collection Pond	6.9	31	5.2	10	4.9	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004
TMA Reclaim Pond	7.7	131	0.000005	5.5	5.5	0.01	0.002	0.00003	0.001	0.01	34	0.0002	56	0.003	0.0003	0.13
Process Control Pond	6.9	31	6.4	12	6.0	0.002	0.0009	0.02	0.02	0.02	7.8	0.00004	8.8	0.0002	0.0002	0.003
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.8	18	16	0.01	0.002	0.0000007	0.002	0.01	21	0.0002	55	0.003	0.00009	0.13

Solution Description	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																				
Pumping Station 1	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.86	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.97	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0002	0.000009	0.28	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.00056	0.001	-
Pumping Station 12	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0002	0.000009	0.38	0.66	0.03	0.0002	0.39	0.0004	0.008	0.00002	0.0005	0.00004	0.48	0.02	0.0003	0.0002	0.00005	0.0009	0.001	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	0.99	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	0.00007	0.00001	33	13	0.04	0.07	86	0.009	0.02	0.0001	0.0007	0.00001	196	0.26	0.03	0.00002	0.0002	0.006	0.002	0.88
Process Control Pond	0.0003	0.000008	0.46	0.74	0.03	0.0002	0.43	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	32	13	0.04	0.06	84	0.009	0.02	0.0001	0.00068	0.00001	192	0.25	0.03	0.00003	0.0002	0.006	0.002	0.87
Scenario 2 - First Flush																				
Pumping Station 1	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000005	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0001	0.000009	2.7	0.94	0.03	0.0007	1.6	0.0004	0.02	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.0010	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	0.00006	0.00001	33	13	0.05	0.07	86	0.009	0.02	0.0001	0.0007	0.00001	202	0.27	0.03	0.00001	0.0002	0.006	0.003	0.88
Process Control Pond	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	0.00006	0.00001	33	13	0.05	0.07	85	0.009	0.02	0.0001	0.00069	0.00001	198	0.26	0.03	0.00002	0.0002	0.006	0.003	0.87
Scenario 3 - 75th Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.06	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.2	2.1	0.06	0.004	6.7	0.0009	0.05	0.00001	0.00155	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00007	0.00001	37	16	0.06	0.07	90	0.010	0.02	0.0002	0.00097	0.00001	223	0.30	0.03	0.00004	0.0002	0.007	0.008	0.88
Process Control Pond	0.0003	0.000008	3.1	2.1	0.06	0.004	6.3	0.0008	0.05	0.00005	0.0015	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00007	0.00001	37	15	0.06	0.07	88	0.010	0.02	0.0001	0.001	0.00001	218	0.30	0.03	0.0001	0.0002	0.007	0.008	0.87
Scenario 4 - Maximum Percentile Process Water																				
Pumping Station 1	0.0004	0.000006	1.4	1.9	0.11	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	0.0003	0.000009	3.6	2.2	0.06	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.0018	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	0.0003	0.00001	4.1	2.3	0.03	0.005	8.5	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	0.0004	0.000009	3.2	2.1	0.06	0.004	6.7	0.0009	0.05	0.00001	0.00155	0.00003	2.8	0.25	0.002	0.003	0.00002	0.005	0.006	-
Detonator Storage Area	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0002	0.00001	1.0	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	0.00008	0.00001	41	19	0.06	0.08	107	0.01	0.03	0.0004	0.00095	0.00001	247	0.35	0.03	0.00002	0.0002	0.007	0.008	0.88
Process Control Pond	0.0003	0.000008	3.1	2.1	0.06	0.004	6.3	0.0008	0.05	0.00005	0.00145	0.00004	2.7	0.23	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	0.00008	0.00001	41	11	0.06	0.08	105	0.01	0.03	0.0004	0.001	0.00001	242	0.35	0.03	0.00007	0.0002	0.007	0.008	0.87

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 4
Operations Model Results
10 Year Dry Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.00015	0.00009	0.002	0.002	-
Pumping Station 2	6.9	25	0.00007	0.04	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.79	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.02	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.66	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00003*	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00008	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	29	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.81	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.2	*0.00001*	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.28	0.5	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.75	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.3	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	11	***22***	11	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.0	16	6.8	***13***	6.4	0.003	0.0006	0.0002	0.005	0.004	6.0	*0.00002*	1.8	0.00008	0.00008	0.0003	0.0002	0.000009	0.37	0.6	0.03	0.0002	0.37	0.0003	0.009	0.00002	0.0005	0.00004	0.47	0.02	0.0002	0.0002	0.00005	0.0009	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	4.7	9.2	4.5	0.003	0.0005	0.0003	0.004	0.003	4.9	*0.00001*	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.6	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	117	0.000004	4.3	4.3	0.01	0.002	0.00003	0.0007	0.01	24	0.00002	24	**0.002**	0.0002	***0.09***	0.00007	0.00001	32	12.8	0.04	**0.06**	84	0.009	0.02	0.0001	0.0007	0.00001	192	0.26	0.03	0.00002	0.0002	**0.006**	0.002	***0.87***
Process Control Pond	7.0	17	5.9	12	5.6	0.002	0.0007	0.0002	0.006	0.004	6.2	*0.00002*	1.9	0.00009	0.0002	0.0003	0.0002	0.000009	0.46	0.7	0.03	0.0002	0.42	0.0004	0.009	0.00004	0.0005	0.00004	0.54	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	113	1.7	***18***	16	0.01	0.002	0.00004	0.0009	0.01	23	0.00002	23	**0.002**	0.0002	***0.08***	0.00007	0.00001	31	12	0.04	**0.06**	81	0.008	0.02	0.0001	0.00067	0.00001	185	0.25	0.02	0.00003	0.0002	**0.006**	0.002	***0.83***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000009	0.004	0.010	11	*0.00001*	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.88	1.57	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.9	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.9	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.0001	0.000002	0.0002	0.0001	0.000009	2.7	0.8	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.38	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.86	0.00006	0.00001	0.0007	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	11	***22***	11	0.002	0.0002	0.00005	0.003	0.009	9.7	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.3	23	6.8	***13***	6.4	0.005	0.0009	0.002	0.01	0.006	6.7	*0.00002*	2.1	0.0001	0.00009	0.0006	0.0001	0.000009	2.7	0.9	0.03	0.0007	1.6	0.0004	0.03	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0008	0.00005	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.010	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	4.7	9.2	4.5	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.9	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	118	0.000004	4.3	4.3	0.02	0.002	0.00001	0.0006	0.01	25	*0.00004*	25	**0.002**	0.0002	***0.09***	0.00006	0.00001	33	13.3	0.05	**0.07**	85	0.009	0.02	0.0001	0.0007	0.00001	199	0.26	0.03	0.000009	0.0002	**0.006**	0.003	***0.87***
Process Control Pond	7.2	23	5.9	12	5.6	0.003	0.0007	0.001	0.009	0.006	6.9	*0.00002*	2.3	0.0001	0.00004	0.0004	0.0002	0.000008	2.4	1	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00004	1.3	0.05	0.0008	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	115	1.7	***18***	16	0.01	0.002	0.00006	0.001	0.01	25	*0.00004*	24	**0.002**	0.0002	***0.08***	0.00007	0.00001	31	13	0.05	**0.06**	81	0.009	0.02	0.0001	0.00068	0.00001	191	0.26	0.02	0.00003	0.0002	**0.006**	0.003	***0.83***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	2	0.12	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	2	0.14	0.001	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	2	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	2	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.30	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	11	***22***	11	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	6.8	***13***	6.4	0.002	0.0008	***0.02***	0.03	0.02	7.5	*0.000041*	9.4	0.0002	0.00003	***0.002***	0.0004	0.000009	3.2	2	0.06	0.004	6.8	0.0008	0.05	0.00001	*0.00158*	0.00003	2.9	0.26	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1	0.01	0.000	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	2	0.02	0.001	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	4.7	9.2	4.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	126	0.000005	4.7	4.7	0.01	0.002	0.00007	0.001	0.02	30	***0.0002***	28	**0.002**	0.0002	***0.11***	0.00007	0.00001	37	15	0.06	**0.07**	88	0.01	0.02	0.0001	0.00096	0.00001	221	0.30	0.03	0.00004	0.0002	**0.006**	0.008	***0.87***
Process Control Pond	6.9	31	5.9	12	5.6	0.002	0.0009	***0.02***	0.02	0.02	7.8	*0.00004*	8.9	0.0002	0.0002	***0.003***	0.0003	0.000008	3.1	2.1	0.05	0.004	6.3	0.0008	0.05	0.00005	*0.0015*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	122	1.7	***18***	16	0.01	0.002	0.0008	0.002	0.02	29	***0.0002***	27	**0.002**	0.0002	***0.10***	0.00007	0.00001	36	15.0	0.06	**0.07**	85	0.009	0.02	0.0001	0.001	0.00001	212	0.30	0.03	0.0002	0.0002	**0.006**	0.008	***0.83***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	2	0.12	0.002	3.3	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.02	0.000001	0.00094	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	2	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	2	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	2	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00067	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	2	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	3.8	2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.0018*	0.00003	3.0	0.30	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00008	**0.002**	0.0004	0.000007	1.7	2	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	11	***22***	11	0.002	0.0006	***0.01***	0.02	0.02	8.7	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2	0.09	0.003	5.0	0.0009	0.04	0.00006	*0.00115*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.8	31	6.8	***13***	6.4	0.002	0.0008	***0.02***	0.03	0.02	7.5	*0.000041*	9.4	0.0002	0.00003	***0.002***	0.0004	0.000009	3.2	2	0.06	0.004	6.8	0.0008	0.05	0.00001	*0.00158*	0.00003	2.9	0.26	0.002	0.003	0.00002	**0.005**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	2	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	4.7	9.2	4.5	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	130	0.000005	5.4	5.4	0.01	0.002	0.00003	0.001	0.01	34	***0.0002***	55	**0.003**	0.0003	***0.13***	0.00008	0.00001	41	19	0.06	**0.07**	105	0.01	0.03	0.0004	0.00095	0.00001	244	0.34	0.03	0.00002	0.0002	**0.007**	0.008	***0.87***
Process Control Pond	6.9	31	5.9	12	5.6	0.002	0.0009	***0.02***	0.02	0.02	7.8	*0.00004*	8.9	0.0002	0.0002	***0.003***	0.0003	0.000008	3.1	2	0.05	0.004	6.3	0.0008	0.05	0.00005	*0.00146*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	65	1.7	***18***	16	0.01	0.002	0.0000008	0.002	0.01	21	***0.0002***	53	**0.002**	0.00009	***0.12***	0.00009	0.00001	39	10.7	0.06	**0.07**	101	0.01	0.03	0.0003	0.001	0.00001	235	0.34	0.03	0.0001	0.0002	**0.007**	0.008	***0.83***

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 5
Operations Model Results
Average Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWOO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	0.00004	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	0.00003	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	0.00004	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	0.0001	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	26	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	0.00003	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	0.00004	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	0.00001	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	0.00001	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	0.00005	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	0.0001	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	0.00001	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	0.00003	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	0.000005	0.75	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	9.1	18	8.6	0.002	0.001	0.00007	0.01	0.008	8.1	0.00003	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.0	15	5.7	11	5.40	0.003	0.0006	0.0002	0.005	0.004	5.6	0.00001	1.6	0.00007	0.0001	0.0003	0.0002	0.000009	0.34	0.57	0.03	0.0002	0.32	0.0003	0.009	0.00003	0.0005	0.00003	0.44	0.02	0.0002	0.0002	0.00004	0.0008	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.8	7.4	3.6	0.003	0.0005	0.0002	0.004	0.003	4.9	0.00001	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	112	0.000005	4.1	4.1	0.01	0.002	0.00003	0.0008	0.01	23	0.00002	23	0.002	0.0002	0.08	0.00007	0.00001	31	12	0.04	0.06	80	0.008	0.02	0.0001	0.0007	0.00001	183	0.24	0.02	0.00002	0.0002	0.005	0.002	0.82
Process Control Pond	7.0	16	4.9	10	4.6	0.002	0.0007	0.0002	0.006	0.004	6.0	0.00002	1.8	0.00009	0.0002	0.0003	0.0002	0.000009	0.45	0.71	0.03	0.0002	0.40	0.0004	0.009	0.00004	0.0005	0.00004	0.52	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	104	1.5	17	15	0.01	0.002	0.00004	0.001	0.01	21	0.00002	21	0.002	0.0002	0.08	0.00007	0.000009	28	11	0.04	0.06	73	0.008	0.02	0.0001	0.00065	0.00002	168	0.22	0.02	0.00004	0.0001	0.005	0.002	0.75
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.01	11	0.00001	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	0.00001	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.4	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.0005	0.00001	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0007	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	9.1	18	8.6	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	23	5.7	11	5.4	0.005	0.0008	0.002	0.01	0.005	6.4	0.00001	2.0	0.00009	0.0001	0.0006	0.0001	0.000009	2.8	0.87	0.03	0.0008	1.6	0.0004	0.03	0.00002	0.0005	0.00004	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.8	7.4	3.6	0.005	0.0006	0.001	0.008	0.005	5.7	0.00001	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	114	0.000005	4.1	4.1	0.01	0.002	0.00001	0.0008	0.01	25	0.00005	23	0.002	0.0002	0.08	0.00007	0.00001	31	13	0.05	0.06	81	0.009	0.02	0.0001	0.0007	0.00001	191	0.26	0.02	0.00001	0.0002	0.006	0.003	0.82
Process Control Pond	7.2	23	4.9	10	4.6	0.004	0.0007	0.001	0.009	0.006	6.8	0.00001	2.2	0.0001	0.00006	0.0004	0.0002	0.000008	2.4	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0006	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	106	1.5	17	15	0.01	0.002	0.0001	0.001	0.01	23	0.00004	22	0.002	0.0002	0.08	0.00007	0.000009	29	12	0.05	0.06	74	0.008	0.02	0.0001	0.00066	0.00001	174	0.24	0.02	0.00006	0.0001	0.005	0.003	0.75
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.0000	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.3	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	9.1	18	8.6	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.7	11	5.4	0.002	0.0009	0.02	0.03	0.02	7.3	0.000043	10	0.0002	0.00005	0.003	0.0004	0.000009	3.4	2.2	0.05	0.005	7.1	0.0008	0.05	0.00002	0.00164	0.00003	2.9	0.27	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.8	7.4	3.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	122	0.000005	4.5	4.5	0.01	0.002	0.00006	0.002	0.02	30	0.0002	27	0.002	0.0002	0.10	0.00007	0.00001	36	15	0.07	0.07	85	0.009	0.02	0.0001	0.00096	0.00001	215	0.29	0.03	0.0000	0.0002	0.006	0.010	0.82
Process Control Pond	6.9	31	4.9	10	4.6	0.002	0.001	0.02	0.03	0.02	7.7	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3.1	2.1	0.05	0.004	6.4	0.0008	0.05	0.00006	0.0015	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	114	1.5	17	15	0.01	0.002	0.002	0.004	0.02	28	0.0002	25	0.002	0.0002	0.10	0.00008	0.000009	33	14	0.06	0.06	78	0.009	0.03	0.0001	0.001	0.00001	197	0.29	0.03	0.0003	0.0001	0.006	0.009	0.75
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	0.00003	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	0.00002	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	0.00002	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.2	0.001	0.02	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	0.00002	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.1	0.00004	10	0.0002	0.0001	0.003	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	0.00172	0.00003	2.9	0.28	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	0.02	0.03	0.02	7.0	0.00004	10	0.0002	0.0002	0.003	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	0.00174	0.00003	2.9	0.29	0.002	0.003	0.00002	0.006	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	0.00001	5.1	0.0004	0.0000006	0.0001	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	0.03	0.03	0.02	6.8	0.00005	10	0.0001	0.0004	0.004	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	0.00179	0.00003	3.0	0.30	0.002	0.004	0.00002	0.006	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.01	0.01	0.01	10	0.00003	7.1	0.0003	0.00007	0.002	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.14	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	0.03	0.03	0.02	6.4	0.00005	11	0.0001	0.0008	0.006	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	0.00191	0.00003	3.0	0.32	0.002	0.004	0.00002	0.007	0.007	-
Pumping Station 14	6.8	30	9.1	18	8.6	0.002	0.0006	0.01	0.02	0.02	8.8	0.00003	7.9	0.0003	0.0002	0.003	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00006	0.00115	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.7	11	5.4	0.002	0.0009	0.02	0.03	0.02	7.3	0.000043	10	0.0002	0.00005	0.003	0.0004	0.000009	3.4	2.2	0.05	0.005	7.1	0.0008	0.05	0.00002	0.00164	0.00003	2.9	0.27	0.002	0.003	0.00002	0.006	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	0.00005	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	0.0001	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	0.00006	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	0.0001	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.8	7.4	3.6	0.002	0.001	0.02	0.03	0.02	7.2	0.00005	10	0.0002	0.0003	0.004	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	0.0017	0.00004	2.9	0.28	0.002	0.003	0.00003	0.006	0.006	-
TMA Reclaim Pond	7.7	126	0.000005	5.1	5.1	0.01	0.002	0.00003	0.002	0.02	33	0.0002	53	0.002	0.0003	0.12	0.00008	0.00001	40	18	0.07	0.07	101	0.01	0.03	0.0003	0.00094	0.00001	238	0.33	0.03	0.00002	0.0002	0.007	0.010	0.82
Process Control Pond	6.9	31	4.9	10	4.6	0.002	0.001	0.02	0.03	0.02	7.7	0.00004	9.0	0.0002	0.0002	0.003	0.0003	0.000009	3.1	2.1	0.05	0.004	6.4	0.0008	0.05	0.00006	0.00149	0.00004	2.7	0.24	0.002	0.003	0.00003	0.005	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	64	1.5	17	15	0.01	0.002	0.000001	0.004	0.01	20	0.0002	49	0.002	0.00009	0.11	0.00007	0.000009	37	10	0.06	0.07	93	0.009	0.03	0.0003	0.001	0.00001	217	0.33	0.03	0.0003	0.0001	0.007	0.009	0.75

0.01 Value Exceeds PWOO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 6
Operations Model Results
10 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[(a)]	Nitrate[(b)]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.063	0.00041	0.87	0.0008	0.0039	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.6	1.3	0.058	0.00038	0.8	0.0007	0.0045	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.66	0.076	0.0005	1.06	0.00094	0.003	0.000008	0.0004	***0.0001***	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00004*	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.062	0.0004	0.85	0.0008	0.0038	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.00046	0.97	0.0009	0.0034	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.023	0.00013	0.26	0.00027	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.022	0.00012	0.25	0.00026	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.81	0.083	0.00055	1.17	0.00103	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	*0.00001*	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.5	0.019	0.0001	0.2	0.00022	0.011	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	1	1.3	0.06	0.00	1	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0	0.3	0.023	0.00	0	0.0001	0.011	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	7.6	***15***	7.2	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0	1.0	0.051	0.00	1	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	5.0	10	4.7	0.003	0.0005	0.0003	0.004	0.003	5.3	*0.00001*	1.5	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.5	0.026	0.00014	0.29	0.0003	0.0096	0.00003	0.0005	0.00003	0.41	0.02	0.0002	0.0002	0.00004	0.0008	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1.3	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	1.7	0.019	0.001	1	0.0012	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.2	6.2	3.0	0.003	0.0005	0.0002	0.004	0.003	4.9	*0.00001*	1.3	0.0001	0.0003	0.0004	0.0002	0.000009	0	0.6	0.02	0.00	0	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	108	0.000005	3.9	3.9	0.01	0.002	0.00002	0.0009	0.01	22	0.00002	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29	11.9	0.037	**0.059**	76	0.008	0.019	0.0001	0.0007	0.00001	175	0.23	0.02	0.00002	0.0002	**0.005**	0.002	***0.78***
Process Control Pond	7.0	16	4.1	8.0	3.9	0.002	0.0007	0.0002	0.006	0.004	5.9	*0.00002*	1.8	0.0001	0.0002	0.0003	0.0002	0.000009	0	0.7	0.03	0.00	0	0.0004	0.009	0.00004	0.0005	0.00004	0.52	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	96	1.3	***16***	15	0.01	0.002	0.00005	0.002	0.01	20	0.00002	19	**0.002**	0.0002	***0.07***	0.00007	0.000009	26	10	0.036	**0.051**	66	0.007	0.018	0.0001	0.00063	0.00002	152	0.21	0.02	0.00004	0.0001	0.005	0.002	***0.68***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.09	1.5	0.112	0.00047	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.29	1.4	0.103	0.00051	1.3	0.00084	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	*0.00001*	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.136	0.00039	1.3	0.00108	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.07	1.4	0.109	0.00046	1.2	0.00088	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.9	1.57	0.124	0.00043	1.3	0.00099	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.9	0.035	0.00075	1.4	0.00035	0.027	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.9	0.033	0.00076	1.4	0.00034	0.027	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.00042	0.000005	0.4	1.8	0.15	0.00034	1.2	0.00118	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.8	0.027	0.00077	1.4	0.0003	0.029	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.38	0.103	0.00049	1.3	0.00083	0.012	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.021	0.00068	1.4	0.00018	0.029	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	7.6	***15***	7.2	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.118	0.00042	1.3	0.00093	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	5.0	10	4.7	0.006	0.0008	0.003	0.01	0.005	6.1	*0.00001*	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	2.93	0.8	0.024	0.00076	1.64	0.0003	0.0279	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.9	1.3	0.014	0.00045	0.7	0.00093	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.019	0.0006	0.93	0.00123	0.0063	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.2	6.2	3.0	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.62	0.9	0.028	0.00076	1.36	0.0004	0.0269	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	110	0.000005	3.9	3.9	0.01	0.002	0.000009	0.0009	0.01	24	*0.00005*	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29.9	12.5	0.05	**0.05953**	77.0	0.00821	0.019	0.0001	0.0007	0.00001	183	0.25	0.02	0.00001	0.0001	**0.005**	0.003	***0.78***
Process Control Pond	7.2	23	4.1	8.0	3.9	0.004	0.0007	0.001	0.009	0.006	6.7	*0.00001*	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2	1	0.04	0.001	1	0.0005	0.023	0.00001	0.00049	0.00003	1.3	0.05	0.0008	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	99	1.3	***16***	15	0.01	0.002	0.0002	0.002	0.01	22	*0.00005*	20	**0.002**	0.0002	***0.07***	0.00007	0.000009	26	11	0.049	**0.052**	67	0.0072	0.02	0.0001	0.00065	0.00001	160	0.22	0.02	0.00009	0.0001	0.005	0.003	***0.68***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1	2	0.115	0.002	3	0.0011	0.015	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.021	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	1	2	0.138	0.001	2	0.0011	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1	2	0.113	0.002	3	0.001	0.015	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1	2	0.127	0.001	3	0.0011	0.011	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	4	2	0.046	0.005	7	0.0008	0.057	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	4	2	0.045	0.005	8	0.0008	0.058	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	4	2	0.039	0.005	8	0.0008	0.061	0.00009	*0.00179*	0.00003	3.0	0.30	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.026	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4	2	0.03	0.005	8	0.0007	0.067	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.6	***15***	7.2	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2	2	0.088	0.003	5	0.0009	0.036	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.0	10	4.7	0.002	0.0009	***0.02***	0.03	0.02	7.2	*0.000044*	10	0.0002	0.00009	***0.003***	0.0003	0.000009	4	2	0.048	0.005	7	0.0008	0.056	0.00004	*0.00169*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	2	0.019	0.001	1	0.0012	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.2	6.2	3.0	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	4	2	0.039	0.005	7	0.0008	0.057	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	118	0.000005	4.3	4.3	0.01	0.002	0.00005	0.002	0.02	30	***0.0002***	26	**0.002**	0.0003	***0.10***	0.00007	0.00001	35	15	0.068	**0.064**	82	0.009	0.022	0.0001	0.00095	0.00001	210	0.29	0.03	0.00003	0.0001	**0.006**	0.011	***0.78***
Process Control Pond	6.9	31	4.1	8.0	3.9	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3	2.1	0.051	0.004	7	0.0008	0.049	0.00006	*0.0015*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	107	1.3	***16***	15	0.01	0.002	0.003	0.005	0.02	27	***0.0002***	24	**0.002**	0.0002	***0.09***	0.00008	0.000009	31	13.3	0.066	**0.057**	72	0.0079	0.026	0.0001	0.001	0.00001	183	0.28	0.02	0.0004	0.0001	**0.006**	0.01	***0.68***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1	2	0.115	0.002	3	0.0011	0.015	0.0000010	0.0008	0.00003	2.4	0.11	0.0007	0.0010	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.021	0.0000013	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.000001	0.0002	0.0004	0.000005	1	2	0.138	0.001	2	0.0011	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1	2	0.113	0.002	3	0.001	0.015	0.0000010	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1	2	0.127	0.001	3	0.0011	0.011	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	4	2	0.046	0.005	7	0.0008	0.057	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	4	2	0.045	0.005	8	0.0008	0.058	0.00006	*0.00174*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.0001	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0	2	0.15	0.00	1	0.0012	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0004	***0.004***	0.0003	0.000009	4	2	0.039	0.005	8	0.0008	0.061	0.00009	*0.00179*	0.00003	3.0	0.30	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	2	2	0.107	0.002	4	0.001	0.026	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4	2	0.03	0.005	8	0.0007	0.067	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.6	***15***	7.2	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2	2	0.088	0.003	5	0.0009	0.036	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	5.0	10	4.7	0.002	0.0009	***0.02***	0.03	0.02	7.2	*0.000044*	10	0.0002	0.00009	***0.003***	0.0003	0.000009	4	2	0.048	0.005	7	0.0008	0.056	0.00004	*0.00169*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	1	1	0.014	0.00	1	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1	2	0.019	0.001	1	0.0012	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.2	6.2	3.0	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	4	2	0.039	0.005	7	0.0008	0.057	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.6	122	0.000006	4.8	4.8	0.01	0.002	0.00003	0.002	0.02	33	***0.0002***	50	**0.002**	0.0003	***0.11***	0.00008	0.00001	39	18	0.068	**0.069**	97	0.0094	0.027	0.0003	0.00094	0.00001	231	0.33	0.03	0.00002	0.0001	**0.007**	0.011	***0.78***
Process Control Pond	6.9	31	4.1	8.0	3.9	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3	2	0.051	0.004	7	0.0008	0.049	0.00006	*0.0015*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	64	1.3	***16***	15	0.009	0.002	0.000001	0.005	0.008	20	***0.0002***	45	**0.002**	0.00009	***0.10***	0.00006	0.000009	34	10.2	0.066	**0.06**	85	0.0083	0.03	0.0003	0.001	0.00001	202	0.32	0.03	0.0004	0.0001	**0.007**	0.01	***0.68***

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 7
Operations Model Results
25 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.6	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.96	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00004*	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002	0.0003	0.00024	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.4	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.56	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.8	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	*0.00001*	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0.2	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	7.2	***14***	6.7	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	4.7	9.2	4.50	0.003	0.0005	0.0003	0.004	0.003	5.2	*0.00001*	1.4	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.50	0.02	0.0001	0.28	0.0003	0.01	0.00003	0.0005	0.00003	0.4	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.9	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.001	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	3.0	5.8	2.8	0.003	0.0005	0.0002	0.004	0.003	4.9	*0.00001*	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	106	0.000005	3.8	3.8	0.01	0.002	0.00002	0.0009	0.01	22	0.00002	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29	12	0.04	**0.06**	75	0.008	0.02	0.0001	0.0007	0.00001	172	0.23	0.02	0.00002	0.0001	**0.005**	0.002	***0.77***
Process Control Pond	7.0	16	3.9	7.6	3.7	0.002	0.0007	0.0002	0.006	0.004	5.9	*0.00002*	1.8	0.00008	0.0002	0.0003	0.0002	0.000009	0.44	0.69	0.03	0.0002	0.39	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	93	1.2	***16***	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	19	**0.002**	0.0002	***0.07***	0.00007	0.000009	25	10	0.04	**0.05**	64	0.007	0.02	0.0001	0.00062	0.00002	148	0.20	0.02	0.00005	0.0001	0.005	0.002	***0.66***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.00001	0.004	0.01	11	*0.00001*	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006	0.0001	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.0010	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	7.2	***14***	6.7	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	4.7	9.2	4.5	0.006	0.0008	0.003	0.01	0.005	6.1	*0.00001*	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	3.0	0.82	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	3.0	5.8	2.8	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	109	0.000005	3.8	3.8	0.01	0.002	0.00001	0.0009	0.01	24	*0.00005*	22	**0.002**	0.0002	***0.08***	0.00007	0.00001	29	12	0.05	**0.06**	76	0.008	0.02	0.0001	0.0007	0.00001	181	0.24	0.02	0.00001	0.0001	**0.005**	0.003	***0.77***
Process Control Pond	7.2	23	3.9	7.6	3.7	0.004	0.0007	0.002	0.009	0.006	6.7	*0.00001*	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2.5	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	96	1.2	***16***	15	0.01	0.002	0.0002	0.002	0.01	22	*0.00005*	19	**0.002**	0.0002	***0.07***	0.00007	0.000009	26	11	0.05	**0.05**	65	0.007	0.02	0.0001	0.00064	0.00001	155	0.22	0.02	0.0001	0.0001	0.005	0.003	***0.66***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.2	***14***	6.7	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.7	9.2	4.5	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.5	2.2	0.05	0.005	7.4	0.0008	0.06	0.00004	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.0	5.8	2.8	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	117	0.000005	4.2	4.2	0.01	0.002	0.00005	0.002	0.02	29	***0.0002***	25	**0.002**	0.0003	***0.10***	0.00008	0.00001	35	15	0.07	**0.06**	80	0.009	0.02	0.0001	0.00095	0.00001	208	0.28	0.03	0.00003	0.0001	**0.006**	0.01	***0.77***
Process Control Pond	6.9	31	3.9	7.6	3.7	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	*0.0015*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	105	1.2	***16***	15	0.01	0.002	0.003	0.005	0.02	26	***0.0002***	23	**0.002**	0.0002	***0.08***	0.00009	0.000009	30	13	0.07	**0.06**	70	0.008	0.03	0.0001	0.001	0.00001	179	0.28	0.02	0.0004	0.0001	**0.006**	0.01	***0.66***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.00099	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.15	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	7.2	***14***	6.7	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.7	9.2	4.5	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.5	2.2	0.05	0.005	7.4	0.0008	0.06	0.00004	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	3.0	5.8	2.8	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.6	120	0.000006	4.8	4.8	0.01	0.002	0.00003	0.002	0.02	33	***0.0002***	49	**0.002**	0.0003	***0.11***	0.00008	0.00001	39	18	0.07	**0.07**	95	0.009	0.03	0.0003	0.00094	0.00001	229	0.32	0.03	0.00002	0.0001	**0.007**	0.01	***0.77***
Process Control Pond	6.9	31	3.9	7.6	3.7	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.0	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	*0.00151*	0.00004	2.7	0.24	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	***16***	15	0.009	0.002	0.000002	0.005	0.008	20	***0.0002***	44	**0.002**	0.00009	***0.10***	0.00005	0.000009	34	10	0.07	**0.06**	83	0.008	0.03	0.0003	0.001	0.00001	197	0.31	0.03	0.0004	0.0001	**0.007**	0.01	***0.66***

0.01	Value Exceeds PWQO Guideline
0.01	Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01	Value Exceeds MISA Regulation

(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

TABLE 8
Operations Model Results
50 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																																				
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	***0.00004***	3.9	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.0001	0.002	0.002	-
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	***0.00003***	3.6	0.0002	0.000008	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	6.9	32	0.00009	0.02	0.01	0.002	0.002	0.00001	0.02	0.009	12	***0.00004***	4.7	0.0002	0.000005	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	1.0	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	***0.00004***	3.8	0.0002	0.000007	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	***0.00004***	4.3	0.0002	0.000006	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	1.0	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	***0.00005***	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	***0.00005***	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	***0.00001***	1.3	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	***0.00001***	1.2	0.00005	0.0002	0.0003	0.0002	0.000009	0.31	0.57	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	***0.00005***	5.2	0.0003	0.000005	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	***0.00001***	1.0	0.00004	0.0003	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	***0.00003***	3.6	0.0002	0.00009	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	***0.000005***	0.76	0.00002	0.0004	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	6.9	22	6.9	***13***	6.5	0.002	0.001	0.00007	0.01	0.008	8.1	***0.00003***	2.9	0.0001	0.0002	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	7.1	14	4.6	8.9	4.3	0.003	0.0005	0.0003	0.004	0.003	5.2	***0.00001***	1.4	0.00006	0.0002	0.0003	0.0002	0.000009	0.32	0.49	0.02	0.0001	0.27	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	***0.00005***	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	***0.00006***	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.001	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.0	13	2.9	5.6	2.7	0.003	0.0005	0.0002	0.004	0.003	4.9	***0.00001***	1.3	0.00006	0.0003	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	7.8	105	0.000005	3.8	3.8	0.01	0.002	0.00002	0.001	0.01	22	0.00002	21	**0.002**	0.0002	***0.08***	0.00007	0.000009	29	12	0.04	**0.06**	74	0.008	0.02	0.0001	0.0006	0.00001	170	0.23	0.02	0.00002	0.0001	**0.005**	0.002	***0.76***
Process Control Pond	7.0	16	3.7	7.2	3.5	0.002	0.0007	0.0002	0.006	0.004	5.9	***0.00002***	1.8	0.00008	0.0002	0.0003	0.0002	0.000009	0.44	0.68	0.03	0.0002	0.39	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.7	92	1.2	***16***	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	19	**0.002**	0.0002	***0.06***	0.00007	0.000009	24	10	0.04	**0.05**	63	0.007	0.02	0.0001	0.00062	0.00002	145	0.20	0.02	0.00005	0.0001	0.005	0.002	***0.65***
Scenario 2 - First Flush																																				
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.01	11	***0.00001***	4.6	0.0004	0.0000006	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.01	10	***0.00001***	4.3	0.0004	0.0000006	0.00009	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001	0.0006	0.00007	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	6.8	27	6.9	***13***	6.5	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	7.4	22	4.6	8.9	4.3	0.006	0.0007	0.003	0.01	0.01	6.0	***0.00001***	1.8	0.00008	0.0002	0.0006	0.0001	0.000009	3.0	0.81	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	***0.00005***	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	***0.00006***	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	7.4	21	2.9	5.6	2.7	0.005	0.0006	0.001	0.008	0.005	5.7	***0.00001***	1.6	0.0001	0.00001	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.00001	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	7.8	108	0.000005	3.8	3.8	0.01	0.002	0.000008	0.0009	0.01	24	***0.00005***	22	**0.002**	0.0002	***0.08***	0.00007	0.000009	29	12	0.05	**0.06**	75	0.008	0.02	0.0001	0.0007	0.00001	179	0.24	0.02	0.000007	0.0001	**0.005**	0.003	***0.76***
Process Control Pond	7.2	23	3.7	7.2	3.5	0.004	0.0007	0.002	0.009	0.006	6.7	***0.00001***	2.2	0.0001	0.00008	0.0005	0.0002	0.000008	2.5	1.0	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	7.8	95	1.2	***16***	15	0.01	0.002	0.0002	0.002	0.01	21	***0.00005***	19	**0.002**	0.0002	***0.07***	0.000068	0.000009	25	11	0.05	**0.05**	64	0.007	0.02	0.0001	0.00064	0.00001	152	0.21	0.02	0.0001	0.0001	0.005	0.003	***0.65***
Scenario 3 - 75th Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	***0.00002***	6.6	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	***0.00003***	7.1	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	***0.00002***	5.7	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	***0.00002***	6.4	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	***0.00002***	6.2	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	***0.00004***	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	***0.00171***	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	***0.00004***	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	***0.00173***	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.1	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	***0.03***	0.03	0.02	6.8	***0.00005***	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	***0.00179***	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	***0.00003***	7.1	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	***0.00005***	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	***0.00191***	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	6.9	***13***	6.5	0.002	0.0006	***0.01***	0.02	0.02	8.8	***0.00003***	7.9	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	***0.00114***	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.6	8.9	4.30	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	***0.00172***	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	***0.00005***	3.1	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	***0.00006***	4.2	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	2.9	5.6	2.7	0.002	0.001	***0.02***	0.03	0.02	7.2	***0.00005***	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	***0.0017***	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.7	116	0.000005	4.1	4.1	0.01	0.002	0.00005	0.002	0.02	29	***0.0003***	25	**0.002**	0.0003	***0.10***	0.00008	0.000009	35	15	0.07	**0.06**	80	0.009	0.02	0.0001	0.00095	0.00001	207	0.28	0.03	0.00003	0.0001	**0.006**	0.01	***0.76***
Process Control Pond	6.9	31	3.7	7.2	3.5	0.002	0.001	***0.02***	0.03	0.02	7.6	***0.00004***	9.1	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	***0.0015***	0.00004	2.7	0.25	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	7.6	103	1.2	***16***	15	0.009	0.002	0.003	0.006	0.02	26	***0.0002***	23	**0.002**	0.0002	***0.08***	0.00009	0.000009	30	13	0.07	**0.05**	69	0.008	0.03	0.0001	0.001	0.00002	177	0.28	0.02	0.0005	0.0001	**0.006**	0.01	***0.65***
Scenario 4 - Maximum Percentile Process Water																																				
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	***0.00002***	6.5715	0.0004	0.000001	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	***0.00003***	7.0558	0.0003	0.000002	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	***0.00002***	5.6746	0.0004	0.0000008	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	***0.00002***	6.4116	0.0003	0.000001	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	***0.00002***	6.1766	0.0004	0.000001	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.0772	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.0669	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	***0.00004***	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	***0.00171***	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	***0.00004***	10	0.0002	0.0002	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	***0.00173***	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	***0.00001***	5.0726	0.0004	0.0000006	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	***0.03***	0.03	0.02	6.8	***0.00005***	10	0.0001	0.0003	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	***0.00179***	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	***0.00003***	7.0625	0.0003	0.00007	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	***0.00005***	11	0.0001	0.0008	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	***0.00191***	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	6.8	30	6.9	***13***	6.5	0.002	0.0006	***0.01***	0.02	0.02	8.8	***0.00003***	7.9375	0.0003	0.0002	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	***0.00114***	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	6.9	31	4.6	8.9	4.3	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000044*	10	0.0002	0.0001	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	***0.00172***	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	***0.00005***	3.1436	0.0002	0.0002	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	***0.00006***	4.1533	0.0003	0.0002	0.0008	0.0002	0.00001	1.0	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	6.9	31	2.9	5.6	2.7	0.002	0.001	***0.02***	0.03	0.02	7.2	***0.00005***	10	0.0002	0.0003	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	***0.0017***	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	7.6	119	0.000006	4.7	4.7	0.01	0.002	0.00003	0.002	0.02	33	***0.0003***	49	**0.002**	0.0003	***0.11***	0.00008	0.000009	38	18	0.07	**0.07**	94	0.009	0.03	0.0003	0.00093	0.00001	228	0.32	0.03	0.00002	0.0001	**0.007**	0.01	***0.76***
Process Control Pond	6.9	31	3.7	7.2	3.5	0.002	0.001	***0.02***	0.03	0.02	7.6	***0.00004***	9.0518	0.0002	0.0002	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.5	0.0008	0.05	0.00007	***0.00151***	0.00004	2.7	0.25	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	***16***	15	0.009	0.002	0.000002	0.006	0.007	20	***0.0002***	43	**0.002**	0.00009	***0.10***	0.00005	0.000009	33	10	0.07	**0.06**	81	0.008	0.03	0.0003	0.001	0.00002	194	0.31	0.03	0.0005	0.0001	**0.006**	0.01	***0.65***

0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
[a] Nitrate concentrations assuming no oxidation of ammonia
[b] Nitrate concentrations assuming complete oxidation of ammonia

TABLE 9
Operations Model Results
100 Year Wet Conditions

Solution Description	pH	Alkalinity	Nitrate[a]	Nitrate[b]	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium
	s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	6.5 to 8.5	-	13	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001
CCME Aquatic Life	6.5 to 9.0	-	13	13	-	0.1	-	0.005	-	-	-	0.000017	-	-	0.001
MISA	6 to 9.5	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Scenario 1 - Steady State															
Pumping Station 1	6.9	27	0.00008	0.03	0.03	0.002	0.001	0.00002	0.01	0.008	10	*0.00004*	3.9	0.0002	0.000007
Pumping Station 2	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00003	0.01	0.007	9.4	*0.00003*	3.6	0.0002	0.000008
Pumping Station 3	6.9	32	0.00009	0.01	0.01	0.002	0.002	0.00001	0.02	0.009	12	*0.00004*	4.7	0.0002	0.000005
Pumping Station 4	6.9	27	0.0001	0.03	0.03	0.002	0.001	0.00002	0.01	0.007	10	*0.00004*	3.8	0.0002	0.000007
Pumping Station 5	6.9	30	0.00008	0.02	0.02	0.002	0.001	0.00002	0.02	0.008	11	*0.00004*	4.3	0.0002	0.000006
Pumping Station 7	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005
Pumping Station 8	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.000009	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005
Pumping Station 9	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.004	0.003	4.8	*0.00001*	1.3	0.00006	0.0002
Pumping Station 6	7.0	13	0.00005	0.08	0.08	0.003	0.0005	0.0002	0.003	0.003	4.7	*0.00001*	1.2	0.00005	0.0002
Pumping Station 10	6.9	34	0.0001	0.006	0.006	0.002	0.002	0.00001	0.02	0.01	13	*0.00005*	5.2	0.0003	0.000005
Pumping Station 15	7.1	12	0.00005	0.08	0.08	0.003	0.0004	0.0003	0.003	0.002	4.3	*0.00001*	1.0	0.00004	0.0003
Pumping Station 12	6.9	26	0.00007	0.03	0.03	0.002	0.001	0.00006	0.01	0.008	9.5	*0.00003*	3.6	0.0002	0.00009
Pumping Station 13	7.1	10	0.00005	0.08	0.08	0.003	0.0003	0.0001	0.001	0.008	4.0	*0.000005*	0.76	0.00002	0.0004
Pumping Station 14	6.9	22	6.7	13	6.3	0.002	0.001	0.00007	0.01	0.008	8.1	*0.00003*	2.9	0.0001	0.0002
Open Pit	7.1	14	4.5	8.7	4.20	0.003	0.0005	0.0003	0.004	0.003	5.1	*0.00001*	1.4	0.0001	0.0002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002
Intermediate Collection Pond	7.0	13	2.8	5.4	2.6	0.003	0.0005	0.0002	0.004	0.003	4.9	*0.00001*	1.3	0.0001	0.0003
TMA Reclaim Pond	7.8	104	0.000005	3.7	3.7	0.01	0.002	0.00002	0.001	0.01	21	0.00002	21	**0.002**	0.0002
Process Control Pond	7.0	16	3.6	7.0	3.4	0.002	0.0007	0.0002	0.006	0.004	5.8	*0.00002*	1.8	0.0001	0.0002
WATER TREAMENT FEED - RECLAIM TANK	7.7	91	1.2	***16***	15	0.01	0.002	0.00005	0.002	0.01	19	0.00002	18	**0.002**	0.0002
Scenario 2 - First Flush															
Pumping Station 1	6.9	26	0.0001	0.02	0.02	0.002	0.0002	0.00003	0.004	0.009	9.3	0.00001	3.9	0.0003	0.0000006
Pumping Station 2	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.00005	0.004	0.008	8.9	0.00001	3.6	0.0003	0.0000006
Pumping Station 3	6.8	28	0.0002	0.01	0.009	0.002	0.0001	0.000008	0.004	0.010	11	*0.00001*	4.6	0.0004	0.0000006
Pumping Station 4	6.8	25	0.0002	0.02	0.02	0.002	0.0002	0.00003	0.004	0.008	9.1	0.00001	3.8	0.0003	0.0000006
Pumping Station 5	6.8	27	0.0001	0.02	0.02	0.002	0.0002	0.00002	0.004	0.009	10	*0.00001*	4.3	0.0004	0.0000006
Pumping Station 7	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 8	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 9	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.5	0.000007	1.6	0.0001	0.000001
Pumping Station 6	7.3	20	0.00004	0.07	0.07	0.005	0.0004	0.0009	0.006	0.005	5.4	0.000006	1.6	0.0001	0.000002
Pumping Station 10	6.8	29	0.0005	0.001	0.001	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 15	7.4	20	0.00003	0.07	0.07	0.006	0.0004	0.001	0.006	0.005	5.1	0.000006	1.4	0.00009	0.000002
Pumping Station 12	6.9	26	0.0001	0.03	0.03	0.002	0.0002	0.0002	0.004	0.008	8.9	0.00001	3.6	0.0003	0.000001
Pumping Station 13	7.7	20	0.00002	0.08	0.08	0.01	0.0005	0.0002	0.004	0.005	4.8	0.000004	0.87	0.00006	0.00001
Pumping Station 14	6.8	27	6.7	13	6.3	0.002	0.0002	0.00005	0.003	0.009	10	0.00001	4.0	0.0003	0.000002
Open Pit	7.4	22	4.5	8.7	4.2	0.006	0.0007	0.003	0.01	0.005	6.0	*0.00001*	1.7	0.00008	0.0002
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.0001	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002
Intermediate Collection Pond	7.4	21	2.8	5.4	2.6	0.005	0.0006	0.001	0.008	0.005	5.7	*0.00001*	1.6	0.0001	0.00001
TMA Reclaim Pond	7.8	107	0.000005	3.7	3.7	0.01	0.002	0.000008	0.001	0.01	24	*0.00005*	22	**0.002**	0.0002
Process Control Pond	7.2	23	3.6	7.0	3.4	0.004	0.0007	0.002	0.009	0.006	6.7	*0.00001*	2.2	0.0001	0.00009
WATER TREAMENT FEED - RECLAIM TANK	7.7	94	1.2	***16***	15	0.01	0.002	0.0002	0.002	0.01	21	*0.00005*	19	**0.002**	0.0002
Scenario 3 - 75th Percentile Process Water															
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008
Pumping Station 14	6.8	30	6.7	13	6.3	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002
Open Pit	6.9	31	4.5	8.7	4.2	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000045*	10	0.0002	0.0001
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002
Intermediate Collection Pond	6.9	31	2.8	5.4	2.6	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003
TMA Reclaim Pond	7.7	115	0.000005	4.1	4.1	0.01	0.002	0.00005	0.002	0.02	29	***0.0003***	25	**0.002**	0.0003
Process Control Pond	6.9	31	3.6	7.0	3.4	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.1	0.0002	0.0002
WATER TREAMENT FEED - RECLAIM TANK	7.6	102	1.2	***16***	15	0.009	0.002	0.003	0.006	0.02	26	***0.0002***	22	**0.002**	0.0003
Scenario 4 - Maximum Percentile Process Water															
Pumping Station 1	6.8	30	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.6	0.0004	0.000001
Pumping Station 2	6.8	30	0.0001	0.06	0.06	0.002	0.0004	0.002	0.01	0.01	10	*0.00003*	7.1	0.0003	0.000002
Pumping Station 3	6.8	30	0.0002	0.02	0.02	0.002	0.0002	0.00009	0.006	0.01	11	*0.00002*	5.7	0.0004	0.0000008
Pumping Station 4	6.8	29	0.0002	0.04	0.04	0.002	0.0003	0.001	0.01	0.01	10	*0.00002*	6.4	0.0003	0.000001
Pumping Station 5	6.8	30	0.0002	0.03	0.03	0.002	0.0003	0.0004	0.009	0.01	10	*0.00002*	6.2	0.0004	0.000001
Pumping Station 7	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 8	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 9	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.00004*	10	0.0002	0.0001
Pumping Station 6	6.9	31	0.0001	0.14	0.14	0.002	0.0009	***0.02***	0.03	0.02	7.0	*0.00004*	10	0.0002	0.0002
Pumping Station 10	6.8	29	0.0005	0.001	0.0006	0.002	0.00007	0.000003	0.003	0.01	11	*0.00001*	5.1	0.0004	0.0000006
Pumping Station 15	6.9	31	0.0001	0.15	0.14	0.002	0.001	***0.03***	0.03	0.02	6.8	*0.00005*	10	0.0001	0.0003
Pumping Station 12	6.8	30	0.0001	0.06	0.06	0.002	0.0004	***0.01***	0.01	0.01	10	*0.00003*	7.1	0.0003	0.00007
Pumping Station 13	6.9	31	0.0001	0.16	0.16	0.002	0.001	***0.03***	0.03	0.02	6.4	*0.00005*	11	0.0001	0.0008
Pumping Station 14	6.8	30	6.7	13	6.3	0.002	0.0006	***0.01***	0.02	0.02	8.8	*0.00003*	7.9	0.0003	0.0002
Open Pit	6.9	31	4.5	8.7	4.20	0.002	0.0009	***0.02***	0.03	0.02	7.1	*0.000045*	10	0.0002	0.0001
Detonator Storage Area	7.0	25	0.0006	0.005	0.005	0.002	0.002	0.00005	0.02	0.007	9.3	*0.00005*	3.1	0.0002	0.0002
Emulsion Plant	7.0	34	0.0001	0.009	0.009	0.003	0.003	0.00007	0.03	0.01	12	*0.00006*	4.2	0.0003	0.0002
Intermediate Collection Pond	6.9	31	2.8	5.4	2.6	0.002	0.001	***0.02***	0.03	0.02	7.2	*0.00005*	10	0.0002	0.0003
TMA Reclaim Pond	7.6	119	0.000006	4.7	4.7	0.01	0.002	0.00003	0.002	0.02	33	***0.0003***	48	**0.002**	0.0003
Process Control Pond	6.9	31	3.6	7.0	3.4	0.002	0.001	***0.02***	0.03	0.02	7.6	*0.00004*	9.1	0.0002	0.0002
WATER TREAMENT FEED - RECLAIM TANK	8.3	63	1.2	***16***	15.00	0.009	0.002	0.000002	0.006	0.007	20	***0.0002***	42	**0.002**	0.00009

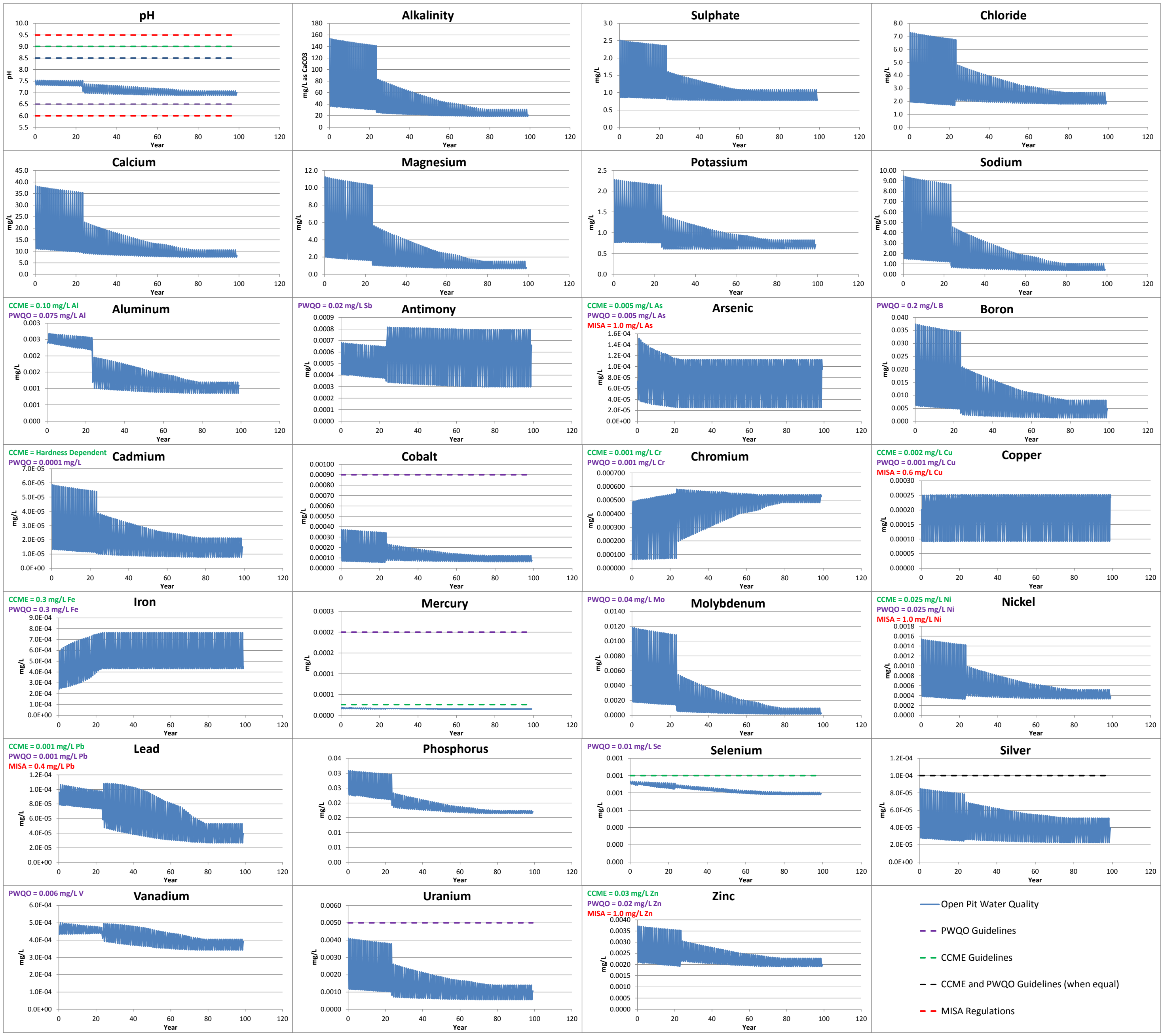
Solution Description	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorous	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc	Cyanide
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02	-
CCME Aquatic Life	0.002	0.3	0.000026	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03	-
MISA	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1	-
Scenario 1 - Steady State																					
Pumping Station 1	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.87	0.0008	0.004	0.000008	0.0004	0.00009	0.83	0.03	0.0005	0.0001	0.0001	0.002	0.002	-
Pumping Station 2	0.0002	0.0003	0.000007	0.60	1.3	0.06	0.0004	0.80	0.0007	0.005	0.000008	0.0004	0.00008	0.77	0.03	0.0005	0.0002	0.00009	0.002	0.002	-
Pumping Station 3	0.0002	0.0003	0.000005	0.74	1.7	0.08	0.0005	1.1	0.0009	0.003	0.000008	0.0004	***0.0001***	0.96	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 4	0.0002	0.0003	0.000006	0.64	1.4	0.06	0.0004	0.85	0.0008	0.004	0.000008	0.0004	0.00009	0.82	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 5	0.0002	0.0003	0.000006	0.69	1.5	0.07	0.0005	0.97	0.0009	0.003	0.000008	0.0004	0.0001	0.89	0.03	0.0006	0.0001	0.0001	0.002	0.002	-
Pumping Station 7	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 8	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 9	0.0003	0.0002	0.000009	0.32	0.58	0.02	0.0001	0.26	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Pumping Station 6	0.0003	0.0002	0.000009	0.31	0.57	0.02	0.0001	0.25	0.0003	0.01	0.00004	0.0005	0.00003	0.39	0.02	0.0002	0.0002	0.00004	0.0006	0.001	-
Pumping Station 10	0.0002	0.0003	0.000005	0.80	1.8	0.08	0.0006	1.2	0.001	0.002	0.000008	0.0003	***0.0001***	1.0	0.03	0.0007	0.00009	0.0001	0.002	0.003	-
Pumping Station 15	0.0003	0.0002	0.000009	0.29	0.50	0.02	0.0001	0.20	0.0002	0.01	0.00004	0.0005	0.00002	0.36	0.02	0.0001	0.0002	0.00003	0.0006	0.001	-
Pumping Station 12	0.0003	0.0003	0.000007	0.59	1.3	0.06	0.0004	0.79	0.0007	0.005	0.00002	0.0004	0.00008	0.77	0.03	0.0005	0.0001	0.00009	0.002	0.002	-
Pumping Station 13	0.0004	0.0002	0.00001	0.20	0.27	0.02	0.0001	0.11	0.0001	0.01	0.00004	0.0005	0.00002	0.31	0.02	0.0001	0.0001	0.00003	0.0005	0.001	-
Pumping Station 14	0.0003	0.0003	0.000007	0.49	1.0	0.05	0.0003	0.62	0.0006	0.007	0.00003	0.0004	0.00006	0.66	0.03	0.0004	0.0001	0.00007	0.001	0.002	-
Open Pit	0.0003	0.0002	0.000009	0.31	0.49	0.02	0.0001	0.27	0.0003	0.01	0.00003	0.0005	0.00003	0.40	0.02	0.0002	0.0002	0.00004	0.0007	0.001	-
Detonator Storage Area	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0004	0.0002	0.000009	0.33	0.59	0.02	0.0001	0.26	0.0003	0.01	0.00006	0.0005	0.00003	0.43	0.02	0.0002	0.0002	0.00004	0.0009	0.002	-
TMA Reclaim Pond	***0.08***	0.00007	0.000009	28	12	0.04	**0.06**	73	0.008	0.02	0.0001	0.0006	0.00001	168	0.22	0.02	0.00002	0.0001	**0.005**	0.002	***0.75***
Process Control Pond	0.0003	0.0002	0.000009	0.44	0.68	0.03	0.0002	0.38	0.0004	0.009	0.00004	0.0005	0.00004	0.51	0.02	0.0003	0.0002	0.00005	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	***0.06***	0.00007	0.000009	24	10	0.04	**0.05**	62	0.007	0.02	0.0001	0.00062	0.00002	142	0.19	0.02	0.0000	0.0001	0.004	0.002	***0.64***
Scenario 2 - First Flush																					
Pumping Station 1	0.00009	0.0003	0.000006	1.1	1.5	0.11	0.0005	1.3	0.0009	0.007	0.0000004	0.00041	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 2	0.0001	0.0003	0.000007	1.3	1.4	0.10	0.0005	1.3	0.0008	0.009	0.0000004	0.00044	0.00003	1.8	0.04	0.0004	0.0003	0.00002	0.0004	0.002	-
Pumping Station 3	0.00008	0.0004	0.000005	0.65	1.7	0.14	0.0004	1.3	0.001	0.004	0.0000005	0.00036	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0002	0.003	-
Pumping Station 4	0.00009	0.0004	0.000006	1.1	1.4	0.11	0.0005	1.2	0.0009	0.007	0.0000004	0.0004	0.00003	1.8	0.04	0.0003	0.0002	0.00002	0.0003	0.002	-
Pumping Station 5	0.00009	0.0004	0.000006	0.88	1.6	0.12	0.0004	1.3	0.001	0.006	0.0000005	0.0004	0.00003	2.0	0.04	0.0002	0.0001	0.00002	0.0003	0.002	-
Pumping Station 7	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	0.0002	0.0001	0.000009	2.6	0.90	0.03	0.0007	1.4	0.0004	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.002	-
Pumping Station 6	0.0002	0.0001	0.000009	2.6	0.89	0.03	0.0008	1.4	0.0003	0.03	0.0000004	0.0005	0.00002	1.3	0.05	0.0008	0.0007	0.00002	0.0009	0.001	-
Pumping Station 10	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.0003	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	0.0002	0.0001	0.000009	2.7	0.84	0.03	0.0008	1.4	0.0003	0.03	0.0000005	0.00055	0.00001	1.3	0.06	0.0009	0.0007	0.00002	0.0009	0.001	-
Pumping Station 12	0.0003	0.0003	0.000007	1.5	1.4	0.10	0.0005	1.3	0.0008	0.01	0.000001	0.0004	0.00003	1.9	0.04	0.0003	0.0002	0.00002	0.0004	0.002	-
Pumping Station 13	0.0006	0.0001	0.00001	3.9	0.59	0.02	0.0007	1.4	0.0002	0.03	0.000004	0.00053	0.00002	1.8	0.03	0.0007	0.0003	0.00002	0.001	0.001	-
Pumping Station 14	0.0002	0.0004	0.000006	1.2	1.5	0.12	0.0004	1.3	0.0009	0.01	0.000001	0.00037	0.00003	2.1	0.03	0.0002	0.0001	0.00002	0.0003	0.002	-
Open Pit	0.0006	0.0001	0.000009	3.0	0.80	0.02	0.0008	1.6	0.0003	0.03	0.00003	0.0005	0.00003	1.2	0.05	0.0009	0.0009	0.00004	0.002	0.002	-
Detonator Storage Area	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.0004	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	0.0004	0.0001	0.000009	2.6	0.91	0.03	0.0008	1.4	0.0004	0.03	0.000008	0.0005	0.00002	1.3	0.05	0.0009	0.0007	0.00003	0.001	0.002	-
TMA Reclaim Pond	***0.08***	0.00007	0.000009	29	12	0.05	**0.06**	74	0.008	0.02	0.0001	0.0007	0.00001	177	0.24	0.02	0.00001	0.0001	**0.005**	0.004	***0.75***
Process Control Pond	0.0005	0.0002	0.000009	2.5	0.98	0.04	0.0007	1.4	0.0005	0.02	0.00001	0.00049	0.00003	1.3	0.05	0.001	0.0007	0.00004	0.001	0.002	-
WATER TREAMENT FEED - RECLAIM TANK	***0.06***	0.00007	0.000009	25	10	0.05	**0.05**	63	0.007	0.02	0.0001	0.00064	0.00001	150	0.21	0.02	0.0001	0.0001	0.005	0.003	***0.64***
Scenario 3 - 75th Percentile Process Water																					
Pumping Station 1	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.0008	0.003	-
Pumping Station 4	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00007	0.00002	0.0001	0.003	-
Pumping Station 8	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 9	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.0001	0.00006	0.00002	0.0001	0.003	-
Pumping Station 15	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	***0.09***	0.00008	0.000009	35	15	0.07	**0.06**	79	0.009	0.02	0.0001	0.00095	0.00001	206	0.28	0.03	0.00003	0.0001	**0.006**	0.01	***0.75***
Process Control Pond	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.6	0.0008	0.05	0.00007	*0.0015*	0.00004	2.7	0.25	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	***0.08***	0.00009	0.000009	30	13	0.07	**0.05**	68	0.007	0.03	0.0001	0.001	0.00002	174	0.28	0.02	0.0005	0.0001	**0.006**	0.01	***0.64***
Scenario 4 - Maximum Percentile Process Water																					
Pumping Station 1	0.0003	0.0004	0.000006	1.4	1.9	0.12	0.002	3.2	0.001	0.02	0.000001	0.0008	0.00003	2.4	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 2	0.0005	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.02	0.000001	0.00093	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 3	0.0002	0.0004	0.000005	0.77	1.8	0.14	0.0009	2.0	0.001	0.006	0.0000006	0.0005	0.00003	2.3	0.06	0.0003	0.0003	0.00002	0.00081	0.003	-
Pumping Station 4	0.0003	0.0004	0.000006	1.4	1.8	0.11	0.002	3.1	0.001	0.01	0.000001	0.00078	0.00003	2.3	0.11	0.0007	0.001	0.00002	0.002	0.004	-
Pumping Station 5	0.0002	0.0004	0.000006	1.1	1.9	0.13	0.001	2.7	0.001	0.01	0.0000008	0.00066	0.00003	2.3	0.09	0.0005	0.0006	0.00002	0.001	0.003	-
Pumping Station 7	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00007	0.00002	0.00008	0.003	-
Pumping Station 8	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00003	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 9	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00171*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 6	***0.003***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.6	0.0008	0.06	0.00006	*0.00173*	0.00003	2.9	0.29	0.002	0.003	0.00002	**0.006**	0.006	-
Pumping Station 10	0.00008	0.0004	0.000005	0.37	1.8	0.15	0.0003	1.2	0.001	0.003	0.0000005	0.00031	0.00004	2.2	0.03	0.00008	0.00006	0.00002	0.00008	0.003	-
Pumping Station 15	***0.004***	0.0003	0.000009	3.8	2.2	0.04	0.005	7.9	0.0008	0.06	0.00009	*0.00179*	0.00003	3.0	0.3	0.002	0.004	0.00002	**0.006**	0.006	-
Pumping Station 12	**0.002**	0.0004	0.000007	1.7	1.9	0.11	0.002	3.8	0.001	0.03	0.00003	0.00089	0.00003	2.5	0.13	0.0009	0.001	0.00002	0.003	0.004	-
Pumping Station 13	***0.006***	0.0003	0.00001	4.1	2.3	0.03	0.005	8.4	0.0007	0.07	0.0001	*0.00191*	0.00003	3.0	0.32	0.002	0.004	0.00002	**0.007**	0.007	-
Pumping Station 14	***0.003***	0.0004	0.000007	2.3	2.0	0.09	0.003	5.0	0.0009	0.04	0.00005	*0.00114*	0.00003	2.6	0.18	0.001	0.002	0.00002	0.004	0.005	-
Open Pit	***0.003***	0.0003	0.000009	3.6	2.2	0.05	0.005	7.5	0.0008	0.06	0.00005	*0.00172*	0.00003	2.9	0.28	0.002	0.003	0.00002	**0.006**	0.006	-
Detonator Storage Area	0.0006	0.0003	0.000007	0.90	1.3	0.01	0.0005	0.71	0.0009	0.005	0.0002	0.0003	***0.0001***	1.2	0.02	0.0007	0.0003	0.0001	0.004	0.004	-
Emulsion Plant	0.0008	0.0002	0.00001	0.99	1.7	0.02	0.0006	0.93	0.001	0.006	0.0002	0.00039	***0.0001***	1.4	0.03	0.001	0.0003	0.0002	0.005	0.006	-
Intermediate Collection Pond	***0.004***	0.0003	0.000009	3.6	2.2	0.04	0.005	7.4	0.0008	0.06	0.0001	*0.0017*	0.00004	2.9	0.28	0.002	0.003	0.00003	**0.006**	0.006	-
TMA Reclaim Pond	***0.11***	0.00008	0.000009	38	18	0.07	**0.07**	93	0.009	0.03	0.0003	0.00093	0.00001	227	0.32	0.03	0.00002	0.0001	**0.007**	0.01	***0.75***
Process Control Pond	***0.003***	0.0003	0.000009	3.2	2.1	0.05	0.004	6.6	0.0008	0.05	0.00007	*0.00151*	0.00004	2.7	0.25	0.002	0.003	0.00003	**0.005**	0.006	-
WATER TREAMENT FEED - RECLAIM TANK	***0.09***	0.00005	0.000009	33	10	0.07	**0.06**	80	0.008	0.03	0.0003	0.001	0.00002	192	0.31	0.02	0.0005	0.0001	**0.006**	0.01	***0.64***

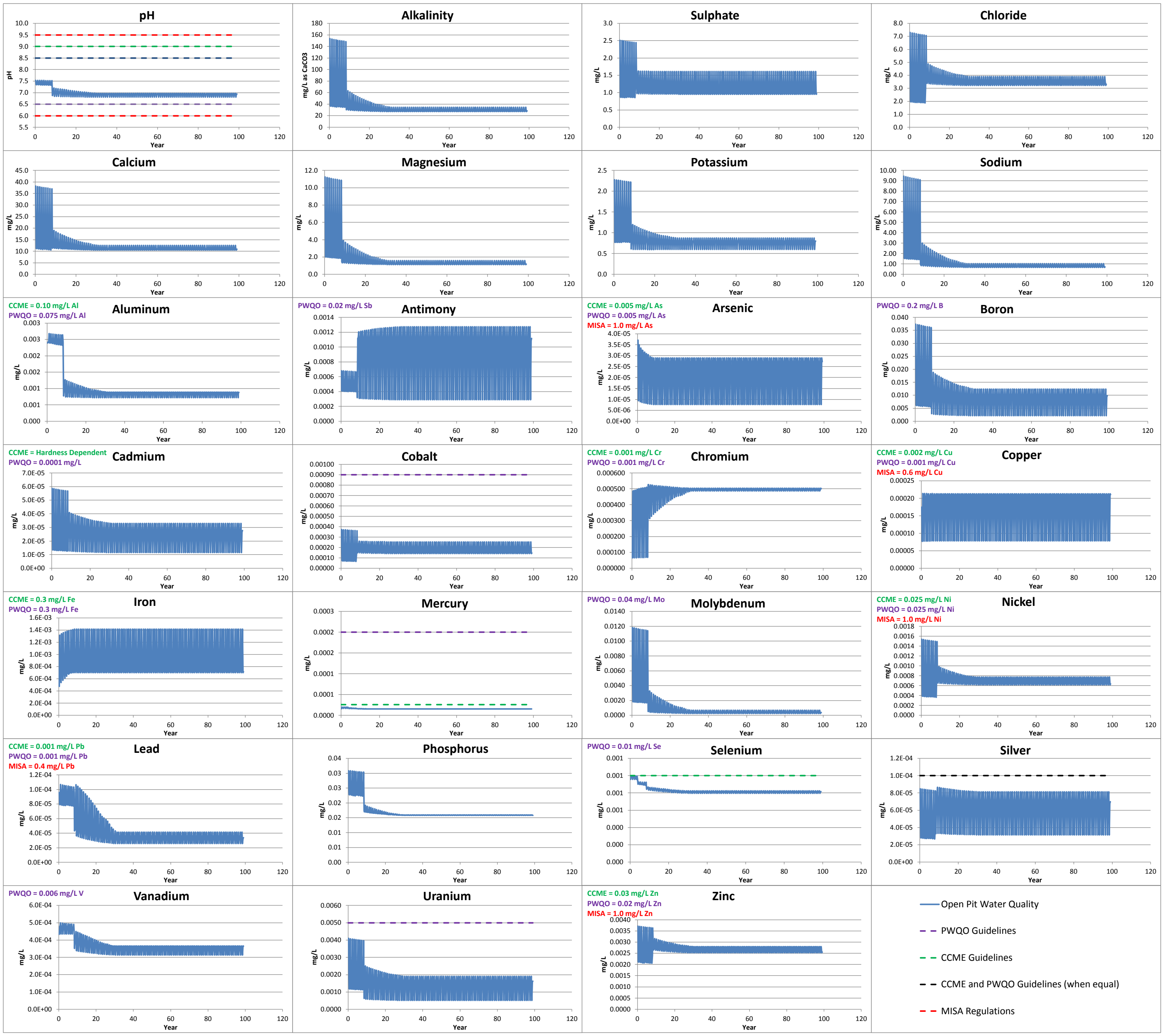
0.01 Value Exceeds PWQO Guideline
0.01 Value Exceeds CCME Guideline for the Protection of Aquatic Life
0.01 Value Exceeds MISA Regulation
(a) Nitrate concentrations assuming no oxidation of ammonia
(b) Nitrate concentrations assuming complete oxidation of ammonia

APPENDIX 4.III

Post-closure Open Pit Flooding Water Quality Figures

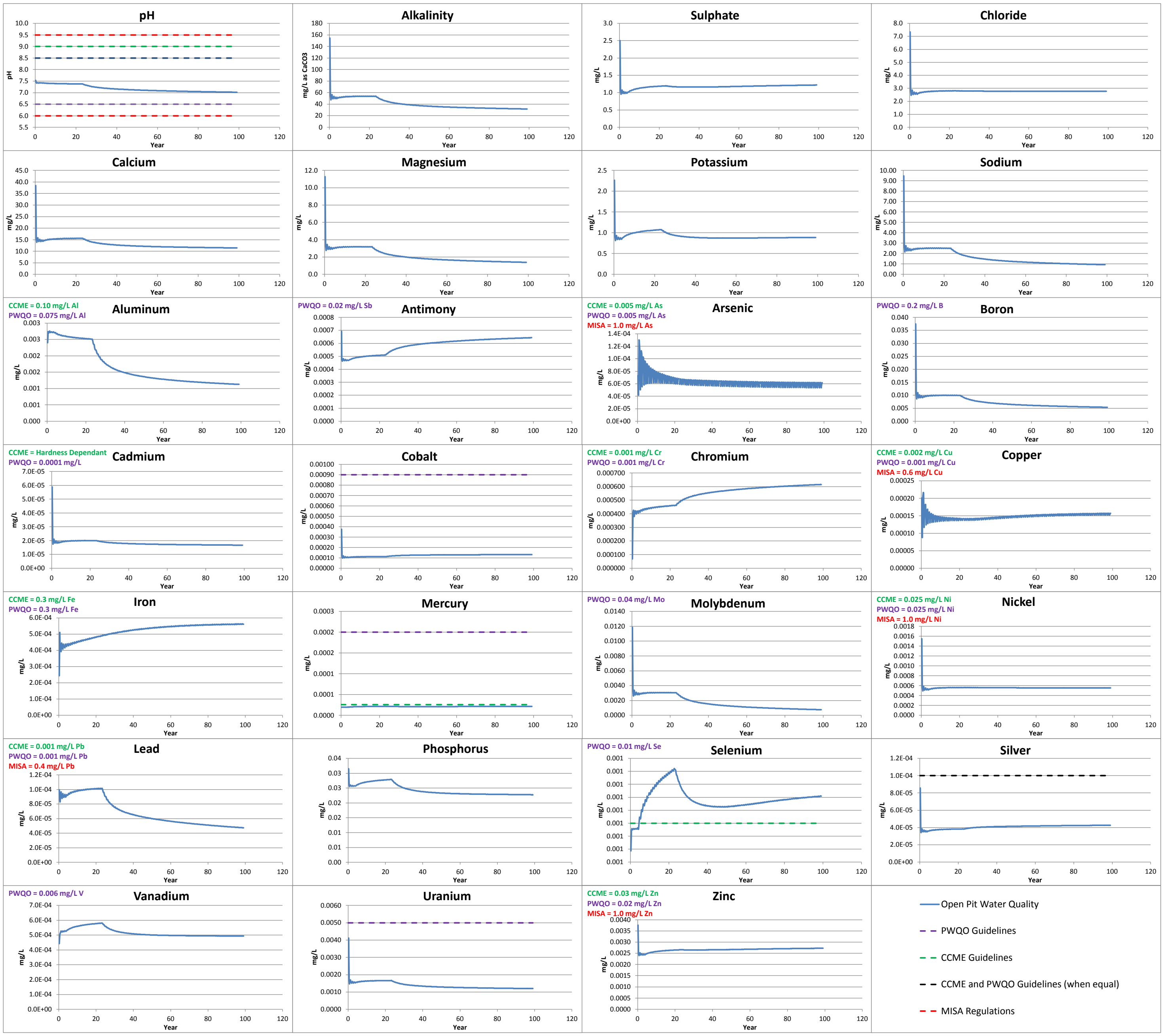

pH
Alkalinity
mg/L as CaCO3
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
mg/L
Year
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Year
mg/L
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations

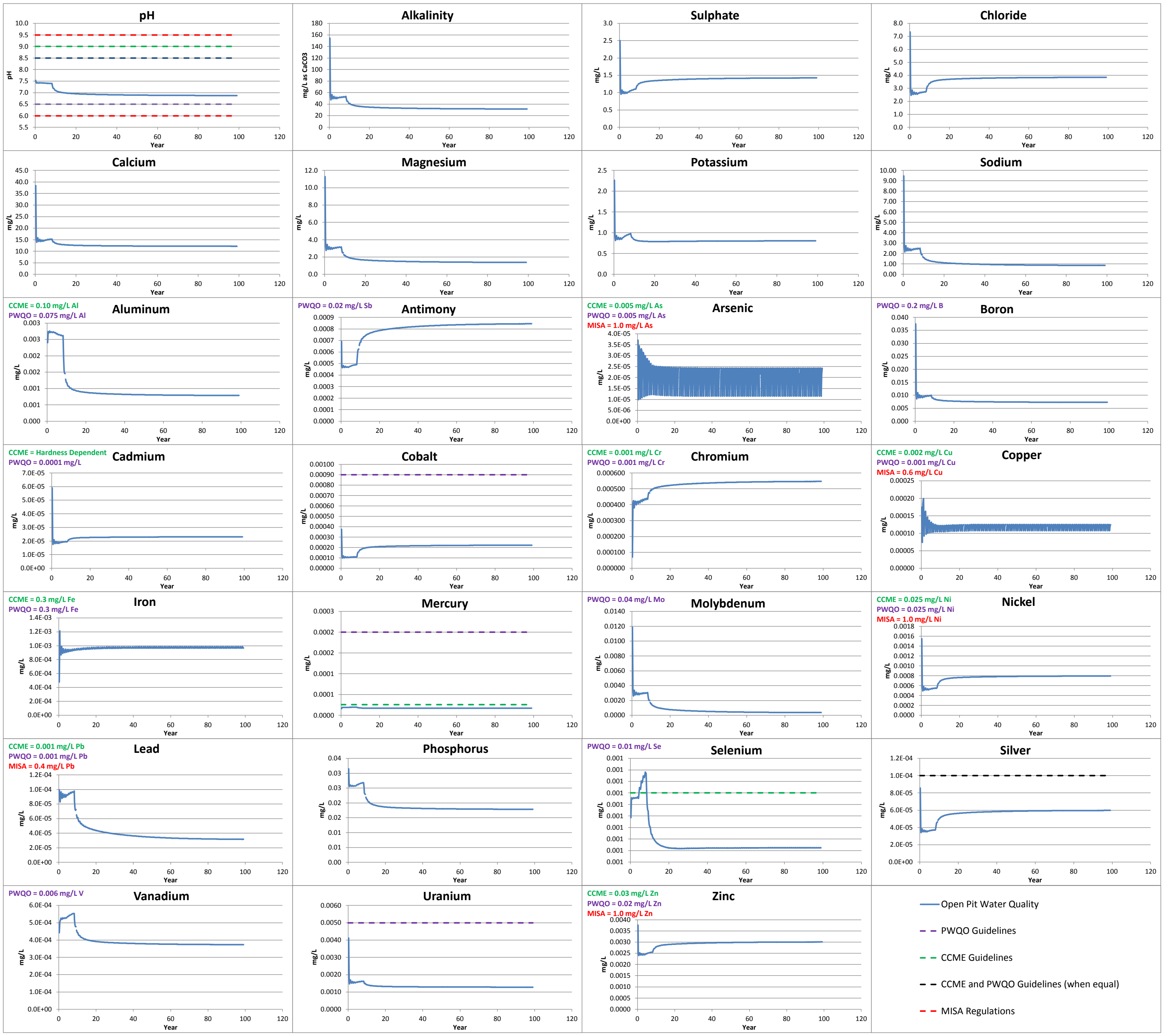

pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
mg/L as CaCO3
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
mg/L
Year
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Year
mg/L
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependant
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Year
mg/L
mg/L as CaCO3
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Year
mg/L
mg/L as CaCO3
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations


pH
Alkalinity
Sulphate
Chloride
Calcium
Magnesium
Potassium
Sodium
CCME = 0.10 mg/L Al
PWQO = 0.075 mg/L Al
Aluminum
PWQO = 0.02 mg/L Sb
Antimony
CCME = 0.005 mg/L As
PWQO = 0.005 mg/L As
MISA = 1.0 mg/L As
Arsenic
PWQO = 0.2 mg/L B
Boron
CCME = Hardness Dependent
PWQO = 0.0001 mg/L
Cadmium
Cobalt
CCME = 0.001 mg/L Cr
PWQO = 0.001 mg/L Cr
Chromium
CCME = 0.002 mg/L Cu
PWQO = 0.001 mg/L Cu
MISA = 0.6 mg/L Cu
Copper
CCME = 0.3 mg/L Fe
PWQO = 0.3 mg/L Fe
Iron
Mercury
PWQO = 0.04 mg/L Mo
Molybdenum
CCME = 0.025 mg/L Ni
PWQO = 0.025 mg/L Ni
MISA = 1.0 mg/L Ni
Nickel
CCME = 0.001 mg/L Pb
PWQO = 0.001 mg/L Pb
MISA = 0.4 mg/L Pb
Lead
Phosphorus
PWQO = 0.01 mg/L Se
Selenium
Silver
PWQO = 0.006 mg/L V
Vanadium
Uranium
CCME = 0.03 mg/L Zn
PWQO = 0.02 mg/L Zn
MISA = 1.0 mg/L Zn
Zinc
Open Pit Water Quality
PWQO Guidelines
CCME Guidelines
CCME and PWQO Guidelines (when equal)
MISA Regulations

APPENDIX 4.IV

Post-closure Open Pit Flooding Water Quality Results

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
EAST PIT																																			
0.25	East Pit	7.4	80	3.4E-05	0.06	0.001	0.0007	7.3E-05	0.022	0.084	20.6	*3.9E-05*	4.7	0.00024	0.000015	0.00020	2.4E-04	6.9E-06	1.2	5.7	0.16	0.0057	4.74	0.0010	0.014	1.9E-05	0.0004	6.8E-05	1.4	0.25	0.0006	2.1E-04	0.00014	0.0025	0.0022
0.5	East Pit	6.9	20	1.2E-04	0.06	0.001	0.0002	3.9E-05	0.002	0.010	7.1	8.5E-06	2.3	0.00017	0.000002	0.00009	5.9E-04	8.0E-06	0.34	1.1	0.07	0.0005	0.77	0.0005	0.008	5.8E-07	0.0004	2.0E-05	1.0	0.04	0.0001	1.6E-04	0.00003	0.0004	0.0017
0.75	East Pit	7.0	20	8.8E-05	0.06	0.001	0.0006	1.5E-04	0.006	0.009	6.8	*1.7E-05*	2.0	0.00009	0.000058	0.00025	3.4E-04	8.2E-06	0.44	1.0	0.04	0.0005	0.65	0.0004	0.009	2.2E-05	0.0004	4.0E-05	0.5	0.04	0.0003	2.4E-04	0.00005	0.0010	0.0015
1	East Pit	7.1	26	7.9E-05	0.06	0.001	0.0007	1.2E-04	0.008	0.017	8.4	*2.0E-05*	2.3	0.00011	0.000035	0.00022	3.1E-04	7.9E-06	0.53	1.5	0.05	0.0011	1.09	0.0005	0.009	1.7E-05	0.0004	4.5E-05	0.6	0.06	0.0003	2.3E-04	0.00006	0.0012	0.0016
1.25	East Pit	7.4	70	4.4E-05	0.06	0.001	0.0007	7.4E-05	0.020	0.072	18.5	*3.7E-05*	4.3	0.00022	0.000015	0.00019	2.5E-04	6.8E-06	1.12	5.0	0.14	0.0049	4.11	0.0009	0.013	1.7E-05	0.0004	6.5E-05	1.3	0.22	0.0005	2.1E-04	0.00013	0.0023	0.0021
1.5	East Pit	6.9	19	1.4E-04	0.05	0.001	0.0002	3.7E-05	0.002	0.009	6.9	8.2E-06	2.2	0.00017	0.000001	0.00009	6.1E-04	7.8E-06	0.33	1.0	0.07	0.0005	0.72	0.0005	0.008	5.7E-07	0.0004	2.0E-05	1.0	0.03	0.0001	1.6E-04	0.00002	0.0003	0.0016
1.75	East Pit	7.0	19	9.9E-05	0.06	0.001	0.0006	1.5E-04	0.006	0.008	6.6	*1.6E-05*	1.9	0.00009	0.000057	0.00025	3.5E-04	8.1E-06	0.44	0.9	0.04	0.0005	0.62	0.0004	0.008	2.2E-05	0.0004	3.9E-05	0.5	0.03	0.0003	2.3E-04	0.00005	0.0010	0.0014
2	East Pit	7.1	25	9.0E-05	0.06	0.001	0.0007	1.2E-04	0.008	0.015	8.1	*1.9E-05*	2.3	0.00011	0.000035	0.00022	3.2E-04	7.8E-06	0.52	1.4	0.05	0.0010	1.01	0.0005	0.009	1.7E-05	0.0004	4.4E-05	0.6	0.05	0.0003	2.3E-04	0.00006	0.0011	0.0015
2.25	East Pit	7.4	66	5.0E-05	0.06	0.001	0.0007	7.4E-05	0.019	0.066	17.5	*3.5E-05*	4.2	0.00021	0.000014	0.00019	2.5E-04	6.8E-06	1.06	4.6	0.13	0.0045	3.81	0.0009	0.012	1.6E-05	0.0004	6.4E-05	1.2	0.20	0.0005	2.1E-04	0.00012	0.0022	0.0021
2.5	East Pit	6.9	19	1.6E-04	0.05	0.001	0.0002	3.6E-05	0.002	0.008	6.7	8.0E-06	2.2	0.00017	0.000001	0.00009	6.2E-04	7.7E-06	0.33	1.0	0.06	0.0004	0.69	0.0005	0.007	5.5E-07	0.0004	2.0E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
2.75	East Pit	7.0	18	1.1E-04	0.06	0.001	0.0006	1.4E-04	0.006	0.008	6.5	*1.6E-05*	1.9	0.00009	0.000056	0.00025	3.5E-04	7.9E-06	0.44	0.9	0.04	0.0005	0.59	0.0004	0.008	2.2E-05	0.0004	3.9E-05	0.5	0.03	0.0002	2.3E-04	0.00005	0.0010	0.0014
3	East Pit	7.1	24	9.9E-05	0.06	0.001	0.0007	1.2E-04	0.008	0.014	7.8	*1.9E-05*	2.2	0.00011	0.000035	0.00022	3.3E-04	7.7E-06	0.51	1.3	0.05	0.0009	0.96	0.0004	0.008	1.7E-05	0.0004	4.4E-05	0.6	0.05	0.0003	2.2E-04	0.00006	0.0011	0.0015
3.25	East Pit	7.3	62	5.5E-05	0.06	0.001	0.0007	7.4E-05	0.018	0.062	16.7	*3.4E-05*	4.0	0.00021	0.000014	0.00019	2.6E-04	6.8E-06	1.02	4.4	0.12	0.0042	3.56	0.0008	0.012	1.6E-05	0.0004	6.3E-05	1.2	0.19	0.0005	2.1E-04	0.00012	0.0021	0.0020
3.5	East Pit	6.9	18	1.7E-04	0.05	0.001	0.0002	3.5E-05	0.002	0.008	6.6	7.8E-06	2.2	0.00017	0.000001	0.00009	6.3E-04	7.6E-06	0.33	1.0	0.06	0.0004	0.67	0.0005	0.007	5.5E-07	0.0004	1.9E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
3.75	East Pit	7.0	18	1.2E-04	0.06	0.001	0.0006	1.4E-04	0.006	0.008	6.4	*1.6E-05*	1.9	0.00009	0.000055	0.00025	3.6E-04	7.9E-06	0.43	0.9	0.04	0.0004	0.57	0.0004	0.008	2.1E-05	0.0004	3.9E-05	0.5	0.03	0.0002	2.3E-04	0.00005	0.0009	0.0014
4	East Pit	7.1	23	1.1E-04	0.06	0.001	0.0006	1.2E-04	0.008	0.013	7.6	*1.9E-05*	2.2	0.00010	0.000034	0.00022	3.4E-04	7.6E-06	0.51	1.3	0.05	0.0008	0.91	0.0004	0.008	1.7E-05	0.0004	4.3E-05	0.6	0.05	0.0003	2.2E-04	0.00006	0.0011	0.0015
4.25	East Pit	7.3	59	6.2E-05	0.06	0.001	0.0008	7.4E-05	0.018	0.058	16.0	*3.3E-05*	3.9	0.00020	0.000014	0.00019	2.6E-04	6.8E-06	0.99	4.1	0.12	0.0039	3.35	0.0008	0.011	1.5E-05	0.0004	6.2E-05	1.1	0.18	0.0005	2.1E-04	0.00011	0.0020	0.0020
4.5	East Pit	6.9	18	1.8E-04	0.05	0.001	0.0001	3.4E-05	0.002	0.008	6.5	7.7E-06	2.2	0.00016	0.000001	0.00009	6.4E-04	7.5E-06	0.33	0.9	0.06	0.0004	0.65	0.0005	0.007	5.4E-07	0.0004	1.9E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
4.75	East Pit	7.0	18	1.3E-04	0.06	0.001	0.0006	1.4E-04	0.006	0.007	6.3	*1.6E-05*	1.9	0.00009	0.000054	0.00025	3.6E-04	7.8E-06	0.43	0.8	0.04	0.0004	0.55	0.0004	0.008	2.1E-05	0.0004	3.9E-05	0.5	0.03	0.0002	2.2E-04	0.00005	0.0009	0.0014
5	East Pit	7.1	22	1.2E-04	0.06	0.001	0.0006	1.1E-04	0.008	0.013	7.5	*1.9E-05*	2.2	0.00010	0.000035	0.00023	3.4E-04	7.6E-06	0.50	1.2	0.05	0.0008	0.86	0.0004	0.008	1.7E-05	0.0004	4.3E-05	0.6	0.05	0.0003	2.2E-04	0.00006	0.0011	0.0015
5.25	East Pit	7.3	56	6.6E-05	0.06	0.001	0.0008	7.4E-05	0.017	0.054	15.4	*3.2E-05*	3.8	0.00019	0.000014	0.00019	2.7E-04	6.8E-06	0.95	3.9	0.11	0.0037	3.16	0.0008	0.011	1.5E-05	0.0004	6.1E-05	1.1	0.17	0.0005	2.1E-04	0.00011	0.0020	0.0020
5.5	East Pit	6.8	18	1.9E-04	0.05	0.001	0.0001	3.3E-05	0.002	0.007	6.5	7.6E-06	2.2	0.00016	0.000001	0.00009	6.5E-04	7.5E-06	0.33	0.9	0.06	0.0003	0.64	0.0005	0.007	5.4E-07	0.0004	1.9E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
5.75	East Pit	7.0	17	1.4E-04	0.06	0.001	0.0006	1.4E-04	0.006	0.007	6.2	*1.6E-05*	1.9	0.00008	0.000053	0.00025	3.7E-04	7.7E-06	0.43	0.8	0.03	0.0004	0.53	0.0004	0.008	2.1E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.2E-04	0.00005	0.0009	0.0014
6	East Pit	7.1	22	1.3E-04	0.06	0.001	0.0006	1.1E-04	0.007	0.012	7.3	*1.8E-05*	2.2	0.00010	0.000034	0.00023	3.5E-04	7.5E-06	0.50	1.2	0.04	0.0007	0.83	0.0004	0.008	1.6E-05	0.0004	4.3E-05	0.6	0.04	0.0003	2.2E-04	0.00006	0.0011	0.0015
6.25	East Pit	7.3	54	7.3E-05	0.05	0.001	0.0008	7.3E-05	0.016	0.051	14.8	*3.2E-05*	3.7	0.00019	0.000014	0.00019	2.7E-04	6.8E-06	0.92	3.7	0.11	0.0034	2.99	0.0008	0.010	1.4E-05	0.0004	6.1E-05	1.1	0.16	0.0004	2.1E-04	0.00011	0.0019	0.0019
6.5	East Pit	6.8	17	2.1E-04	0.05	0.001	0.0001	3.2E-05	0.002	0.007	6.4	7.5E-06	2.2	0.00016	0.000001	0.00009	6.6E-04	7.4E-06	0.33	0.9	0.06	0.0003	0.62	0.0005	0.007	5.3E-07	0.0004	1.9E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
6.75	East Pit	7.0	17	1.5E-04	0.06	0.001	0.0006	1.3E-04	0.006	0.007	6.1	*1.6E-05*	1.8	0.00008	0.000052	0.00025	3.7E-04	7.6E-06	0.44	0.8	0.03	0.0004	0.52	0.0004	0.008	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.2E-04	0.00005	0.0009	0.0014
7	East Pit	7.0	21	1.4E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.011	7.2	*1.8E-05*	2.1	0.00010	0.000034	0.00023	3.6E-04	7.4E-06	0.50	1.1	0.04	0.0007	0.79	0.0004	0.008	1.6E-05	0.0004	4.3E-05	0.6	0.04	0.0003	2.1E-04	0.00006	0.0011	0.0015
7.25	East Pit	7.3	51	7.9E-05	0.05	0.001	0.0008	7.3E-05	0.016	0.048	14.3	*3.1E-05*	3.6	0.00018	0.000014	0.00019	2.8E-04	6.7E-06	0.90	3.5	0.10	0.0032	2.82	0.0007	0.010	1.4E-05	0.0004	6.0E-05	1.0	0.15	0.0004	2.1E-04	0.00010	0.0018	0.0019
7.5	East Pit	6.8	17	2.2E-04	0.05	0.001	0.0001	3.2E-05	0.002	0.007	6.3	7.4E-06	2.1	0.00016	0.000001	0.00009	6.7E-04	7.3E-06	0.33	0.9	0.06	0.0003	0.61	0.0005	0.007	5.3E-07	0.0004	1.9E-05	1.0	0.03	0.0001	1.5E-04	0.00002	0.0003	0.0016
7.75	East Pit	7.0	17	1.6E-04	0.06	0.001	0.0006	1.3E-04	0.006	0.006	6.1	*1.6E-05*	1.8	0.00008	0.000052	0.00025	3.8E-04	7.6E-06	0.44	0.8	0.03	0.0004	0.51	0.0004	0.008	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.2E-04	0.00005	0.0009	0.0014
8	East Pit	7.0	21	1.4E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.011	7.1	*1.8E-05*	2.1	0.00010	0.000034	0.00023	3.6E-04	7.4E-06	0.49	1.1	0.04	0.0007	0.76	0.0004	0.008	1.6E-05	0.0004	4.2E-05	0.6	0.04	0.0003	2.1E-04	0.00006	0.0010	0.0014
8.25	East Pit	7.3	49	8.3E-05	0.05	0.001	0.0008	7.3E-05	0.015	0.045	13.8	*3.0E-05*	3.5	0.00018	0.000014	0.00019	2.8E-04	6.7E-06	0.87	3.3	0.10	0.0030	2.67	0.0007	0.010	1.3E-05	0.0004	5.9E-05	1.0	0.14	0.0004	2.1E-04	0.00010	0.0018	0.0019
8.5	East Pit	6.8	17	2.2E-04	0.05	0.001	0.0001	3.1E-05	0.002	0.007	6.3	7.3E-06	2.1	0.00016	0.000001	0.00009	6.8E-04	7.3E-06	0.33	0.9	0.06	0.0003	0.60	0.0005	0.007	5.3E-07	0.0004	1.8E-05	1.0	0.03	0.0001	1.4E-04	0.00002	0.0003	0.0016
8.75	East Pit	7.0	17	1.6E-04	0.06	0.001	0.0006	1.3E-04	0.006	0.006	6.0	*1.5E-05*	1.8	0.00008	0.000051	0.00025	3.8E-04	7.5E-06	0.44	0.8	0.03	0.0003	0.50	0.0004	0.008	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.2E-04	0.00005	0.0009	0.0013
9	East Pit	7.0	20	1.5E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.010	7.0	*1.8E-05*	2.1	0.00010	0.000034	0.00023	3.7E-04	7.3E-06	0.49	1.1	0.04	0.0006	0.73	0.0004	0.008	1.6E-05	0.0004	4.2E-05	0.6	0.04	0.0003	2.1E-04	0.00006	0.0010	0.0014
9.25	East Pit	7.3	47	9.0E-05	0.05	0.001	0.0008	7.2E-05	0.015	0.042	13.3	*2.9E-05*	3.4	0.00017	0.000014	0.00018	2.9E-04	6.7E-06	0.84	3.2	0.09	0.0029	2.53	0.0007	0.010	1.3E-05	0.0004	5.9E-05	1.0	0.13	0.0004	2.1E-04	0.00010	0.0017	0.0019
9.5	East Pit	6.8	17	2.4E-04	0.05	0.001	0.0001	3.0E-05	0.002	0.007	6.2	7.3E-06	2.1	0.00016	0.000001	0.00009	6.8E-04	7.2E-06	0.33	0.9	0.06	0.0003	0.59	0.0005	0.007	5.2E-07	0.0004	1.8E-05	1.0	0.03	0.0001	1.4E-04	0.00002	0.0003	0.0016
9.75	East Pit	7.0	16	1.7E-04	0.06	0.001	0.0006	1.3E-04	0.006	0.006	5.9	*1.5E-05*	1.8	0.00008	0.000050	0.00025	3.9E-04	7.4E-06	0.44	0.7	0.03	0.0003	0.48	0.0004	0.007	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.1E-04	0.00005	0.0009	0.0013
10	East Pit	7.0	20	1.6E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.010	6.9	*1.8E-05*	2.1	0.00010	0.000034	0.00023	3.7E-04	7.3E-06	0.49	1.0	0.04	0.0006	0.71	0.0004	0.007	1.6E-05	0.0004	4.2E-05	0.6	0.04	0.0003	2.1E-04	0.00005	0.0010	0.0014
10.25	East Pit	7.2	45	9.6E-05	0.05	0.001	0.0008	7.2E-05	0.014	0.040	12.8	*2.9E-05*	3.4	0.00017	0.000014	0.00018	2.9E-04	6.7E-06	0.82	3.0	0.09	0.0027	2.39	0.0007	0.009	1.3E-05	0.0004	5.8E-05	1.0	0.12	0.0004	2.0E-04	0.00010	0.0017	0.0018
10.5	East Pit	6.8	16	2.5E-04	0.05	0.001	0.0001	3.0E-05	0.002	0.006	6.2	7.2E-06	2.1	0.00016	0.000001	0.00009	6.9E-04	7.2E-06	0.33	0.8	0.06	0.0003	0.58	0.0005	0.006	5.2E-07	0.0004	1.8E-05	1.0	0.03	0.0001	1.4E-04	0.00002	0.0003	0.0016
10.75	East Pit	7.0	16	1.8E-04	0.05	0.001	0.0006	1.3E-04	0.006	0.006	5.9	*1.5E-05*	1.8	0.00008	0.000050	0.00025	3.9E-04	7.4E-06	0.44	0.7	0.03	0.0003	0.47	0.0004	0.007	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.1E-04	0.00005	0.0009	0.0013
11	East Pit	7.0	19	1.6E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.009	6.8	*1.8E-05*	2.1	0.00010	0.000034	0.00023	3.8E-04	7.2E-06	0.48	1.0	0.04	0.0006	0.68	0.0004	0.007	1.6E-05	0.0004	4.2E-05	0.6	0.04	0.0003	2.1E-04	0.00005	0.0010	0.0014
11.25	East Pit	7.2	43	1.0E-04	0.05	0.001	0.0008	7.2E-05	0.014	0.037	12.4	*2.8E-05*	3.3	0.00017	0.000015	0.00018	3.0E-04	6.7E-06	0.80	2.8	0.09	0.0025	2.25	0.0007	0.009	1.2E-05	0.0004	5.7E-05	0.9	0.12	0.0004	2.0E-04	0.00009	0.0017	0.0018
11.5	East Pit	6.8	16	2.5E-04	0.05	0.001	0.0001	3.0E-05	0.002	0.006	6.1	7.1E-06	2.1	0.00016	0.000001	0.00009	7.0E-04	7.1E-06	0.33	0.8	0.06	0.0003	0.57	0.0005	0.006	5.2E-07	0.0004	1.8E-05	1.0	0.03	0.0001	1.4E-04	0.00002	0.0003	0.0016
11.75	East Pit	7.0	16	1.8E-04	0.05	0.001	0.0006	1.3E-04	0.006	0.006	5.9	*1.5E-05*	1.8	0.00008	0.000050	0.00025	3.9E-04	7.4E-06	0.44	0.7	0.03	0.0003	0.46	0.0003	0.007	2.0E-05	0.0004	3.8E-05	0.5	0.03	0.0002	2.1E-04	0.00005	0.0009	0.0013
12	East Pit	7.0	19	1.7E-04	0.05	0.001	0.0006	1.1E-04	0.007	0.009	6.7	*1.7E-05*	2.0	0.00010	0.000034	0.00023	3.8E-04	7.2E-06	0.48	1.0	0.04	0.0005	0.66	0.0004	0.007	1.6E-05	0.0004	4.2E-05	0.6	0.03	0.0003	2.1E-04	0.00005	0.0010	0.0014
12.25	East Pit	7.2	41	1.1E-04	0.05	0.001	0.0008	7.1E-05	0.013	0.035	12.0	*2.8E-05*	3.2	0.00016	0.000015	0.00019	3.1E-04	6.7E-06	0.77	2.7	0.08	0.0023	2.12	0.0007	0.009	1.2E-05	0.0004	5.7E-05	0.9	0.11	0.0004	2.0E-04	0.00009	0.0016	0.0018
12.5	East Pit	6.8	16	2.6E-04	0.05	0.001	0.0001	2.9E-05	0.002	0.006	6.1	7.1E-06	2.1	0.00016	0.000001	0.00009	7.0E-04	7.1E-06	0.33	0.8	0.06	0.0003	0.56	0.0005	0.006	5.2E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.4E-04	0.00002	0.0003	0.0016
12.75	East Pit	7.0	16	1.9E-04	0.05	0.001	0.0006	1.3E-04	0.006	0.005	5.8	*1.5E-05*	1.8	0.00008	0.000049	0.00025	4.0E-04	7.3E-06	0.44	0.7	0.03	0.0003	0.46	0.0003	0.007	2.0E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.1E-04	0.00005	0.0009	0.0013
13	East Pit	7.0	19	1.8E-04	0.05	0.001	0.0006	1.0E-04	0.007	0.008	6.6	*1.7E-05*	2.0	0.00009	0.000034	0.00023	3.9E-04	7.1E-06	0.48	0.9	0.04	0.0005	0.63	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.1E-04	0.00005	0.0010	0.0014
13.25	East Pit	7.2	39	1.1E-04	0.05	0.001	0.0008	7.0E-05	0.013	0.032	11.5	*2.7E-05*	3.1	0.00016	0.000015	0.00019	3.2E-04	6.7E-06	0.75	2.5	0.08	0.0022	1.99	0.0006	0.009	1.2E-05	0.0004	5.6E-05	0.9	0.10	0.0004	2.0E-04	0.00009	0.0016	0.0018
13.5	East Pit	6.8	16	2.7E-04	0.05	0.001	0.0001	2.9E-05	0.002	0.006	6.0	7.0E-06	2.1	0.00016	0.000001	0.00009	7.1E-04	7.0E-06	0.33	0.8	0.06	0.0002	0.55	0.0005	0.006	5.2E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.4E-04	0.00002	0.0003	0.0015
13.75	East Pit	7.0	15	2.0E-04	0.05	0.001	0.0006	1.2E-04	0.006	0.005	5.8	*1.5E-05*	1.8	0.00008	0.000049	0.00025	4.0E-04	7.2E-06	0.44	0.7	0.03	0.0003	0.45	0.0003	0.007	2.0E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.1E-04	0.00005	0.0009	0.0013
14	East Pit	7.0	18	1.9E-04	0.05	0.001	0.0006	1.0E-04	0.007	0.008	6.5	*1.7E-05*	2.0	0.00009	0.000034	0.00023	3.9E-04	7.1E-06	0.48	0.9	0.04	0.0005	0.61	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.1E-04	0.00005	0.0010	0.0014
14.25	East Pit	7.2	37	1.2E-04	0.05	0.001	0.0008	7.0E-05	0.012	0.030	11.1	*2.6E-05*	3.1	0.00015	0.000015	0.00019	3.2E-04	6.6E-06	0.73	2.4	0.08	0.0020	1.86	0.0006	0.008	1.2E-05	0.0004	5.6E-05	0.9	0.10	0.0004	2.0E-04	0.00008	0.0015	0.0017
14.5	East Pit	6.8	16	2.8E-04	0.05	0.001	0.0001	2.8E-05	0.002	0.006	6.0	7.0E-06	2.1	0.00016	0.000001	0.00009	7.1E-04	7.0E-06	0.33	0.8	0.06	0.0002	0.54	0.0005	0.006	5.1E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.4E-04	0.00002	0.0003	0.0015
14.75	East Pit	7.0	15	2.1E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.005	5.7	*1.5E-05*	1.8	0.00008	0.000048	0.00025	4.0E-04	7.2E-06	0.44	0.7	0.03	0.0003	0.44	0.0003	0.007	2.0E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.1E-04	0.00005	0.0009	0.0013
15	East Pit	7.0	18	1.9E-04	0.05	0.001	0.0006	1.0E-04	0.007	0.008	6.4	*1.7E-05*	2.0	0.00009	0.000034	0.00024	4.0E-04	7.1E-06	0.47	0.9	0.04	0.0004	0.59	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.0E-04	0.00005	0.0010	0.0014
15.25	East Pit	7.2	36	1.3E-04	0.05	0.001	0.0008	6.9E-05	0.012	0.028	10.7	*2.6E-05*	3.0	0.00015	0.000015	0.00019	3.3E-04	6.6E-06	0.71	2.2	0.07	0.0018	1.74	0.0006	0.008	1.2E-05	0.0004	5.5E-05	0.8	0.09	0.0004	2.0E-04	0.00008	0.0015	0.0017
15.5	East Pit	6.8	16	2.9E-04	0.05	0.001	0.0001	2.8E-05	0.002	0.006	6.0	6.9E-06	2.1	0.00016	0.000001	0.00009	7.2E-04	7.0E-06	0.33	0.8	0.06	0.0002	0.54	0.0005	0.006	5.1E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.4E-04	0.00002	0.0002	0.0015
15.75	East Pit	6.9	15	2.1E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.005	5.7	*1.5E-05*	1.8	0.00008	0.000048	0.00025	4.1E-04	7.2E-06	0.44	0.7	0.03	0.0003	0.43	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.1E-04	0.00005	0.0009	0.0013
16	East Pit	7.0	18	2.0E-04	0.05	0.001	0.0006	1.0E-04	0.006	0.007	6.3	*1.7E-05*	2.0	0.00009	0.000034	0.00024	4.1E-04	7.1E-06	0.47	0.9	0.04	0.0004	0.57	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.0E-04	0.00005	0.0010	0.0014
16.25	East Pit	7.1	34	1.3E-04	0.05	0.001	0.0008	6.9E-05	0.011	0.026	10.3	*2.5E-05*	2.9	0.00015	0.000015	0.00019	3.4E-04	6.6E-06	0.69	2.1	0.07	0.0017	1.62	0.0006	0.008	1.1E-05	0.0004	5.5E-05	0.8	0.08	0.0004	2.0E-04	0.00008	0.0014	0.0017
16.5	East Pit	6.8	15	2.9E-04	0.05	0.001	0.0001	2.8E-05	0.001	0.005	5.9	6.9E-06	2.1	0.00016	0.000001	0.00009	7.2E-04	6.9E-06	0.33	0.8	0.06	0.0002	0.53	0.0005	0.006	5.1E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.4E-04	0.00002	0.0002	0.0015
16.75	East Pit	6.9	15	2.2E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.005	5.6	*1.5E-05*	1.8	0.00008	0.000048	0.00025	4.1E-04	7.1E-06	0.44	0.7	0.03	0.0002	0.42	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.1E-04	0.00005	0.0009	0.0013
17	East Pit	7.0	17	2.1E-04	0.05	0.001	0.0006	1.0E-04	0.006	0.007	6.2	*1.7E-05*	2.0	0.00009	0.000033	0.00024	4.1E-04	7.0E-06	0.47	0.8	0.04	0.0004	0.55	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.0E-04	0.00005	0.0010	0.0014
17.25	East Pit	7.1	32	1.5E-04	0.05	0.001	0.0008	6.8E-05	0.011	0.023	9.9	*2.5E-05*	2.9	0.00014	0.000015	0.00019	3.5E-04	6.6E-06	0.67	2.0	0.07	0.0015	1.50	0.0006	0.008	1.1E-05	0.0004	5.4E-05	0.8	0.08	0.0004	1.9E-04	0.00008	0.0014	0.0017
17.5	East Pit	6.8	15	3.1E-04	0.05	0.001	0.0001	2.7E-05	0.001	0.005	5.9	6.8E-06	2.1	0.00016	0.000001	0.00009	7.3E-04	6.9E-06	0.34	0.8	0.06	0.0002	0.52	0.0005	0.006	5.1E-07	0.0004	1.8E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
17.75	East Pit	6.9	15	2.3E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.005	5.6	*1.5E-05*	1.8	0.00008	0.000047	0.00025	4.1E-04	7.1E-06	0.44	0.7	0.03	0.0002	0.41	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.0E-04	0.00005	0.0009	0.0013
18	East Pit	7.0	17	2.2E-04	0.05	0.001	0.0006	9.9E-05	0.006	0.006	6.1	*1.7E-05*	1.9	0.00009	0.000033	0.00024	4.2E-04	6.9E-06	0.47	0.8	0.03	0.0004	0.53	0.0004	0.007	1.6E-05	0.0004	4.1E-05	0.6	0.03	0.0003	2.0E-04	0.00005	0.0009	0.0013
18.25	East Pit	7.1	30	1.6E-04	0.05	0.001	0.0008	6.7E-05	0.011	0.021	9.5	*2.4E-05*	2.8	0.00014	0.000015	0.00019	3.7E-04	6.6E-06	0.65	1.8	0.06	0.0014	1.38	0.0006	0.007	1.1E-05	0.0004	5.4E-05	0.8	0.07	0.0004	1.9E-04	0.00007	0.0014	0.0016
18.5	East Pit	6.8	15	3.2E-04	0.04	0.001	0.0001	2.6E-05	0.001	0.005	5.8	6.7E-06	2.1	0.00016	0.000001	0.00009	7.4E-04	6.8E-06	0.34	0.8	0.06	0.0002	0.51	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
18.75	East Pit	6.9	15	2.4E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.005	5.5	*1.5E-05*	1.7	0.00008	0.000046	0.00025	4.2E-04	7.0E-06	0.44	0.7	0.03	0.0002	0.41	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.0E-04	0.00005	0.0008	0.0013
19	East Pit	6.9	17	2.3E-04	0.05	0.001	0.0006	9.8E-05	0.006	0.006	6.1	*1.7E-05*	1.9	0.00009	0.000033	0.00024	4.2E-04	6.9E-06	0.47	0.8	0.03	0.0003	0.51	0.0004	0.007	1.6E-05	0.0004	4.0E-05	0.6	0.03	0.0003	2.0E-04	0.00005	0.0009	0.0013
19.25	East Pit	7.1	28	1.7E-04	0.05	0.001	0.0008	6.6E-05	0.010	0.019	9.1	*2.4E-05*	2.7	0.00013	0.000016	0.00019	3.8E-04	6.5E-06	0.63	1.7	0.06	0.0012	1.27	0.0005	0.007	1.1E-05	0.0004	5.3E-05	0.7	0.06	0.0003	1.9E-04	0.00007	0.0013	0.0016
19.5	East Pit	6.8	15	3.3E-04	0.04	0.001	0.0001	2.6E-05	0.001	0.005	5.8	6.7E-06	2.1	0.00016	0.000001	0.00009	7.4E-04	6.8E-06	0.34	0.8	0.06	0.0002	0.51	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
19.75	East Pit	6.9	15	2.4E-04	0.05	0.001	0.0006	1.2E-04	0.005	0.004	5.5	*1.5E-05*	1.7	0.00008	0.000046	0.00025	4.2E-04	7.0E-06	0.44	0.6	0.03	0.0002	0.40	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
20	East Pit	6.9	16	2.3E-04	0.05	0.001	0.0006	9.7E-05	0.006	0.006	6.0	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.3E-04	6.8E-06	0.47	0.8	0.03	0.0003	0.49	0.0004	0.007	1.6E-05	0.0004	4.0E-05	0.6	0.02	0.0003	2.0E-04	0.00005	0.0009	0.0013
20.25	East Pit	7.1	27	1.8E-04	0.04	0.001	0.0008	6.5E-05	0.010	0.017	8.7	*2.3E-05*	2.7	0.00013	0.000016	0.00020	4.0E-04	6.5E-06	0.61	1.6	0.06	0.0011	1.16	0.0005	0.007	1.1E-05	0.0004	5.3E-05	0.7	0.06	0.0003	1.9E-04	0.00007	0.0013	0.0016
20.5	East Pit	6.8	15	3.4E-04	0.04	0.001	0.0001	2.6E-05	0.001	0.005	5.8	6.7E-06	2.0	0.00016	0.000001	0.00009	7.5E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.50	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
20.75	East Pit	6.9	14	2.5E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.5	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.2E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.39	0.0003	0.007	1.9E-05	0.0004	3.7E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
21	East Pit	6.9	16	2.4E-04	0.05	0.001	0.0006	9.6E-05	0.006	0.005	5.9	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.4E-04	6.8E-06	0.46	0.7	0.03	0.0003	0.48	0.0004	0.007	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0003	2.0E-04	0.00005	0.0009	0.0013
21.25	East Pit	7.0	25	1.9E-04	0.04	0.001	0.0008	6.4E-05	0.009	0.015	8.4	*2.3E-05*	2.6	0.00013	0.000016	0.00020	4.1E-04	6.5E-06	0.59	1.4	0.05	0.0009	1.05	0.0005	0.007	1.1E-05	0.0004	5.2E-05	0.7	0.05	0.0003	1.9E-04	0.00007	0.0013	0.0016
21.5	East Pit	6.8	15	3.4E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.6E-06	2.0	0.00016	0.000001	0.00009	7.5E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.50	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
21.75	East Pit	6.9	14	2.5E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.39	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
22	East Pit	6.9	16	2.5E-04	0.05	0.001	0.0006	9.6E-05	0.006	0.005	5.9	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.4E-04	6.8E-06	0.46	0.7	0.03	0.0003	0.46	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	2.0E-04	0.00005	0.0009	0.0013
22.25	East Pit	7.0	24	2.0E-04	0.04	0.001	0.0008	6.4E-05	0.009	0.013	8.0	*2.2E-05*	2.6	0.00012	0.000016	0.00020	4.3E-04	6.5E-06	0.57	1.3	0.05	0.0008	0.94	0.0005	0.006	1.1E-05	0.0004	5.2E-05	0.7	0.05	0.0003	1.9E-04	0.00007	0.0012	0.0016

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
0.01		Parameter concentrations is greater than MISA Regulation																																	
22.5	East Pit	6.8	15	3.5E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.6E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.49	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
22.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
23	East Pit	6.9	15	2.5E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.45	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	2.0E-04	0.00005	0.0009	0.0013
23.25	East Pit	7.0	22	2.1E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.011	7.7	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.5E-04	6.5E-06	0.56	1.2	0.05	0.0007	0.84	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
23.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
23.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
24	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
24.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
24.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
24.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
25	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
25.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
25.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
25.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
26	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
26.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
26.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
26.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
27	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
27.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
27.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
27.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
28	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
28.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
28.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
28.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
29	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
29.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
29.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
29.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
30	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
30.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
30.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
30.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
31	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
31.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
31.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
31.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
32	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
32.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
32.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
32.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
33	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
33.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
33.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
33.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
34	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
34.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
34.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
34.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
35	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
35.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
35.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
35.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
36	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
36.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
36.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
36.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
37	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
37.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
37.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
37.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
38	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
38.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
38.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
38.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
39	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
39.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
39.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
39.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
40	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
40.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
40.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
40.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
41	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
41.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
41.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
41.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
42	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
42.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
42.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
42.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
43	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
43.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
43.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
43.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
44	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
44.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
0.01		Parameter concentrations is greater than PWQO guideline																																	
0.01		Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life																																	
0.01		Parameter concentrations is greater than MISA Regulation																																	
44.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
44.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
45	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
45.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
45.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
45.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
46	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
46.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
46.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
46.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
47	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
47.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
47.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
47.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
48	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
48.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
48.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
48.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
49	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
49.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
49.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
49.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
50	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
50.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
50.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
50.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
51	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
51.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
51.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
51.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
52	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
52.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
52.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
52.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
53	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
53.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
53.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
53.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
54	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
54.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
54.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
54.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
55	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
55.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
55.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
55.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
56	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
56.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
56.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
56.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
57	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
57.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
57.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
57.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
58	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
58.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
58.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
58.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
59	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
59.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
59.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
59.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
60	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
60.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
60.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
60.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
61	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
61.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
61.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
61.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
62	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
62.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
62.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
62.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
63	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
63.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
63.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
63.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
64	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
64.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
64.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
64.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
65	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
65.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
65.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
65.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
66	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
66.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
66.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
66.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
67	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
67.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
67.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
67.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
68	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
68.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
68.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
68.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
69	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
69.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
69.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
69.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
70	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
70.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
70.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
70.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
71	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
71.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
71.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
71.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
72	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
72.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
72.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
72.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
73	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
73.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
73.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
73.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
74	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
74.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
74.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
74.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
75	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
75.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
75.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
75.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
76	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
76.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
76.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
76.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
77	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
77.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
77.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
77.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
78	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
78.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
78.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
78.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
79	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
79.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
79.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
79.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
80	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
80.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
80.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
80.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
81	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
81.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
81.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
81.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
82	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
82.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
82.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
82.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
83	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
83.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
83.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
83.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
84	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
84.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
84.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
84.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
85	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
85.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
85.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
85.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
86	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
86.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
86.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
86.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
87	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
87.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
87.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
87.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
88	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
88.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
88.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
88.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
89	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
89.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
89.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
89.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
90	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
90.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
90.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
90.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
91	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
91.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
91.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
91.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
92	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
92.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
92.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
92.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
93	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
93.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
93.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
93.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
94	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
94.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
94.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
94.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
95	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
95.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
95.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
95.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
96	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
96.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
96.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
96.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
97	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
97.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
97.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
97.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
98	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
98.25	East Pit	7.0	22	2.2E-04	0.04	0.001	0.0008	6.3E-05	0.009	0.010	7.6	*2.2E-05*	2.5	0.00012	0.000017	0.00021	4.6E-04	6.5E-06	0.55	1.2	0.05	0.0006	0.81	0.0005	0.006	1.1E-05	0.0004	5.1E-05	0.7	0.04	0.0003	1.8E-04	0.00006	0.0012	0.0015
98.5	East Pit	6.8	14	3.6E-04	0.04	0.001	0.0001	2.5E-05	0.001	0.005	5.7	6.5E-06	2.0	0.00016	0.000001	0.00009	7.6E-04	6.7E-06	0.34	0.7	0.06	0.0002	0.48	0.0005	0.006	5.1E-07	0.0004	1.7E-05	1.0	0.02	0.0001	1.3E-04	0.00002	0.0002	0.0015
98.75	East Pit	6.9	14	2.6E-04	0.05	0.001	0.0006	1.1E-04	0.005	0.004	5.4	*1.5E-05*	1.7	0.00008	0.000045	0.00025	4.3E-04	6.9E-06	0.44	0.6	0.03	0.0002	0.38	0.0003	0.007	1.9E-05	0.0004	3.6E-05	0.5	0.02	0.0002	2.0E-04	0.00004	0.0008	0.0013
99	East Pit	6.9	15	2.6E-04	0.05	0.001	0.0006	9.5E-05	0.006	0.005	5.8	*1.6E-05*	1.9	0.00009	0.000033	0.00024	4.5E-04	6.8E-06	0.46	0.7	0.03	0.0002	0.44	0.0004	0.006	1.6E-05	0.0004	4.0E-05	0.5	0.02	0.0002	1.9E-04	0.00005	0.0009	0.0013
WEST PIT																																			
0.25	West Pit	7.5	154	5.7E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.172	38.2	*5.9E-05*	7.3	0.00037	0.000065	0.00045	1.4E-04	0.0000	2.3	11.2	0.29	0.0118	9.43	0.0015	0.03	9.6E-05	0.001	8.5E-05	2.5	0.52	0.0008	4.3E-04	0.00024	0.0041	0.0037
0.5	West Pit	7.4	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.029	11.2	1.4E-05	2.0	0.00007	0.000485	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0019	1.56	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.11	0.0002	4.8E-04	0.00007	0.0012	0.0021
0.75	West Pit	7.3	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.1	1.3E-05	2.0	0.00007	0.000488	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.53	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
1	West Pit	7.4	63	1.0E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.061	17.3	*2.4E-05*	3.2	0.00014	0.000406	0.00044	1.3E-04	0.0000	1.1	4.1	0.11	0.0041	3.34	0.0007	0.02	1.1E-04	0.001	4.1E-05	1.2	0.20	0.0004	5.0E-04	0.00011	0.0018	0.0025
1.25	West Pit	7.5	153	5.8E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.171	38.0	*5.8E-05*	7.3	0.00037	0.000065	0.00045	1.4E-04	0.0000	2.3	11.2	0.29	0.0118	9.39	0.0015	0.03	9.6E-05	0.001	8.5E-05	2.5	0.52	0.0008	4.3E-04	0.00024	0.0041	0.0037
1.5	West Pit	7.3	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.1	1.3E-05	2.0	0.00007	0.000488	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.53	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
1.75	West Pit	7.3	36	1.4E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000492	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.51	0.0004	0.02	7.8E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
2	West Pit	7.4	63	1.1E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.061	17.1	*2.4E-05*	3.2	0.00014	0.000408	0.00044	1.3E-04	0.0000	1.1	4.1	0.11	0.0041	3.30	0.0006	0.02	1.1E-04	0.001	4.1E-05	1.2	0.20	0.0004	5.0E-04	0.00011	0.0018	0.0025
2.25	West Pit	7.5	152	5.9E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.171	37.9	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.3	11.1	0.29	0.0117	9.34	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0041	0.0037
2.5	West Pit	7.3	36	1.4E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000492	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.51	0.0004	0.02	7.8E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
2.75	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	10.9	1.3E-05	1.9	0.00007	0.000496	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.48	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
3	West Pit	7.4	62	1.1E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.060	17.0	*2.3E-05*	3.1	0.00014	0.000410	0.00044	1.3E-04	0.0000	1.1	4.0	0.11	0.0040	3.25	0.0006	0.02	1.1E-04	0.001	4.0E-05	1.2	0.19	0.0004	5.0E-04	0.00010	0.0018	0.0025
3.25	West Pit	7.5	151	6.0E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.170	37.7	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.3	11.1	0.29	0.0117	9.29	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
3.5	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	10.9	1.3E-05	1.9	0.00007	0.000496	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.49	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
3.75	West Pit	7.3	35	1.5E-04	0.16	0.002	0.0004	9.7E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000500	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
4	West Pit	7.4	61	1.2E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.059	16.8	*2.3E-05*	3.1	0.00014	0.000413	0.00044	1.3E-04	0.0000	1.1	4.0	0.11	0.0040	3.22	0.0006	0.02	1.1E-04	0.001	4.0E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
4.25	West Pit	7.5	151	6.2E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.169	37.5	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.2	11.0	0.29	0.0116	9.25	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
4.5	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000500	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.49	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
4.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.9	1.3E-05	1.9	0.00007	0.000504	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
5	West Pit	7.4	61	1.2E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.059	16.7	*2.3E-05*	3.1	0.00013	0.000414	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0039	3.18	0.0006	0.02	1.0E-04	0.001	4.0E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
5.25	West Pit	7.5	150	6.2E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.168	37.4	*5.7E-05*	7.1	0.00036	0.000067	0.00045	1.4E-04	0.0000	2.2	11.0	0.29	0.0116	9.21	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
5.5	West Pit	7.3	36	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.9	1.3E-05	1.9	0.00007	0.000502	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
5.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000506	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.45	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
6	West Pit	7.4	60	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.058	16.6	*2.3E-05*	3.0	0.00013	0.000415	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0039	3.15	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
6.25	West Pit	7.5	150	6.3E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.168	37.3	*5.7E-05*	7.1	0.00036	0.000067	0.00045	1.4E-04	0.0000	2.2	10.9	0.28	0.0115	9.18	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.51	0.0008	4.4E-04	0.00024	0.0040	0.0036
6.5	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000504	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.45	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
6.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.7	1.3E-05	1.9	0.00007	0.000508	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.43	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
7	West Pit	7.4	60	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.057	16.5	*2.3E-05*	3.0	0.00013	0.000416	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0038	3.12	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0003	4.9E-04	0.00010	0.0018	0.0024
7.25	West Pit	7.5	149	6.3E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.167	37.2	*5.7E-05*	7.1	0.00036	0.000068	0.00045	1.4E-04	0.0000	2.2	10.9	0.28	0.0115	9.15	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.50	0.0008	4.4E-04	0.00024	0.0040	0.0036
7.5	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.7	1.3E-05	1.9	0.00007	0.000506	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.44	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
7.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.026	10.6	1.3E-05	1.9	0.00007	0.000510	0.00054	1.4E-04	0.0000	0.8	1.8	0.06	0.0017	1.41	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
8	West Pit	7.4	59	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.057	16.3	*2.2E-05*	3.0	0.00013	0.000417	0.00044	1.3E-04	0.0000	1.1	3.8	0.11	0.0038	3.09	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0003	4.9E-04	0.00010	0.0017	0.0024

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-
8.25	West Pit	7.5	149	6.4E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.166	37.0	*5.7E-05*	7.1	0.00036	0.000068	0.00045	1.4E-04	0.0000	2.2
8.5	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.026	10.7	1.3E-05	1.9	0.00007	0.000508	0.00054	1.4E-04	0.0000	0.8
8.75	West Pit	7.3	34	1.7E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.026	10.5	1.3E-05	1.9	0.00007	0.000512	0.00054	1.4E-04	0.0000	0.8
9	West Pit	7.4	59	1.3E-04	0.16	0.003	0.0005	6.2E-04	0.012	0.056	16.2	*2.2E-05*	3.0	0.00013	0.000419	0.00044	1.3E-04	0.0000	1.1
9.25	West Pit	7.5	148	6.5E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.166	36.9	*5.7E-05*	7.1	0.00036	0.000068	0.00045	1.4E-04	0.0000	2.2
9.5	West Pit	7.3	34	1.7E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.026	10.6	1.3E-05	1.9	0.00007	0.000510	0.00054	1.4E-04	0.0000	0.8
9.75	West Pit	7.3	34	1.7E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.026	10.5	1.2E-05	1.8	0.00007	0.000515	0.00054	1.4E-04	0.0000	0.8
10	West Pit	7.4	58	1.3E-04	0.15	0.003	0.0004	6.2E-04	0.012	0.056	16.1	*2.2E-05*	3.0	0.00013	0.000420	0.00044	1.3E-04	0.0000	1.1
10.25	West Pit	7.5	148	6.6E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.165	36.8	*5.6E-05*	7.0	0.00036	0.000069	0.00045	1.4E-04	0.0000	2.2
10.5	West Pit	7.3	34	1.7E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.026	10.5	1.2E-05	1.8	0.00007	0.000513	0.00054	1.4E-04	0.0000	0.8
10.75	West Pit	7.3	34	1.8E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.4	1.2E-05	1.8	0.00006	0.000518	0.00054	1.4E-04	0.0000	0.8
11	West Pit	7.4	58	1.3E-04	0.15	0.003	0.0004	6.2E-04	0.012	0.055	16.0	*2.2E-05*	2.9	0.00013	0.000422	0.00044	1.3E-04	0.0000	1.1
11.25	West Pit	7.5	147	6.7E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.165	36.7	*5.6E-05*	7.0	0.00036	0.000069	0.00045	1.4E-04	0.0000	2.2
11.5	West Pit	7.3	34	1.7E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.4	1.2E-05	1.8	0.00007	0.000516	0.00054	1.4E-04	0.0000	0.8
11.75	West Pit	7.3	33	1.8E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.3	1.2E-05	1.8	0.00006	0.000521	0.00054	1.4E-04	0.0000	0.8
12	West Pit	7.4	57	1.4E-04	0.15	0.003	0.0004	6.2E-04	0.012	0.055	15.9	*2.2E-05*	2.9	0.00013	0.000423	0.00044	1.3E-04	0.0000	1.1
12.25	West Pit	7.5	147	6.8E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.164	36.6	*5.6E-05*	7.0	0.00036	0.000069	0.00044	1.4E-04	0.0000	2.2
12.5	West Pit	7.3	33	1.8E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.3	1.2E-05	1.8	0.00006	0.000519	0.00054	1.4E-04	0.0000	0.8
12.75	West Pit	7.3	33	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.2	1.2E-05	1.8	0.00006	0.000524	0.00054	1.4E-04	0.0000	0.8
13	West Pit	7.4	57	1.4E-04	0.15	0.003	0.0004	6.2E-04	0.012	0.054	15.7	*2.1E-05*	2.9	0.00013	0.000425	0.00044	1.3E-04	0.0000	1.1
13.25	West Pit	7.5	146	6.9E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.163	36.4	*5.6E-05*	7.0	0.00035	0.000070	0.00044	1.4E-04	0.0000	2.2
13.5	West Pit	7.3	33	1.8E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.3	1.2E-05	1.8	0.00006	0.000522	0.00054	1.4E-04	0.0000	0.8
13.75	West Pit	7.3	33	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.1	1.2E-05	1.8	0.00006	0.000527	0.00054	1.4E-04	0.0000	0.8
14	West Pit	7.4	56	1.4E-04	0.15	0.003	0.0004	6.2E-04	0.012	0.054	15.6	*2.1E-05*	2.9	0.00012	0.000426	0.00044	1.3E-04	0.0000	1.1
14.25	West Pit	7.5	146	7.0E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.163	36.3	*5.6E-05*	6.9	0.00035	0.000070	0.00044	1.4E-04	0.0000	2.2
14.5	West Pit	7.3	33	1.8E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.025	10.2	1.2E-05	1.8	0.00006	0.000524	0.00054	1.4E-04	0.0000	0.8
14.75	West Pit	7.3	32	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.1	1.2E-05	1.8	0.00006	0.000529	0.00054	1.4E-04	0.0000	0.8
15	West Pit	7.4	56	1.4E-04	0.15	0.003	0.0004	6.2E-04	0.011	0.053	15.5	*2.1E-05*	2.9	0.00012	0.000427	0.00044	1.3E-04	0.0000	1.1
15.25	West Pit	7.5	145	7.0E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.162	36.2	*5.5E-05*	6.9	0.00035	0.000070	0.00044	1.4E-04	0.0000	2.2
15.5	West Pit	7.3	33	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.1	1.2E-05	1.8	0.00006	0.000526	0.00054	1.4E-04	0.0000	0.8
15.75	West Pit	7.3	32	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.0	1.2E-05	1.8	0.00006	0.000531	0.00054	1.4E-04	0.0000	0.8
16	West Pit	7.4	56	1.4E-04	0.15	0.003	0.0004	6.3E-04	0.011	0.053	15.5	*2.1E-05*	2.8	0.00012	0.000428	0.00044	1.3E-04	0.0000	1.1
16.25	West Pit	7.5	145	7.1E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.162	36.1	*5.5E-05*	6.9	0.00035	0.000071	0.00044	1.4E-04	0.0000	2.2
16.5	West Pit	7.3	32	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.1	1.2E-05	1.8	0.00006	0.000528	0.00054	1.4E-04	0.0000	0.8
16.75	West Pit	7.3	32	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.0	1.2E-05	1.8	0.00006	0.000533	0.00054	1.5E-04	0.0000	0.8
17	West Pit	7.4	55	1.5E-04	0.15	0.003	0.0004	6.3E-04	0.011	0.052	15.4	*2.1E-05*	2.8	0.00012	0.000429	0.00044	1.3E-04	0.0000	1.1
17.25	West Pit	7.5	144	7.1E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.161	36.0	*5.5E-05*	6.9	0.00035	0.000071	0.00044	1.4E-04	0.0000	2.2
17.5	West Pit	7.3	32	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.0	1.2E-05	1.8	0.00006	0.000530	0.00054	1.4E-04	0.0000	0.8
17.75	West Pit	7.3	32	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	9.9	1.2E-05	1.7	0.00006	0.000535	0.00054	1.5E-04	0.0000	0.8
18	West Pit	7.4	55	1.5E-04	0.15	0.003	0.0004	6.3E-04	0.011	0.052	15.3	*2.1E-05*	2.8	0.00012	0.000431	0.00044	1.3E-04	0.0000	1.0
18.25	West Pit	7.5	144	7.2E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.161	35.9	*5.5E-05*	6.8	0.00035	0.000072	0.00044	1.4E-04	0.0000	2.2
18.5	West Pit	7.3	32	1.9E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	10.0	1.2E-05	1.8	0.00006	0.000532	0.00054	1.4E-04	0.0000	0.8
18.75	West Pit	7.3	32	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.9	1.2E-05	1.7	0.00006	0.000537	0.00054	1.5E-04	0.0000	0.8
19	West Pit	7.4	54	1.5E-04	0.15	0.003	0.0004	6.3E-04	0.011	0.051	15.2	*2.1E-05*	2.8	0.00012	0.000432	0.00044	1.3E-04	0.0000	1.0
19.25	West Pit	7.5	143	7.2E-05	0.16	0.002	0.0007	2.3E-04	0.035	0.160	35.8	*5.5E-05*	6.8	0.00035	0.000072	0.00044	1.4E-04	0.0000	2.2
19.5	West Pit	7.3	32	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.024	9.9	1.2E-05	1.7	0.00006	0.000534	0.00054	1.5E-04	0.0000	0.8
19.75	West Pit	7.3	31	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.8	1.2E-05	1.7	0.00006	0.000539	0.00054	1.5E-04	0.0000	0.8
20	West Pit	7.4	54	1.5E-04	0.15	0.003	0.0004	6.3E-04	0.011	0.051	15.1	*2.0E-05*	2.8	0.00012	0.000433	0.00044	1.3E-04	0.0000	1.0
20.25	West Pit	7.5	143	7.3E-05	0.16	0.002	0.0006	2.3E-04	0.035	0.159	35.7	*5.5E-05*	6.8	0.00035	0.000072	0.00044	1.4E-04	0.0000	2.2
20.5	West Pit	7.3	32	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.9	1.2E-05	1.7	0.00006	0.000537	0.00054	1.5E-04	0.0000	0.8
20.75	West Pit	7.3	31	2.1E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.8	1.1E-05	1.7	0.00006	0.000542	0.00054	1.5E-04	0.0000	0.8
21	West Pit	7.4	54	1.6E-04	0.15	0.003	0.0004	6.4E-04	0.011	0.051	15.0	*2.0E-05*	2.7	0.00012	0.000435	0.00044	1.3E-04	0.0000	1.0
21.25	West Pit	7.5	142	7.4E-05	0.16	0.002	0.0006	2.3E-04	0.034	0.159	35.5	*5.4E-05*	6.8	0.00034	0.000073	0.00044	1.4E-04	0.0000	2.2
21.5	West Pit	7.3	31	2.0E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.8	1.2E-05	1.7	0.00006	0.000540	0.00054	1.5E-04	0.0000	0.8
21.75	West Pit	7.3	31	2.1E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.7	1.1E-05	1.7	0.00006	0.000545	0.00054	1.5E-04	0.0000	0.8
22	West Pit	7.4	53	1.6E-04	0.15	0.003	0.0004	6.4E-04	0.011	0.050	14.9	*2.0E-05*	2.7	0.00012	0.000436	0.00044	1.3E-04	0.0000	1.0
22.25	West Pit	7.5	142	7.6E-05	0.16	0.002	0.0006	2.3E-04	0.034	0.158	35.4	*5.4E-05*	6.8	0.00034	0.000073	0.00044	1.4E-04	0.0000	2.1
22.5	West Pit	7.3	31	2.1E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.023	9.7	1.1E-05	1.7	0.00006	0.000543	0.00054	1.5E-04	0.0000	0.8
22.75	West Pit	7.3	31	2.2E-04	0.15	0.002	0.0004	9.8E-04	0.005	0.022	9.6	1.1E-05	1.7	0.00006	0.000548	0.00054	1.5E-04	0.0000	0.8
23	West Pit	7.4	53	1.6E-04	0.15	0.003	0.0004	6.4E-04	0.011	0.050	14.8	*2.0E-05*	2.7	0.00012	0.000438	0.00044	1.3E-04	0.0000	1.0
23.25	West Pit	7.5	141	7.7E-05	0.16	0.002	0.0006	2.3E-04	0.034	0.158	35.3	*5.4E-05*	6.7	0.00034	0.000073	0.00044	1.4E-04	0.0000	2.1
23.5	West Pit	7.1	27	2.7E-04	0.14	0.001	0.0003	9.5E-04	0.003	0.014	9.5	1.0E-05	2.2	0.00012	0.000581	0.00062	2.7E-04	0.0000	0.7
23.75	West Pit	7.1	26	2.4E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.011	9.1	*1.6E-05*	2.1	0.00008	0.000579	0.00069	2.4E-04	0.0000	0.7
24	West Pit	7.2	33	2.1E-04	0.14	0.001	0.0007	8.1E-04	0.008	0.020	11.0	*1.9E-05*	2.5	0.00010	0.000511	0.00061	2.2E-04	0.0000	0.8
24.25	West Pit	7.4	83	1.1E-04	0.14	0.002	0.0008	3.6E-04	0.021	0.081	22.5	*3.9E-05*	4.8	0.00023	0.000200	0.00044	1.7E-04	0.0000	1.4
24.5	West Pit	7.0	26	2.9E-04	0.14	0.001	0.0003	9.3E-04	0.003	0.011	9.3	1.0E-05	2.3	0.00014	0.000545	0.00062	3.3E-04	0.0000	0.6
24.75	West Pit	7.1	25	2.5E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.011	9.1	*1.5E-05*	2.1	0.00008	0.000578	0.00069	2.4E-04	0.0000	0.7
25	West Pit	7.1	33	2.1E-04	0.14	0.001	0.0007	8.2E-04	0.007	0.019	10.9	*1.9E-05*	2.5	0.00010	0.000513	0.00061	2.2E-04	0.0000	0.8
25.25	West Pit	7.4	82	1.2E-04	0.14	0.002	0.0008	3.7E-04	0.021	0.079	22.2	*3.8E-05*	4.7	0.00023	0.000207	0.00044	1.7E-04	0.0000	1.4
25.5	West Pit	7.0	25	3.0E-04	0.14	0.001	0.0003	9.3E-04	0.002	0.011	9.3	1.0E-05	2.3	0.00013	0.000544	0.00062	3.3E-04	0.0000	0.6
25.75	West Pit	7.1	25	2.5E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.010	9.0	*1.5E-05*	2.1	0.00008	0.000578	0.00069	2.4E-04	0.0000	0.7
26	West Pit	7.1	32	2.2E-04	0.14	0.001	0.0007	8.2E-04	0.007	0.019	10.8	*1.9E-05*	2.5	0.00010	0.000515	0.00062	2.2E-04	0.0000	0.8
26.25	West Pit	7.4	80	1.2E-04	0.14	0.002	0.0008	3.7E-04	0.020	0.077	21.9	*3.8E-05*	4.7	0.00022	0.000213	0.00044	1.7E-04	0.0000	1.4
26.5	West Pit	7.0	25	3.0E-04	0.14	0.001	0.0003	9.3E-04	0.002	0.011	9.2	9.9E-06	2.3	0.00013	0.000543	0.00061	3.3E-04	0.0000	0.6
26.75	West Pit	7.1	25	2.6E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.010	9.0	*1.5E-05*	2.1	0.00008	0.000576	0.00069	2.4E-04	0.0000	0.7
27	West Pit	7.1	32	2.2E-04	0.14	0.001	0.0007	8.2E-04	0.007	0.018	10.7	*1.9E-05*	2.5	0.00010	0.000515	0.00062	2.2E-04	0.0000	0.8
27.25	West Pit	7.4	79	1.2E-04	0.14	0.002	0.0008	3.8E-04	0.020	0.076	21.5	*3.7E-05*	4.6	0.00022	0.000219	0.00044	1.7E-04	0.0000	1.4
27.5	West Pit	7.0	25	3.1E-04	0.13	0.001	0.0003	9.3E-04	0.002	0.010	9.2	9.8E-06	2.3	0.00013	0.000541	0.00061	3.3E-04	0.0000	0.6
27.75	West Pit	7.1	25	2.7E-04	0.14	0.001	0.0006	9.7E-04	0.005	0.010	8.9	*1.5E-05*	2.0	0.00008	0.000574	0.00069	2.5E-04	0.0000	0.7
28	West Pit	7.1	31	2.3E-04	0.14	0.001	0.0007	8.3E-04	0.007	0.018	10.5	*1.9E-05*	2.4	0.00010	0.000515	0.00062	2.3E-04	0.0000	0.8
28.25	West Pit	7.4	77	1.3E-04	0.14	0.002	0.0008	3.9E-04	0.019	0.074	21.2	*3.7E-05*	4.5	0.00022	0.000226	0.00044	1.7E-04	0.0000	1.3
28.5	West Pit	7.0	25	3.2E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.010	9.1	9.7E-06	2.3	0.00013	0.000540	0.00061	3.4E-04	0.0000	0.6
28.75	West Pit	7.1	24	2.7E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.010	8.8	*1.5E-05*	2.0	0.00008	0.000574	0.00069	2.5E-04	0.0000	0.7
29	West Pit	7.1	31	2.3E-04	0.14	0.001	0.0007	8.3E-04	0.007	0.017	10.5	*1.9E-05*	2.4	0.00010	0.000516	0.00062	2.3E-04	0.0000	0.8
29.25	West Pit	7.4	76	1.3E-04	0.14	0.002	0.0008	3.9E-04	0.019	0.072	20.9	*3.6E-05*	4.5	0.00021	0.000232	0.00044	1.7E-04	0.0000	1.3
29.5	West Pit	7.0	25	3.2E-04	0.13	0.001	0.0003	9.3E-04	0.002	0.010	9.1	9.7E-06	2.3	0.00013	0.000540	0.00061	3.4E-04	0.0000	0.6
29.75	West Pit	7.1	24	2.7E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.010	8.8	*1.5E-05*	2.0	0.00008	0.000574	0.00069	2.5E-04	0.0000	0.7
30	West Pit	7.1	31	2.3E-04	0.14	0.001	0.0007	8.4E-04	0.007	0.017	10.4	*1.8E-05*	2.4	0.00010	0.000518	0.00063	2.3E-04	0.0000	0.8
30.25	West Pit	7.3	75	1.3E-04	0.14	0.002	0.0008	4.0E-04	0.019	0.070	20.6	*3.6E-05*	4.4	0.00021	0.000239	0.00044	1.7E-04	0.0000	1.3

YEAR	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
8.25	10.9	0.28	0.0114	9.11	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.4	0.50	0.0008	4.4E-04	0.00024	0.0040	0.0036
8.5	1.9	0.06	0.0017	1.42	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
8.75	1.8	0.06	0.0017	1.40	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0020
9	3.8	0.11	0.0038	3.06	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.18	0.0003	4.9E-04	0.00010	0.0017	0.0024
9.25	10.8	0.28	0.0114	9.08	0.0015	0.03	9.6E-05	0.001	8.2E-05	2.4	0.50	0.0008	4.4E-04	0.00023	0.0040	0.0036
9.5	1.8	0.06	0.0017	1.40	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0020
9.75	1.8	0.06	0.0016	1.38	0.0004	0.02	7.7E-05	0.001	2.6E-05	0.9	0.10	0.0002	4.6E-04	0.00006	0.0011	0.0020
10	3.7	0.10	0.0037	3.03	0.0006	0.02	1.0E-04	0.001	3.8E-05	1.2	0.18	0.0003	4.9E-04	0.00010	0.0017	0.0024
10.25	10.8	0.28	0.0113	9.04	0.0015	0.03	9.6E-05	0.001	8.2E-05	2.4	0.50	0.0008	4.4E-04	0.00023	0.0039	0.0036
10.5	1.8	0.06	0.0016	1.39	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.6E-04	0.00006	0.0011	0.0020
10.75	1.8	0.06	0.0016	1.36	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.9	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
11	3.7	0.10	0.0037	3.00	0.0006	0.02	1.0E-04	0.001	3.8E-05	1.2	0.18	0.0003	4.9E-04	0.00010	0.0017	0.0024
11.25	10.7	0.28	0.0113	9.01	0.0015	0.03	9.6E-05	0.001	8.2E-05	2.4	0.50	0.0008	4.4E-04	0.00023	0.0039	0.0036
11.5	1.8	0.06	0.0016	1.37	0.0004	0.02	7.7E-05	0.001	2.6E-05	0.9	0.10	0.0002	4.6E-04	0.00006	0.0011	0.0020
11.75	1.8	0.06	0.0016	1.35	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.9	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
12	3.7	0.10	0.0037	2.97	0.0006	0.02	1.0E-04	0.001	3.8E-05	1.2	0.18	0.0003	4.8E-04	0.00010	0.0017	0.0024
12.25	10.7	0.28	0.0113	8.98	0.0015	0.03	9.6E-05	0.001	8.1E-05	2.4	0.50	0.0008	4.4E-04	0.00023	0.0039	0.0036
12.5	1.8	0.06	0.0016	1.36	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.9	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
12.75	1.7	0.05	0.0016	1.33	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.9	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
13	3.6	0.10	0.0036	2.94	0.0006	0.02	1.0E-04	0.001	3.8E-05	1.2	0.18	0.0003	4.8E-04	0.00010	0.0017	0.0023
13.25	10.7	0.28	0.0112	8.94	0.0015	0.03	9.6E-05	0.001	8.1E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0039	0.0036
13.5	1.8	0.06	0.0016	1.34	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.9	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
13.75	1.7	0.05	0.0016	1.32	0.0003	0.02	7.6E-05	0.001	2.6E-05	0.8	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
14	3.6	0.10	0.0036	2.92	0.0006	0.02	1.0E-04	0.001	3.7E-05	1.2	0.18	0.0003	4.8E-04	0.00010	0.0017	0.0023
14.25	10.6	0.28	0.0112	8.91	0.0015	0.03	9.6E-05	0.001	8.1E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0039	0.0036
14.5	1.7	0.05	0.0016	1.33	0.0004	0.02	7.6E-05	0.001	2.6E-05	0.8	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
14.75	1.7	0.05	0.0015	1.31	0.0003	0.02	7.5E-05	0.001	2.6E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
15	3.6	0.10	0.0036	2.89	0.0006	0.02	1.0E-04	0.001	3.7E-05	1.2	0.17	0.0003	4.8E-04	0.00010	0.0017	0.0023
15.25	10.6	0.28	0.0111	8.88	0.0015	0.03	9.6E-05	0.001	8.1E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0039	0.0036
15.5	1.7	0.05	0.0016	1.32	0.0003	0.02	7.5E-05	0.001	2.6E-05	0.8	0.09	0.0002	4.6E-04	0.00006	0.0011	0.0020
15.75	1.7	0.05	0.0015	1.29	0.0003	0.02	7.5E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
16	3.5	0.10	0.0035	2.87	0.0006	0.02	1.0E-04	0.001	3.7E-05	1.2	0.17	0.0003	4.8E-04	0.00010	0.0016	0.0023
16.25	10.6	0.28	0.0111	8.85	0.0015	0.03	9.6E-05	0.001	8.0E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0039	0.0036
16.5	1.7	0.05	0.0015	1.31	0.0003	0.02	7.5E-05	0.001	2.6E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
16.75	1.7	0.05	0.0015	1.28	0.0003	0.02	7.5E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
17	3.5	0.10	0.0035	2.85	0.0006	0.02	1.0E-04	0.001	3.7E-05	1.2	0.17	0.0003	4.8E-04	0.00009	0.0016	0.0023
17.25	10.5	0.27	0.0111	8.82	0.0014	0.03	9.6E-05	0.001	8.0E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0039	0.0036
17.5	1.7	0.05	0.0015	1.29	0.0003	0.02	7.5E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
17.75	1.7	0.05	0.0015	1.27	0.0003	0.02	7.5E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
18	3.5	0.10	0.0035	2.82	0.0006	0.02	9.9E-05	0.001	3.6E-05	1.2	0.17	0.0003	4.8E-04	0.00009	0.0016	0.0023
18.25	10.5	0.27	0.0110	8.79	0.0014	0.03	9.6E-05	0.001	8.0E-05	2.4	0.49	0.0008	4.4E-04	0.00023	0.0038	0.0036
18.5	1.7	0.05	0.0015	1.28	0.0003	0.02	7.5E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
18.75	1.7	0.05	0.0015	1.26	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0020
19	3.5	0.10	0.0034	2.80	0.0006	0.02	9.9E-05	0.001	3.6E-05	1.2	0.17	0.0003	4.8E-04	0.00009	0.0016	0.0023
19.25	10.4	0.27	0.0110	8.76	0.0014	0.03	9.6E-05	0.001	8.0E-05	2.4	0.48	0.0008	4.4E-04	0.00023	0.0038	0.0036
19.5	1.7	0.05	0.0015	1.27	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0011	0.0020
19.75	1.6	0.05	0.0015	1.25	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0020
20	3.4	0.10	0.0034	2.77	0.0006	0.02	9.9E-05	0.001	3.6E-05	1.1	0.17	0.0003	4.8E-04	0.00009	0.0016	0.0023
20.25	10.4	0.27	0.0109	8.73	0.0014	0.03	9.6E-05	0.001	8.0E-05	2.4	0.48	0.0008	4.4E-04	0.00023	0.0038	0.0035
20.5	1.7	0.05	0.0015	1.26	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0020
20.75	1.6	0.05	0.0014	1.23	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0019
21	3.4	0.10	0.0034	2.75	0.0006	0.02	9.8E-05	0.001	3.6E-05	1.1	0.17	0.0003	4.8E-04	0.00009	0.0016	0.0023
21.25	10.4	0.27	0.0109	8.70	0.0014	0.03	9.6E-05	0.001	7.9E-05	2.4	0.48	0.0008	4.4E-04	0.00023	0.0038	0.0035
21.5	1.6	0.05	0.0015	1.24	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0019
21.75	1.6	0.05	0.0014	1.22	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.4E-04	0.00006	0.0010	0.0019
22	3.4	0.10	0.0033	2.73	0.0006	0.02	9.8E-05	0.001	3.6E-05	1.1	0.17	0.0003	4.7E-04	0.00009	0.0016	0.0023
22.25	10.3	0.27	0.0109	8.67	0.0014	0.03	9.6E-05	0.001	7.9E-05	2.4	0.48	0.0008	4.4E-04	0.00022	0.0038	0.0035
22.5	1.6	0.05	0.0014	1.23	0.0003	0.02	7.4E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.5E-04	0.00006	0.0010	0.0019
22.75	1.6	0.05	0.0014	1.21	0.0003	0.02	7.3E-05	0.001	2.5E-05	0.8	0.09	0.0002	4.4E-04	0.00006	0.0010	0.0019
23	3.3	0.09	0.0033	2.70	0.0006	0.02	9.7E-05	0.001	3.5E-05	1.1	0.16	0.0003	4.7E-04	0.00009	0.0016	0.0023
23.25	10.3	0.27	0.0108	8.64	0.0014	0.03	9.6E-05	0.001	7.9E-05	2.4	0.48	0.0008	4.4E-04	0.00022	0.0038	0.0035
23.5	1.3	0.06	0.0008	0.88	0.0005	0.02	6.0E-05	0.001	2.6E-05	1.0	0.06	0.0002	4.1E-04	0.00005	0.0008	0.0022
23.75	1.1	0.04	0.0006	0.69	0.0004	0.02	5.9E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.4E-04	0.00006	0.0011	0.0022
24	1.7	0.06	0.0012	1.19	0.0005	0.02	7.4E-05	0.001	4.5E-05	0.9	0.08	0.0003	4.6E-04	0.00007	0.0014	0.0023
24.25	5.6	0.16	0.0055	4.55	0.0010	0.02	1.1E-04	0.001	6.9E-05	1.6	0.25	0.0006	4.9E-04	0.00015	0.0026	0.0030
24.5	1.1	0.06	0.0005	0.75	0.0005	0.02	4.8E-05	0.001	2.6E-05	1.1	0.05	0.0002	3.9E-04	0.00004	0.0007	0.0023
24.75	1.0	0.04	0.0006	0.68	0.0004	0.02	5.8E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.4E-04	0.00006	0.0011	0.0021
25	1.6	0.06	0.0012	1.16	0.0005	0.02	7.3E-05	0.001	4.5E-05	0.9	0.08	0.0003	4.5E-04	0.00007	0.0014	0.0023
25.25	5.5	0.15	0.0053	4.45	0.0010	0.02	1.1E-04	0.001	6.9E-05	1.6	0.25	0.0006	4.9E-04	0.00015	0.0026	0.0030
25.5	1.1	0.06	0.0005	0.73	0.0005	0.02	4.7E-05	0.001	2.6E-05	1.1	0.05	0.0002	3.9E-04	0.00004	0.0007	0.0023
25.75	1.0	0.04	0.0006	0.66	0.0004	0.02	5.7E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.4E-04	0.00006	0.0011	0.0021
26	1.6	0.06	0.0011	1.13	0.0005	0.02	7.2E-05	0.001	4.5E-05	0.9	0.07	0.0003	4.5E-04	0.00007	0.0013	0.0023
26.25	5.4	0.15	0.0052	4.35	0.0010	0.02	1.1E-04	0.001	6.8E-05	1.6	0.24	0.0006	4.9E-04	0.00015	0.0025	0.0030
26.5	1.1	0.06	0.0005	0.72	0.0005	0.02	4.6E-05	0.001	2.6E-05	1.1	0.05	0.0002	3.9E-04	0.00004	0.0007	0.0023
26.75	1.0	0.04	0.0006	0.65	0.0004	0.02	5.7E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.4E-04	0.00006	0.0011	0.0021
27	1.6	0.06	0.0011	1.11	0.0005	0.02	7.1E-05	0.001	4.5E-05	0.9	0.07	0.0003	4.5E-04	0.00007	0.0013	0.0023
27.25	5.2	0.15	0.0051	4.25	0.0009	0.02	1.1E-04	0.001	6.8E-05	1.5	0.24	0.0005	4.9E-04	0.00014	0.0025	0.0030
27.5	1.1	0.06	0.0005	0.71	0.0005	0.02	4.5E-05	0.001	2.6E-05	1.1	0.05	0.0002	3.9E-04	0.00004	0.0007	0.0023
27.75	1.0	0.04	0.0005	0.64	0.0004	0.02	5.6E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021
28	1.5	0.06	0.0011	1.08	0.0005	0.02	7.0E-05	0.001	4.4E-05	0.9	0.07	0.0003	4.5E-04	0.00007	0.0013	0.0023
28.25	5.1	0.15	0.0050	4.16	0.0009	0.02	1.1E-04	0.001	6.7E-05	1.5	0.23	0.0005	4.9E-04	0.00014	0.0025	0.0030
28.5	1.1	0.06	0.0005	0.70	0.0005	0.02	4.5E-05	0.001	2.6E-05	1.1	0.05	0.0002	3.9E-04	0.00004	0.0007	0.0023
28.75	1.0	0.04	0.0005	0.63	0.0004	0.02	5.5E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021
29	1.5	0.06	0.0010	1.06	0.0005	0.02	6.9E-05	0.001	4.4E-05	0.9	0.07	0.0003	4.5E-04	0.00007	0.0013	0.0022
29.25	5.0	0.14	0.0049	4.07	0.0009	0.02	1.1E-04	0.001	6.7E-05	1.5	0.23	0.0005	4.9E-04	0.00014	0.0024	0.0029
29.5	1.1	0.06	0.0005	0.69	0.0005	0.02	4.4E-05	0.001	2.6E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
29.75	1.0	0.04	0.0005	0.62	0.0004	0.02	5.5E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021
30	1.5	0.05	0.0010	1.03	0.0005	0.02	6.8E-05	0.001	4.4E-05	0.9	0.07	0.0003	4.4E-04	0.00007	0.0013	0.0022
30.25	4.9	0.14	0.0047	3.98	0.0009	0.02	1.1E-04	0.001	6.6E-05	1.5	0.22	0.0005	4.9E-04	0.00014	0.0024	0.0029

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
30.5	West Pit	7.0	24	3.2E-04	0.13	0.001	0.0003	9.3E-04	0.002	0.010	9.0	9.6E-06	2.3	0.00013	0.000539	0.00061	3.4E-04	0.0000	0.6	1.0	0.06	0.0005	0.68	0.0005	0.02	4.4E-05	0.001	2.6E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
30.75	West Pit	7.1	24	2.8E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.009	8.8	1.5E-05	2.0	0.00008	0.000572	0.00069	2.5E-04	0.0000	0.7	1.0	0.04	0.0005	0.61	0.0004	0.02	5.4E-05	0.001	3.9E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021
31	West Pit	7.1	30	2.4E-04	0.14	0.001	0.0007	8.4E-04	0.007	0.017	10.3	1.8E-05	2.4	0.00010	0.000518	0.00063	2.3E-04	0.0000	0.8	1.4	0.05	0.0010	1.01	0.0005	0.02	6.7E-05	0.001	4.4E-05	0.9	0.07	0.0003	4.4E-04	0.00007	0.0013	0.0022
31.25	West Pit	7.3	73	1.3E-04	0.14	0.002	0.0008	4.0E-04	0.018	0.069	20.3	3.5E-05	4.4	0.00021	0.000245	0.00044	1.7E-04	0.0000	1.3	4.8	0.14	0.0046	3.89	0.0009	0.02	1.1E-04	0.001	6.6E-05	1.5	0.22	0.0005	4.9E-04	0.00014	0.0024	0.0029
31.5	West Pit	7.0	24	3.3E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.010	9.0	9.5E-06	2.3	0.00013	0.000538	0.00061	3.4E-04	0.0000	0.6	1.0	0.06	0.0005	0.67	0.0005	0.02	4.3E-05	0.001	2.5E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
31.75	West Pit	7.1	24	2.9E-04	0.14	0.001	0.0006	9.7E-04	0.005	0.009	8.7	1.5E-05	2.0	0.00007	0.000570	0.00069	2.5E-04	0.0000	0.7	1.0	0.04	0.0005	0.60	0.0004	0.02	5.4E-05	0.001	3.8E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

32	West Pit	7.1	30	2.5E-04	0.14	0.001	0.0007	8.4E-04	0.007	0.016	10.2	1.8E-05	2.4	0.00009	0.000518	0.00063	2.3E-04	0.0000	0.8	1.4	0.05	0.0010	0.99	0.0005	0.02	6.6E-05	0.001	4.4E-05	0.9	0.07	0.0003	4.4E-04	0.00007	0.0013	0.0022
32.25	West Pit	7.3	72	1.4E-04	0.14	0.002	0.0008	4.1E-04	0.018	0.067	20.0	3.5E-05	4.3	0.00021	0.000251	0.00045	1.8E-04	0.0000	1.3	4.7	0.14	0.0045	3.80	0.0009	0.02	1.1E-04	0.001	6.5E-05	1.5	0.21	0.0005	4.9E-04	0.00013	0.0023	0.0029
32.5	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.9	9.4E-06	2.3	0.00013	0.000536	0.00061	3.4E-04	0.0000	0.6	1.0	0.06	0.0004	0.66	0.0005	0.02	4.2E-05	0.001	2.5E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
32.75	West Pit	7.1	24	2.9E-04	0.14	0.001	0.0006	9.7E-04	0.005	0.009	8.6	1.5E-05	2.0	0.00007	0.000569	0.00069	2.5E-04	0.0000	0.7	0.9	0.04	0.0005	0.59	0.0004	0.02	5.3E-05	0.001	3.8E-05	0.8	0.05	0.0003	4.3E-04	0.00006	0.0011	0.0021
33	West Pit	7.1	30	2.5E-04	0.14	0.001	0.0007	8.5E-04	0.007	0.016	10.1	1.8E-05	2.4	0.00009	0.000518	0.00063	2.4E-04	0.0000	0.8	1.4	0.05	0.0009	0.97	0.0005	0.02	6.6E-05	0.001	4.3E-05	0.9	0.07	0.0003	4.4E-04	0.00007	0.0013	0.0022
33.25	West Pit	7.3	71	1.4E-04	0.14	0.002	0.0008	4.1E-04	0.018	0.066	19.7	3.4E-05	4.3	0.00020	0.000257	0.00045	1.8E-04	0.0000	1.3	4.6	0.13	0.0044	3.71	0.0009	0.02	1.1E-04	0.001	6.5E-05	1.4	0.21	0.0005	4.9E-04	0.00013	0.0023	0.0029
33.5	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.9	9.4E-06	2.2	0.00013	0.000536	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.66	0.0005	0.02	4.2E-05	0.001	2.5E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
33.75	West Pit	7.1	23	2.9E-04	0.14	0.001	0.0006	9.7E-04	0.005	0.009	8.6	1.5E-05	2.0	0.00007	0.000569	0.00069	2.5E-04	0.0000	0.7	0.9	0.04	0.0005	0.58	0.0004	0.02	5.3E-05	0.001	3.8E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0011	0.0021
34	West Pit	7.1	29	2.5E-04	0.14	0.001	0.0007	8.5E-04	0.007	0.015	10.0	1.8E-05	2.3	0.00009	0.000519	0.00063	2.4E-04	0.0000	0.8	1.4	0.05	0.0009	0.95	0.0005	0.02	6.5E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.4E-04	0.00007	0.0013	0.0022
34.25	West Pit	7.3	69	1.4E-04	0.14	0.002	0.0008	4.2E-04	0.018	0.064	19.4	3.4E-05	4.2	0.00020	0.000264	0.00045	1.8E-04	0.0000	1.3	4.5	0.13	0.0043	3.63	0.0009	0.02	1.1E-04	0.001	6.4E-05	1.4	0.21	0.0005	4.9E-04	0.00013	0.0023	0.0029
34.5	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.8	9.3E-06	2.2	0.00013	0.000536	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.65	0.0005	0.02	4.1E-05	0.001	2.5E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
34.75	West Pit	7.1	23	3.0E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.009	8.6	1.5E-05	2.0	0.00007	0.000569	0.00069	2.5E-04	0.0000	0.7	0.9	0.04	0.0005	0.57	0.0004	0.02	5.2E-05	0.001	3.8E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0011	0.0021
35	West Pit	7.1	29	2.6E-04	0.14	0.001	0.0007	8.5E-04	0.007	0.015	10.0	1.8E-05	2.3	0.00009	0.000521	0.00064	2.4E-04	0.0000	0.8	1.3	0.05	0.0009	0.93	0.0005	0.02	6.4E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.4E-04	0.00007	0.0013	0.0022
35.25	West Pit	7.3	68	1.5E-04	0.14	0.002	0.0008	4.3E-04	0.017	0.063	19.1	3.4E-05	4.2	0.00020	0.000270	0.00045	1.8E-04	0.0000	1.2	4.4	0.13	0.0042	3.55	0.0009	0.02	1.1E-04	0.001	6.4E-05	1.4	0.20	0.0005	4.9E-04	0.00013	0.0023	0.0028
35.5	West Pit	7.0	24	3.5E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.8	9.3E-06	2.2	0.00013	0.000535	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.64	0.0005	0.02	4.1E-05	0.001	2.5E-05	1.1	0.05	0.0001	3.8E-04	0.00004	0.0007	0.0023
35.75	West Pit	7.1	23	3.0E-04	0.14	0.001	0.0006	9.8E-04	0.005	0.009	8.5	1.5E-05	2.0	0.00007	0.000568	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.57	0.0004	0.02	5.2E-05	0.001	3.8E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0011	0.0021
36	West Pit	7.1	29	2.6E-04	0.14	0.001	0.0007	8.6E-04	0.007	0.015	9.9	1.8E-05	2.3	0.00009	0.000521	0.00064	2.4E-04	0.0000	0.8	1.3	0.05	0.0009	0.91	0.0004	0.02	6.3E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.3E-04	0.00007	0.0013	0.0022
36.25	West Pit	7.3	67	1.5E-04	0.14	0.002	0.0008	4.3E-04	0.017	0.061	18.9	3.3E-05	4.1	0.00019	0.000276	0.00045	1.8E-04	0.0000	1.2	4.3	0.13	0.0041	3.47	0.0008	0.02	1.1E-04	0.001	6.4E-05	1.4	0.20	0.0005	4.8E-04	0.00013	0.0022	0.0028
36.5	West Pit	6.9	23	3.6E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.8	9.2E-06	2.2	0.00013	0.000534	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.63	0.0005	0.02	4.0E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.8E-04	0.00004	0.0007	0.0023
36.75	West Pit	7.1	23	3.1E-04	0.14	0.001	0.0006	9.7E-04	0.005	0.008	8.5	1.5E-05	2.0	0.00007	0.000566	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.56	0.0004	0.02	5.1E-05	0.001	3.8E-05	0.8	0.04	0.0003	4.2E-04	0.00006	0.0011	0.0021
37	West Pit	7.1	28	2.7E-04	0.13	0.001	0.0007	8.6E-04	0.006	0.014	9.8	1.8E-05	2.3	0.00009	0.000521	0.00064	2.4E-04	0.0000	0.7	1.3	0.05	0.0008	0.89	0.0004	0.02	6.3E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
37.25	West Pit	7.3	66	1.5E-04	0.14	0.002	0.0008	4.4E-04	0.017	0.060	18.6	3.3E-05	4.1	0.00019	0.000282	0.00046	1.8E-04	0.0000	1.2	4.2	0.12	0.0040	3.39	0.0008	0.02	1.0E-04	0.001	6.3E-05	1.4	0.19	0.0005	4.8E-04	0.00013	0.0022	0.0028
37.5	West Pit	6.9	23	3.6E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.7	9.2E-06	2.2	0.00013	0.000533	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.63	0.0005	0.02	4.0E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0007	0.0023
37.75	West Pit	7.1	23	3.1E-04	0.13	0.001	0.0006	9.7E-04	0.005	0.008	8.4	1.5E-05	2.0	0.00007	0.000565	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.55	0.0004	0.02	5.1E-05	0.001	3.8E-05	0.8	0.04	0.0003	4.2E-04	0.00006	0.0011	0.0021
38	West Pit	7.1	28	2.7E-04	0.13	0.001	0.0007	8.6E-04	0.006	0.014	9.7	1.7E-05	2.3	0.00009	0.000521	0.00064	2.4E-04	0.0000	0.7	1.3	0.05	0.0008	0.88	0.0004	0.02	6.2E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
38.25	West Pit	7.3	64	1.6E-04	0.14	0.002	0.0008	4.5E-04	0.016	0.058	18.3	3.2E-05	4.0	0.00019	0.000289	0.00046	1.8E-04	0.0000	1.2	4.1	0.12	0.0039	3.30	0.0008	0.02	1.0E-04	0.001	6.3E-05	1.4	0.19	0.0005	4.8E-04	0.00012	0.0022	0.0028
38.5	West Pit	6.9	23	3.7E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.009	8.7	9.1E-06	2.2	0.00013	0.000532	0.00061	3.5E-04	0.0000	0.6	1.0	0.06	0.0004	0.62	0.0005	0.02	3.9E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
38.75	West Pit	7.0	23	3.2E-04	0.13	0.001	0.0006	9.7E-04	0.005	0.008	8.4	1.4E-05	2.0	0.00007	0.000565	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.54	0.0004	0.02	5.0E-05	0.001	3.8E-05	0.8	0.04	0.0003	4.2E-04	0.00006	0.0011	0.0020
39	West Pit	7.1	28	2.8E-04	0.13	0.001	0.0007	8.7E-04	0.006	0.014	9.7	1.7E-05	2.3	0.00009	0.000522	0.00064	2.4E-04	0.0000	0.7	1.3	0.05	0.0008	0.86	0.0004	0.02	6.1E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
39.25	West Pit	7.3	63	1.6E-04	0.14	0.002	0.0008	4.5E-04	0.016	0.057	18.0	3.2E-05	4.0	0.00019	0.000295	0.00046	1.8E-04	0.0000	1.2	4.0	0.12	0.0038	3.23	0.0008	0.02	1.0E-04	0.001	6.2E-05	1.4	0.18	0.0005	4.8E-04	0.00012	0.0021	0.0028
39.5	West Pit	6.9	23	3.7E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.7	9.1E-06	2.2	0.00013	0.000532	0.00061	3.6E-04	0.0000	0.6	1.0	0.06	0.0004	0.61	0.0005	0.02	3.9E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
39.75	West Pit	7.0	22	3.2E-04	0.13	0.001	0.0006	9.8E-04	0.005	0.008	8.4	1.4E-05	2.0	0.00007	0.000564	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.54	0.0004	0.02	5.0E-05	0.001	3.8E-05	0.8	0.04	0.0003	4.2E-04	0.00006	0.0011	0.0020
40	West Pit	7.1	27	2.8E-04	0.13	0.001	0.0007	8.7E-04	0.006	0.013	9.6	1.7E-05	2.3	0.00009	0.000523	0.00064	2.5E-04	0.0000	0.7	1.2	0.05	0.0008	0.84	0.0004	0.02	6.0E-05	0.001	4.3E-05	0.9	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
40.25	West Pit	7.3	62	1.6E-04	0.14	0.002	0.0008	4.6E-04	0.016	0.055	17.8	3.2E-05	3.9	0.00018	0.000302	0.00046	1.9E-04	0.0000	1.2	4.0	0.12	0.0037	3.15	0.0008	0.02	1.0E-04	0.001	6.2E-05	1.3	0.18	0.0005	4.8E-04	0.00012	0.0021	0.0028
40.5	West Pit	6.9	23	3.7E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.6	9.0E-06	2.2	0.00013	0.000531	0.00061	3.6E-04	0.0000	0.6	0.9	0.06	0.0004	0.60	0.0005	0.02	3.8E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
40.75	West Pit	7.0	22	3.2E-04	0.13	0.001	0.0006	9.8E-04	0.005	0.008	8.3	1.4E-05	2.0	0.00007	0.000564	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.53	0.0004	0.02	5.0E-05	0.001	3.8E-05	0.8	0.04	0.0003	4.2E-04	0.00006	0.0011	0.0020
41	West Pit	7.1	27	2.8E-04	0.13	0.001	0.0007	8.7E-04	0.006	0.013	9.6	1.7E-05	2.3	0.00009	0.000524	0.00065	2.5E-04	0.0000	0.7	1.2	0.05	0.0007	0.82	0.0004	0.02	6.0E-05	0.001	4.2E-05	0.8	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
41.25	West Pit	7.3	61	1.6E-04	0.14	0.002	0.0008	4.7E-04	0.015	0.054	17.5	3.1E-05	3.9	0.00018	0.000309	0.00047	1.9E-04	0.0000	1.2	3.9	0.12	0.0036	3.07	0.0008	0.02	1.0E-04	0.001	6.2E-05	1.3	0.18	0.0005	4.8E-04	0.00012	0.0021	0.0027
41.5	West Pit	6.9	23	3.8E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.6	9.0E-06	2.2	0.00013	0.000531	0.00061	3.6E-04	0.0000	0.6	0.9	0.06	0.0004	0.60	0.0005	0.02	3.8E-05	0.001	2.5E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
41.75	West Pit	7.0	22	3.3E-04	0.13	0.001	0.0006	9.8E-04	0.005	0.008	8.3	1.4E-05	1.9	0.00007	0.000564	0.00069	2.6E-04	0.0000	0.7	0.9	0.04	0.0004	0.52	0.0004	0.02	4.9E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.2E-04	0.00006	0.0011	0.0020
42	West Pit	7.1	27	2.9E-04	0.13	0.001	0.0007	8.8E-04	0.006	0.013	9.5	1.7E-05	2.2	0.00009	0.000524	0.00065	2.5E-04	0.0000	0.7	1.2	0.05	0.0007	0.81	0.0004	0.02	5.9E-05	0.001	4.2E-05	0.8	0.06	0.0003	4.3E-04	0.00007	0.0012	0.0022
42.25	West Pit	7.3	60	1.7E-04	0.14	0.002	0.0008	4.7E-04	0.015	0.052	17.3	3.1E-05	3.8	0.00018	0.000315	0.00047	1.9E-04	0.0000	1.1	3.8	0.11	0.0035	2.99	0.0008	0.02	1.0E-04	0.001	6.1E-05	1.3	0.17	0.0005	4.8E-04	0.00012	0.0021	0.0027
42.5	West Pit	6.9	23	3.8E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.6	8.9E-06	2.2	0.00013	0.000530	0.00060	3.6E-04	0.0000	0.6	0.9	0.06	0.0004	0.59	0.0005	0.02	3.7E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
42.75	West Pit	7.0	22	3.3E-04	0.13	0.001	0.0006	9.8E-04	0.005	0.008	8.3	1.4E-05	1.9	0.00007	0.000562	0.00069	2.6E-04	0.0000	0.7	0.8	0.04	0.0004	0.51	0.0004	0.02	4.9E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0011	0.0020
43	West Pit	7.1	27	2.9E-04	0.13	0.001	0.0007	8.8E-04	0.006	0.012	9.4	1.7E-05	2.2	0.00009	0.000524	0.00065	2.5E-04	0.0000	0.7	1.2	0.05	0.0007	0.79	0.0004	0.02	5.8E-05	0.001	4.2E-05	0.8	0.06	0.0003	4.2E-04	0.00007	0.0012	0.0021
43.25	West Pit	7.3	59	1.7E-04	0.14	0.002	0.0008	4.8E-04	0.015	0.051	17.0	3.1E-05	3.8	0.00018	0.000321	0.00047	1.9E-04	0.0000	1.1	3.7	0.11	0.0034	2.91	0.0008	0.02	1.0E-04	0.001	6.1E-05	1.3	0.17	0.0005	4.7E-04	0.00012	0.0020	0.0027
43.5	West Pit	6.9	22	3.9E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.5	8.9E-06	2.2	0.00013	0.000529	0.00060	3.6E-04	0.0000	0.6	0.9	0.06	0.0003	0.58	0.0005	0.02	3.7E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
43.75	West Pit	7.0	22	3.4E-04	0.13	0.001	0.0006	9.7E-04	0.005	0.008	8.2	1.4E-05	1.9	0.00007	0.000561	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0004	0.51	0.0004	0.02	4.8E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
44	West Pit	7.1	26	3.0E-04	0.13	0.001	0.0007	8.8E-04	0.006	0.012	9.4	1.7E-05	2.2	0.00009	0.000524	0.00065	2.5E-04	0.0000	0.7	1.2	0.05	0.0007	0.78	0.0004	0.02	5.7E-05	0.001	4.2E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
44.25	West Pit	7.3	58	1.8E-04	0.14	0.002	0.0008	4.9E-04	0.015	0.049	16.7	3.0E-05	3.8	0.00017	0.000327	0.00047	1.9E-04	0.0000	1.1	3.6	0.11	0.0033	2.84	0.0008	0.02	9.9E-05	0.001	6.0E-05	1.3	0.16	0.0005	4.7E-04	0.00011	0.0020	0.0027
44.5	West Pit	6.9	22	3.9E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.5	8.8E-06	2.2	0.00013	0.000528	0.00060	3.6E-04	0.0000	0.6	0.9	0.06	0.0003	0.58	0.0005	0.02	3.6E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
44.75	West Pit	7.0	22	3.4E-04	0.13	0.001	0.0006	9.7E-04	0.005	0.007	8.2	1.4E-05	1.9	0.00007	0.000560	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0004	0.50	0.0004	0.02	4.8E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
45	West Pit	7.1	26	3.0E-04	0.13	0.001	0.0007	8.8E-04	0.006	0.012	9.3	1.7E-05	2.2	0.00009	0.000525	0.00065	2.5E-04	0.0000	0.7	1.1	0.05	0.0007	0.76	0.0004	0.02	5.6E-05	0.001	4.2E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
45.25	West Pit	7.3	56	1.8E-04	0.13	0.002	0.0008	5.0E-04	0.014	0.048	16.5	3.0E-05	3.7	0.00017	0.000334	0.00048	1.9E-04	0.0000	1.1	3.5	0.11	0.0032	2.76	0.0008	0.02	9.9E-05	0.001	6.0E-05	1.3	0.16	0.0005	4.7E-04	0.00011	0.0020	0.0027
45.5	West Pit	6.9	22	4.0E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.5	8.8E-06	2.2	0.00013	0.000528	0.00060	3.6E-04	0.0000	0.6	0.9	0.06	0.0003	0.57	0.0005	0.02	3.6E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.7E-04	0.00004	0.0006	0.0022
45.75	West Pit	7.0	22	3.4E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.007	8.2	1.4E-05	1.9	0.00007	0.000560	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0004	0.49	0.0004	0.02	4.7E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
46	West Pit	7.1	26	3.0E-04	0.13	0.001	0.0007	8.9E-04	0.006	0.012	9.2	1.7E-05	2.2	0.00009	0.000526	0.00065	2.6E-04	0.0000	0.7	1.1	0.05	0.0006	0.75	0.0004	0.02	5.6E-05	0.001	4.2E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
46.25	West Pit	7.3	55	1.8E-04	0.13	0.002	0.0008	5.1E-04	0.014	0.047	16.2	2.9E-05	3.7	0.00017	0.000340	0.00048	2.0E-04	0.0000	1.1	3.4	0.10	0.0031	2.69	0.0007	0.02	9.8E-05	0.001	6.0E-05	1.2	0.15	0.0004	4.7E-04	0.00011	0.0020	0.0027
46.5	West Pit	6.9	22	4.0E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.4	8.8E-06	2.2	0.00013	0.000528	0.00060	3.7E-04	0.0000	0.6	0.9	0.06	0.0003	0.57	0.0005	0.02	3.6E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
46.75	West Pit	7.0	22	3.5E-04	0.13	0.001	0.0006	9.8E-04	0.004	0.007	8.1	1.4E-05	1.9	0.00007	0.000560	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0003	0.49	0.0004	0.02	4.7E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
47	West Pit	7.1	26	3.1E-04	0.13	0.001	0.0007	8.9E-04	0.006	0.011	9.2	1.7E-05	2.2	0.00009	0.000527	0.00066	2.6E-04	0.0000	0.7	1.1	0.05	0.0006	0.73	0.0004	0.02	5.5E-05	0.001	4.2E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
47.25	West Pit	7.3	54	1.9E-04	0.13	0.002	0.0008	5.2E-04	0.014	0.045	16.0	2.9E-05	3.6	0.00017	0.000347	0.00048	2.0E-04	0.0000	1.1	3.3	0.10	0.0030	2.61	0.0007	0.02	9.7E-05	0.001	5.9E-05	1.2	0.15	0.0004	4.7E-04	0.00011	0.0019	0.0026
47.5	West Pit	6.9	22	4.0E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.008	8.4	8.7E-06	2.2	0.00013	0.000527	0.00060	3.7E-04	0.0000	0.6	0.9	0.06	0.0003	0.56	0.0005	0.02	3.5E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
47.75	West Pit	7.0	21	3.5E-04	0.13	0.001	0.0006	9.8E-04	0.004	0.007	8.1	1.4E-05	1.9	0.00007	0.000560	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0003	0.48	0.0004	0.02	4.7E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
48	West Pit	7.1	25	3.1E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.011	9.1	1.7E-05	2.2	0.00008	0.000528	0.00066	2.6E-04	0.0000	0.7	1.1	0.04	0.0006	0.72	0.0004	0.02	5.4E-05	0.001	4.2E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
48.25	West Pit	7.3	53	1.9E-04	0.13	0.002	0.0008	5.3E-04	0.014	0.044	15.7	2.9E-05	3.6	0.00016	0.000354	0.00049	2.0E-04	0.0000	1.1	3.2	0.10	0.0029	2.53	0.0007	0.02	9.6E-05	0.001	5.9E-05	1.2	0.15	0.0004	4.7E-04	0.00011	0.0019	0.0026
48.5	West Pit	6.9	22	4.1E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.007	8.4	8.7E-06	2.2	0.00013	0.000527	0.00060	3.7E-04	0.0000	0.6	0.9	0.06	0.0003	0.55	0.0005	0.02	3.5E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
48.75	West Pit	7.0	21	3.5E-04	0.13	0.001	0.0006	9.8E-04	0.004	0.007	8.1	1.4E-05	1.9	0.00007	0.000558	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0003	0.47	0.0004	0.02	4.6E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00006	0.0010	0.0020
49	West Pit	7.1	25	3.2E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.011	9.1	1.6E-05	2.2	0.00008	0.000527	0.00066	2.6E-04	0.0000	0.7	1.1	0.04	0.0006	0.70	0.0004	0.02	5.4E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.2E-04	0.00006	0.0012	0.0021
49.25	West Pit	7.2	52	2.0E-04	0.13	0.002	0.0008	5.3E-04	0.013	0.042	15.4	2.8E-05	3.5	0.00016	0.000359	0.00049	2.0E-04	0.0000	1.1	3.1	0.10	0.0028	2.46	0.0007	0.02	9.4E-05	0.001	5.8E-05	1.2	0.14	0.0004	4.6E-04	0.00011	0.0019	0.0026
49.5	West Pit	6.9	22	4.2E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.007	8.3	8.6E-06	2.2	0.00013	0.000524	0.00060	3.7E-04	0.0000	0.6	0.9	0.06	0.0003	0.55	0.0005	0.02	3.4E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
49.75	West Pit	7.0	21	3.6E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.007	8.0	1.4E-05	1.9	0.00007	0.000556	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0003	0.47	0.0004	0.02	4.6E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.1E-04	0.00005	0.0010	0.0020
50	West Pit	7.1	25	3.2E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.010	9.0	1.6E-05	2.2	0.00008	0.000525	0.00066	2.6E-04	0.0000	0.7	1.1	0.04	0.0006	0.69	0.0004	0.02	5.3E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0012	0.0021
50.25	West Pit	7.2	51	2.0E-04	0.13	0.002	0.0008	5.4E-04	0.013	0.041	15.2	2.8E-05	3.5	0.00016	0.000365	0.00050	2.0E-04	0.0000	1.0	3.1	0.10	0.0027	2.38	0.0007	0.02	9.3E-05	0.001	5.8E-05	1.2	0.14	0.0004	4.6E-04	0.00010	0.0019	0.0026
50.5	West Pit	6.9	22	4.3E-04	0.13	0.001	0.0003	9.2E-04	0.002	0.007	8.3	8.6E-06	2.1	0.00013	0.000522	0.00060	3.7E-04	0.0000	0.6	0.9	0.06	0.0003	0.54	0.0005	0.02	3.4E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
50.75	West Pit	7.0	21	3.7E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.007	8.0	1.4E-05	1.9	0.00007	0.000553	0.00069	2.7E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	4.5E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
51	West Pit	7.1	25	3.3E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.010	8.9	1.6E-05	2.1	0.00008	0.000524	0.00066	2.7E-04	0.0000	0.7	1.0	0.04	0.0006	0.67	0.0004	0.02	5.2E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
51.25	West Pit	7.2	50	2.1E-04	0.13	0.002	0.0008	5.5E-04	0.013	0.040	14.9	2.7E-05	3.4	0.00016	0.000370	0.00050	2.1E-04	0.0000	1.0	3.0	0.09	0.0026	2.31	0.0007	0.02	9.2E-05	0.001	5.7E-05	1.2	0.13	0.0004	4.6E-04	0.00010	0.0018	0.0026

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
51.5	West Pit	6.9	21	4.3E-04	0.13	0.001	0.0003	9.1E-04	0.002	0.007	8.3	8.5E-06	2.1	0.00013	0.000520	0.00060	3.8E-04	0.0000	0.6	0.9	0.06	0.0003	0.54	0.0005	0.02	3.3E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
51.75	West Pit	7.0	21	3.8E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.007	7.9	1.4E-05	1.9	0.00007	0.000551	0.00069	2.8E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	4.5E-05	0.001	3.7E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
52	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.010	8.9	1.6E-05	2.1	0.00008	0.000523	0.00066	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.66	0.0004	0.02	5.1E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
52.25	West Pit	7.2	48	2.2E-04	0.13	0.002	0.0008	5.6E-04	0.012	0.038	14.6	2.7E-05	3.4	0.00015	0.000376	0.00050	2.1E-04	0.0000	1.0	2.9	0.09	0.0025	2.23	0.0007	0.02	9.0E-05	0.001	5.7E-05	1.2	0.13	0.0004	4.5E-04	0.00010	0.0018	0.0025
52.5	West Pit	6.9	21	4.4E-04	0.13	0.001	0.0003	9.1E-04	0.002	0.007	8.2	8.5E-06	2.1	0.00013	0.000518	0.00059	3.8E-04	0.0000	0.6	0.9	0.06	0.0003	0.53	0.0005	0.02	3.3E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
52.75	West Pit	7.0	21	3.8E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.9	1.4E-05	1.9	0.00007	0.000550	0.00069	2.8E-04	0.0000	0.7	0.8	0.04	0.0003	0.45	0.0004	0.02	4.4E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
53	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0007	9.0E-04	0.006	0.010	8.8	1.6E-05	2.1	0.00008	0.000524	0.00066	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.65	0.0004	0.02	5.0E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
53.25	West Pit	7.2	47	2.2E-04	0.13	0.002	0.0008	5.7E-04	0.012	0.037	14.4	2.7E-05	3.3	0.00015	0.000382	0.00051	2.1E-04	0.0000	1.0	2.8	0.09	0.0024	2.16	0.0007	0.02	8.9E-05	0.001	5.7E-05	1.2	0.13	0.0004	4.5E-04	0.00010	0.0018	0.0025
53.5	West Pit	6.9	21	4.4E-04	0.13	0.001	0.0003	9.1E-04	0.002	0.007	8.2	8.4E-06	2.1	0.00013	0.000518	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0003	0.53	0.0005	0.02	3.3E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.6E-04	0.00004	0.0006	0.0022
53.75	West Pit	7.0	21	3.9E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.9	1.4E-05	1.9	0.00007	0.000550	0.00069	2.8E-04	0.0000	0.7	0.8	0.04	0.0003	0.45	0.0003	0.02	4.4E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
54	West Pit	7.0	24	3.4E-04	0.13	0.001	0.0007	9.0E-04	0.005	0.009	8.8	1.6E-05	2.1	0.00008	0.000524	0.00066	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.63	0.0004	0.02	5.0E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
54.25	West Pit	7.2	46	2.2E-04	0.13	0.002	0.0008	5.8E-04	0.012	0.036	14.2	2.6E-05	3.3	0.00015	0.000388	0.00051	2.1E-04	0.0000	1.0	2.7	0.09	0.0023	2.10	0.0007	0.02	8.8E-05	0.001	5.6E-05	1.1	0.12	0.0004	4.5E-04	0.00010	0.0018	0.0025
54.5	West Pit	6.9	21	4.5E-04	0.13	0.001	0.0003	9.1E-04	0.002	0.007	8.2	8.4E-06	2.1	0.00013	0.000518	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0003	0.52	0.0005	0.02	3.2E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
54.75	West Pit	7.0	21	3.9E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.9	1.4E-05	1.9	0.00007	0.000550	0.00069	2.8E-04	0.0000	0.7	0.8	0.04	0.0003	0.44	0.0003	0.02	4.4E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
55	West Pit	7.0	24	3.5E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.7	1.6E-05	2.1	0.00008	0.000525	0.00066	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.62	0.0004	0.02	4.9E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
55.25	West Pit	7.2	45	2.3E-04	0.13	0.001	0.0008	5.9E-04	0.012	0.034	13.9	2.6E-05	3.3	0.00015	0.000395	0.00052	2.1E-04	0.0000	1.0	2.6	0.09	0.0022	2.03	0.0007	0.02	8.6E-05	0.001	5.6E-05	1.1	0.12	0.0004	4.5E-04	0.00010	0.0017	0.0025
55.5	West Pit	6.9	21	4.5E-04	0.13	0.001	0.0003	9.1E-04	0.002	0.007	8.2	8.4E-06	2.1	0.00013	0.000518	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0003	0.52	0.0005	0.02	3.2E-05	0.001	2.4E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
55.75	West Pit	7.0	20	3.9E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.8	1.4E-05	1.9	0.00007	0.000550	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.44	0.0003	0.02	4.3E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
56	West Pit	7.0	23	3.5E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.7	1.6E-05	2.1	0.00008	0.000526	0.00067	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.61	0.0004	0.02	4.8E-05	0.001	4.1E-05	0.8	0.05	0.0003	4.1E-04	0.00006	0.0011	0.0021
56.25	West Pit	7.2	44	2.3E-04	0.13	0.001	0.0008	6.1E-04	0.011	0.033	13.7	2.6E-05	3.2	0.00014	0.000401	0.00052	2.2E-04	0.0000	1.0	2.6	0.08	0.0021	1.96	0.0006	0.02	8.5E-05	0.001	5.6E-05	1.1	0.11	0.0004	4.5E-04	0.00010	0.0017	0.0025
56.5	West Pit	6.9	21	4.5E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.007	8.1	8.3E-06	2.1	0.00013	0.000518	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0002	0.51	0.0004	0.02	3.2E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
56.75	West Pit	7.0	20	3.9E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.8	1.4E-05	1.9	0.00007	0.000549	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.43	0.0003	0.02	4.3E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
57	West Pit	7.0	23	3.5E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.6	1.6E-05	2.1	0.00008	0.000526	0.00067	2.7E-04	0.0000	0.7	1.0	0.04	0.0005	0.60	0.0004	0.02	4.8E-05	0.001	4.1E-05	0.8	0.04	0.0003	4.1E-04	0.00006	0.0011	0.0021
57.25	West Pit	7.2	44	2.4E-04	0.13	0.001	0.0008	6.1E-04	0.011	0.032	13.6	2.6E-05	3.2	0.00014	0.000404	0.00053	2.2E-04	0.0000	1.0	2.5	0.08	0.0021	1.92	0.0006	0.02	8.4E-05	0.001	5.5E-05	1.1	0.11	0.0004	4.4E-04	0.00009	0.0017	0.0025
57.5	West Pit	6.9	21	4.6E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.007	8.1	8.3E-06	2.1	0.00013	0.000517	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0002	0.51	0.0004	0.02	3.1E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
57.75	West Pit	7.0	20	4.0E-04	0.13	0.001	0.0006	9.7E-04	0.004	0.006	7.8	1.4E-05	1.9	0.00007	0.000548	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.43	0.0003	0.02	4.3E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
58	West Pit	7.0	23	3.6E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.6	1.6E-05	2.1	0.00008	0.000525	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0005	0.59	0.0004	0.02	4.8E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0021
58.25	West Pit	7.2	43	2.4E-04	0.13	0.001	0.0008	6.2E-04	0.011	0.032	13.4	2.5E-05	3.2	0.00014	0.000407	0.00053	2.2E-04	0.0000	1.0	2.5	0.08	0.0020	1.88	0.0006	0.02	8.3E-05	0.001	5.5E-05	1.1	0.11	0.0004	4.4E-04	0.00009	0.0017	0.0025
58.5	West Pit	6.9	21	4.6E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.007	8.1	8.3E-06	2.1	0.00013	0.000516	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0002	0.51	0.0004	0.02	3.1E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
58.75	West Pit	7.0	20	4.0E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.8	1.4E-05	1.9	0.00007	0.000547	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.43	0.0003	0.02	4.3E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
59	West Pit	7.0	23	3.6E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.6	1.6E-05	2.1	0.00008	0.000525	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.59	0.0004	0.02	4.7E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0021
59.25	West Pit	7.2	43	2.4E-04	0.13	0.001	0.0008	6.2E-04	0.011	0.031	13.3	2.5E-05	3.2	0.00014	0.000409	0.00053	2.2E-04	0.0000	1.0	2.4	0.08	0.0020	1.85	0.0006	0.02	8.2E-05	0.001	5.5E-05	1.1	0.11	0.0004	4.4E-04	0.00009	0.0017	0.0025
59.5	West Pit	6.9	21	4.6E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.006	8.1	8.3E-06	2.1	0.00013	0.000515	0.00059	3.8E-04	0.0000	0.6	0.8	0.06	0.0002	0.50	0.0004	0.02	3.1E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00004	0.0006	0.0022
59.75	West Pit	7.0	20	4.1E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.8	1.4E-05	1.8	0.00007	0.000546	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.42	0.0003	0.02	4.3E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0020
60	West Pit	7.0	23	3.6E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.009	8.5	1.6E-05	2.1	0.00008	0.000524	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.58	0.0004	0.02	4.7E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0021
60.25	West Pit	7.2	42	2.5E-04	0.13	0.001	0.0008	6.3E-04	0.011	0.030	13.2	2.5E-05	3.1	0.00014	0.000412	0.00053	2.2E-04	0.0000	1.0	2.4	0.08	0.0020	1.81	0.0006	0.02	8.1E-05	0.001	5.5E-05	1.1	0.11	0.0004	4.4E-04	0.00009	0.0017	0.0024
60.5	West Pit	6.9	21	4.7E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.006	8.1	8.2E-06	2.1	0.00013	0.000514	0.00059	3.9E-04	0.0000	0.6	0.8	0.06	0.0002	0.50	0.0004	0.02	3.1E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0022
60.75	West Pit	7.0	20	4.1E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.4E-05	1.8	0.00007	0.000545	0.00069	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.42	0.0003	0.02	4.2E-05	0.001	3.6E-05	0.8	0.04	0.0002	4.0E-04	0.00005	0.0010	0.0019
61	West Pit	7.0	23	3.7E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.5	1.6E-05	2.1	0.00008	0.000523	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.58	0.0004	0.02	4.7E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
61.25	West Pit	7.2	42	2.5E-04	0.13	0.001	0.0008	6.3E-04	0.011	0.030	13.1	2.5E-05	3.1	0.00014	0.000415	0.00054	2.3E-04	0.0000	0.9	2.4	0.08	0.0019	1.78	0.0006	0.02	8.0E-05	0.001	5.5E-05	1.1	0.11	0.0004	4.4E-04	0.00009	0.0016	0.0024
61.5	West Pit	6.9	21	4.7E-04	0.12	0.001	0.0003	9.1E-04	0.002	0.006	8.1	8.2E-06	2.1	0.00012	0.000513	0.00059	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.50	0.0004	0.02	3.1E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0022
61.75	West Pit	7.0	20	4.1E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.4E-05	1.8	0.00007	0.000544	0.00068	2.8E-04	0.0000	0.7	0.7	0.03	0.0003	0.42	0.0003	0.02	4.2E-05	0.001	3.6E-05	0.8	0.04	0.0002	3.9E-04	0.00005	0.0010	0.0019
62	West Pit	7.0	23	3.7E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.5	1.6E-05	2.1	0.00008	0.000523	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.57	0.0004	0.02	4.6E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
62.25	West Pit	7.2	41	2.5E-04	0.13	0.001	0.0008	6.4E-04	0.011	0.029	13.0	2.5E-05	3.1	0.00014	0.000417	0.00054	2.3E-04	0.0000	0.9	2.3	0.08	0.0019	1.75	0.0006	0.02	7.9E-05	0.001	5.4E-05	1.1	0.10	0.0004	4.4E-04	0.00009	0.0016	0.0024
62.5	West Pit	6.9	21	4.8E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	8.0	8.2E-06	2.1	0.00012	0.000512	0.00059	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.50	0.0004	0.02	3.0E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
62.75	West Pit	7.0	20	4.2E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.3E-05	1.8	0.00007	0.000543	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0003	0.42	0.0003	0.02	4.2E-05	0.001	3.6E-05	0.8	0.04	0.0002	3.9E-04	0.00005	0.0010	0.0019
63	West Pit	7.0	23	3.8E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.5	1.6E-05	2.1	0.00008	0.000523	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.56	0.0004	0.02	4.6E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
63.25	West Pit	7.2	41	2.6E-04	0.13	0.001	0.0008	6.5E-04	0.011	0.028	12.8	2.4E-05	3.1	0.00014	0.000420	0.00054	2.3E-04	0.0000	0.9	2.3	0.08	0.0018	1.71	0.0006	0.02	7.8E-05	0.001	5.4E-05	1.1	0.10	0.0004	4.3E-04	0.00009	0.0016	0.0024
63.5	West Pit	6.9	21	4.8E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	8.0	8.2E-06	2.1	0.00012	0.000511	0.00059	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.49	0.0004	0.02	3.0E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
63.75	West Pit	7.0	20	4.2E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.3E-05	1.8	0.00007	0.000542	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.41	0.0003	0.02	4.2E-05	0.001	3.6E-05	0.8	0.04	0.0002	3.9E-04	0.00005	0.0010	0.0019
64	West Pit	7.0	23	3.8E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.4	1.6E-05	2.1	0.00008	0.000522	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.56	0.0004	0.02	4.5E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
64.25	West Pit	7.2	40	2.6E-04	0.13	0.001	0.0008	6.5E-04	0.010	0.028	12.7	2.4E-05	3.1	0.00013	0.000422	0.00054	2.3E-04	0.0000	0.9	2.2	0.08	0.0018	1.68	0.0006	0.02	7.7E-05	0.001	5.4E-05	1.1	0.10	0.0004	4.3E-04	0.00009	0.0016	0.0024
64.5	West Pit	6.9	20	4.8E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	8.0	8.2E-06	2.1	0.00012	0.000510	0.00059	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.49	0.0004	0.02	3.0E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
64.75	West Pit	7.0	20	4.2E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.3E-05	1.8	0.00007	0.000541	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.41	0.0003	0.02	4.2E-05	0.001	3.6E-05	0.8	0.04	0.0002	3.9E-04	0.00005	0.0010	0.0019
65	West Pit	7.0	22	3.8E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.4	1.5E-05	2.1	0.00008	0.000522	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.55	0.0004	0.02	4.5E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
65.25	West Pit	7.2	40	2.6E-04	0.13	0.001	0.0008	6.6E-04	0.010	0.027	12.6	2.4E-05	3.0	0.00013	0.000425	0.00055	2.3E-04	0.0000	0.9	2.2	0.07	0.0017	1.64	0.0006	0.02	7.6E-05	0.001	5.4E-05	1.1	0.10	0.0004	4.3E-04	0.00009	0.0016	0.0024
65.5	West Pit	6.9	20	4.9E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	8.0	8.1E-06	2.1	0.00012	0.000509	0.00058	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.49	0.0004	0.02	3.0E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
65.75	West Pit	7.0	20	4.3E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.7	1.3E-05	1.8	0.00007	0.000540	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.41	0.0003	0.02	4.1E-05	0.001	3.6E-05	0.8	0.04	0.0002	3.9E-04	0.00005	0.0010	0.0019
66	West Pit	7.0	22	3.9E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.4	1.5E-05	2.1	0.00008	0.000521	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.55	0.0004	0.02	4.5E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
66.25	West Pit	7.2	39	2.7E-04	0.13	0.001	0.0008	6.7E-04	0.010	0.026	12.4	2.4E-05	3.0	0.00013	0.000429	0.00055	2.3E-04	0.0000	0.9	2.1	0.07	0.0017	1.59	0.0006	0.02	7.4E-05	0.001	5.4E-05	1.0	0.10	0.0004	4.3E-04	0.00009	0.0016	0.0024
66.5	West Pit	6.9	20	4.9E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	8.0	8.1E-06	2.1	0.00012	0.000509	0.00058	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.49	0.0004	0.02	2.9E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
66.75	West Pit	7.0	20	4.3E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.006	7.6	1.3E-05	1.8	0.00007	0.000540	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.40	0.0003	0.02	4.1E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
67	West Pit	7.0	22	3.9E-04	0.13	0.001	0.0007	9.1E-04	0.005	0.008	8.3	1.5E-05	2.0	0.00008	0.000522	0.00067	2.8E-04	0.0000	0.7	0.9	0.04	0.0004	0.53	0.0004	0.02	4.4E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
67.25	West Pit	7.1	38	2.7E-04	0.13	0.001	0.0008	6.8E-04	0.010	0.025	12.2	2.4E-05	3.0	0.00013	0.000435	0.00056	2.4E-04	0.0000	0.9	2.1	0.07	0.0016	1.53	0.0006	0.02	7.2E-05	0.001	5.3E-05	1.0	0.09	0.0004	4.3E-04	0.00009	0.0016	0.0024
67.5	West Pit	6.9	20	4.9E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.1E-06	2.1	0.00012	0.000509	0.00058	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.48	0.0004	0.02	2.9E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
67.75	West Pit	7.0	20	4.3E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.005	7.6	1.3E-05	1.8	0.00007	0.000540	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.40	0.0003	0.02	4.1E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
68	West Pit	7.0	22	3.9E-04	0.13	0.001	0.0007	9.2E-04	0.005	0.007	8.3	1.5E-05	2.0	0.00008	0.000522	0.00067	2.9E-04	0.0000	0.7	0.9	0.04	0.0004	0.52	0.0004	0.02	4.3E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
68.25	West Pit	7.1	37	2.8E-04	0.13	0.001	0.0008	7.0E-04	0.010	0.024	12.0	2.3E-05	2.9	0.00013	0.000441	0.00057	2.4E-04	0.0000	0.9	2.0	0.07	0.0015	1.47	0.0006	0.02	7.0E-05	0.001	5.3E-05	1.0	0.09	0.0004	4.2E-04	0.00008	0.0015	0.0024
68.5	West Pit	6.9	20	5.0E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.1E-06	2.1	0.00012	0.000509	0.00058	3.9E-04	0.0000	0.6	0.8	0.05	0.0002	0.48	0.0004	0.02	2.9E-05	0.001	2.3E-05	1.1	0.04	0.0001	3.5E-04	0.00003	0.0006	0.0021
68.75	West Pit	7.0	19	4.3E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.005	7.6	1.3E-05	1.8	0.00007	0.000540	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.39	0.0003	0.02	4.1E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
69	West Pit	7.0	22	4.0E-04	0.13	0.001	0.0007	9.2E-04	0.005	0.007	8.3	1.5E-05	2.0	0.00008	0.000523	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0004	0.51	0.0004	0.02	4.3E-05	0.001	4.0E-05	0.8	0.04	0.0003	4.0E-04	0.00006	0.0011	0.0020
69.25	West Pit	7.1	36	2.9E-04	0.13	0.001	0.0008	7.1E-04	0.009	0.023	11.8	2.3E-05	2.9	0.00012	0.000447	0.00057	2.4E-04	0.0000	0.9	1.9	0.07	0.0014	1.40	0.0006	0.02	6.8E-05	0.001	5.3E-05	1.0	0.08	0.0004	4.2E-04	0.00008	0.0015	0.0024
69.5	West Pit	6.9	20	5.0E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.0E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.47	0.0004	0.02	2.9E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
69.75	West Pit	7.0	19	4.4E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.005	7.6	1.3E-05	1.8	0.00007	0.000540	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.39	0.0003	0.02	4.0E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
70	West Pit	7.0	22	4.0E-04	0.13	0.001	0.0007	9.2E-04	0.005	0.007	8.2	1.5E-05	2.0	0.00008	0.000523	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.50	0.0004	0.02	4.2E-05	0.001	4.0E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
70.25	West Pit	7.1	35	2.9E-04	0.13	0.001	0.0008	7.3E-04	0.009	0.022	11.6	2.3E-05	2.9	0.00012	0.000454	0.00058	2.5E-04	0.0000	0.9	1.8	0.07	0.0013	1.34	0.0006	0.02	6.6E-05	0.001	5.2E-05	1.0	0.08	0.0004	4.2E-04	0.00008	0.0015	0.0023
70.5	West Pit	6.9	20	5.0E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.0E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.47	0.0004	0.02	2.8E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
70.75	West Pit	7.0	19	4.4E-04	0.13	0.001	0.0006	9.6E-04	0.004	0.005	7.6	1.3E-05	1.8	0.00007	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.39	0.0003	0.02	4.0E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
71	West Pit	7.0	21	4.0E-04	0.13	0.001	0.0007	9.2E-04	0.005	0.007	8.2	1.5E-05	2.0	0.00008	0.000524	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.49	0.0004	0.02	4.2E-05	0.001	4.0E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
71.25	West Pit	7.1	34	3.0E-04	0.13	0.001	0.0008	7.4E-04	0.009	0.020	11.4	2.2E-05	2.8	0.00012	0.000459	0.00059	2.5E-04	0.0000	0.9	1.8	0.06	0.0013	1.28	0.0005	0.02	6.3E-05	0.001	5.2E-05	1.0	0.08	0.0004	4.2E-04	0.00008	0.0015	0.0023
71.5	West Pit	6.9	20	5.0E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.0E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.47	0.0004	0.02	2.8E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
71.75	West Pit	7.0	19	4.4E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.38	0.0003	0.02	4.0E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
72	West Pit	7.0	21	4.0E-04	0.13	0.001	0.0007	9.3E-04	0.005	0.007	8.2	1.5E-05	2.0	0.00008	0.000524	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.49	0.0004	0.02	4.1E-05	0.001	4.0E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
72.25	West Pit	7.1	34	3.0E-04	0.13	0.001	0.0008	7.5E-04	0.009	0.020	11.3	2.2E-05	2.8	0.00012	0.000463	0.00059	2.5E-04	0.0000	0.9	1.7	0.06	0.0012	1.24	0.0005	0.02	6.2E-05	0.001	5.2E-05	1.0	0.08	0.0004	4.1E-04	0.00008	0.0015	0.0023
72.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.0E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.47	0.0004	0.02	2.8E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
72.75	West Pit	7.0	19	4.4E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.38	0.0003	0.02	4.0E-05	0.001	3.6E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
73	West Pit	7.0	21	4.0E-04	0.13	0.001	0.0007	9.3E-04	0.005	0.007	8.1	1.5E-05	2.0	0.00008	0.000525	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.48	0.0004	0.02	4.1E-05	0.001	4.0E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
73.25	West Pit	7.1	33	3.0E-04	0.12	0.001	0.0008	7.6E-04	0.009	0.019	11.1	2.2E-05	2.8	0.00012	0.000466	0.00060	2.6E-04	0.0000	0.9	1.7	0.06	0.0012	1.21	0.0005	0.02	6.1E-05	0.001	5.2E-05	1.0	0.07	0.0004	4.1E-04	0.00008	0.0015	0.0023
73.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.9	8.0E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.46	0.0004	0.02	2.8E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
73.75	West Pit	7.0	19	4.4E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.38	0.0003	0.02	4.0E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
74	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.007	8.1	1.5E-05	2.0	0.00008	0.000525	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.48	0.0004	0.02	4.1E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
74.25	West Pit	7.1	33	3.1E-04	0.12	0.001	0.0008	7.7E-04	0.009	0.019	11.0	2.2E-05	2.8	0.00012	0.000469	0.00060	2.6E-04	0.0000	0.8	1.7	0.06	0.0011	1.18	0.0005	0.02	5.9E-05	0.001	5.1E-05	1.0	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0023
74.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.8	7.9E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.46	0.0004	0.02	2.8E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

74.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.38	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
75	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.1	1.5E-05	2.0	0.00008	0.000525	0.00067	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.47	0.0004	0.02	4.0E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
75.25	West Pit	7.1	32	3.1E-04	0.12	0.001	0.0008	7.8E-04	0.008	0.018	10.9	2.2E-05	2.7	0.00012	0.000472	0.00060	2.6E-04	0.0000	0.8	1.6	0.06	0.0011	1.15	0.0005	0.02	5.8E-05	0.001	5.1E-05	1.0	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0023
75.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.8	7.9E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.46	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
75.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.38	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
76	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.1	1.5E-05	2.0	0.00008	0.000525	0.00068	2.9E-04	0.0000	0.7	0.8	0.04	0.0003	0.47	0.0004	0.02	4.0E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
76.25	West Pit	7.1	32	3.2E-04	0.12	0.001	0.0008	7.9E-04	0.008	0.017	10.8	2.2E-05	2.7	0.00012	0.000475	0.00061	2.6E-04	0.0000	0.8	1.6	0.06	0.0011	1.12	0.0005	0.02	5.6E-05	0.001	5.1E-05	1.0	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0023
76.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.8	7.9E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.46	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
76.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	2.9E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
77	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.1	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	4.0E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
77.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.0E-04	0.008	0.017	10.7	2.1E-05	2.7	0.00011	0.000478	0.00061	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.08	0.0005	0.02	5.5E-05	0.001	5.1E-05	1.0	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0023
77.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.006	7.8	7.9E-06	2.1	0.00012	0.000508	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.46	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
77.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
78	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
78.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000481	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.05	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
78.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
78.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
79	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
79.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
79.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
79.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
80	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
80.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
80.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
80.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
81	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
81.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
81.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
81.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
82	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
82.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
82.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
82.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
83	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
83.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
83.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
83.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
84	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
84.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
84.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
84.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
85	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
85.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
85.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
85.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
86	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
86.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
86.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
86.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
87	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
87.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
87.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
87.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
88	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
88.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
88.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
88.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
89	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
89.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
89.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
89.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
90	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
90.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
90.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
90.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
91	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
91.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
91.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
91.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
92	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	1.5E-05	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
92.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	2.1E-05	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
92.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
92.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	1.3E-05	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019

TABLE 1
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025	-	0.001	0.1	0.0001	-	-	-	0.006	-	0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025	-	0.001	0.001	0.0001	-	-	-	-	-	-	0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1	-	0.4	-	-	-	-	-	-	-	-	1
93	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
93.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
93.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
93.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
94	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
94.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
94.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
94.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
95	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
95.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
95.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
95.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

96	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
96.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
96.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
96.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
97	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
97.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
97.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
97.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
98	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020
98.25	West Pit	7.1	31	3.2E-04	0.12	0.001	0.0008	8.1E-04	0.008	0.016	10.6	*2.1E-05*	2.7	0.00011	0.000482	0.00062	2.7E-04	0.0000	0.8	1.5	0.06	0.0010	1.04	0.0005	0.02	5.3E-05	0.001	5.1E-05	0.9	0.07	0.0003	4.0E-04	0.00008	0.0014	0.0023
98.5	West Pit	6.9	20	5.1E-04	0.12	0.001	0.0003	9.0E-04	0.001	0.005	7.8	7.9E-06	2.1	0.00012	0.000507	0.00058	4.0E-04	0.0000	0.6	0.8	0.05	0.0002	0.45	0.0004	0.02	2.7E-05	0.001	2.3E-05	1.1	0.03	0.0001	3.4E-04	0.00003	0.0006	0.0021
98.75	West Pit	7.0	19	4.5E-04	0.12	0.001	0.0006	9.6E-04	0.004	0.005	7.5	*1.3E-05*	1.8	0.00006	0.000539	0.00068	3.0E-04	0.0000	0.7	0.7	0.03	0.0002	0.37	0.0003	0.02	3.9E-05	0.001	3.5E-05	0.8	0.03	0.0002	3.9E-04	0.00005	0.0010	0.0019
99	West Pit	7.0	21	4.1E-04	0.12	0.001	0.0007	9.3E-04	0.005	0.006	8.0	*1.5E-05*	2.0	0.00007	0.000526	0.00068	3.0E-04	0.0000	0.7	0.8	0.04	0.0003	0.46	0.0004	0.02	3.9E-05	0.001	3.9E-05	0.8	0.04	0.0003	3.9E-04	0.00006	0.0011	0.0020

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
EAST PIT																																			
0.25	East Pit	7.2	51	9.9E-05	0.04	0.001	0.0011	3.7E-05	0.018	0.042	15.0	*3.9E-05*	4.4	0.00023	0.000008	0.00017	4.8E-04	5.9E-06	0.9	3.4	0.11	0.0028	2.62	0.0009	0.008	9.5E-06	0.0004	8.2E-05	1.1	0.13	0.0006	1.7E-04	0.00012	0.0022	0.0022
0.5	East Pit	6.8	22	3.1E-04	0.03	0.001	0.0001	9.4E-06	0.002	0.009	8.4	1.0E-05	3.4	0.00028	0.000001	0.00008	1.3E-03	6.1E-06	0.36	1.3	0.10	0.0003	0.89	0.0008	0.005	4.9E-07	0.0004	2.5E-05	1.5	0.03	0.0001	8.9E-05	0.00002	0.0002	0.0021
0.75	East Pit	6.9	23	2.1E-04	0.03	0.001	0.0010	3.5E-05	0.011	0.008	8.5	*2.8E-05*	3.1	0.00016	0.000011	0.00021	6.6E-04	6.3E-06	0.58	1.2	0.05	0.0004	0.77	0.0006	0.005	9.1E-06	0.0004	6.8E-05	0.7	0.03	0.0004	1.6E-04	0.00008	0.0014	0.0018
1	East Pit	6.9	25	2.0E-04	0.03	0.001	0.0011	3.3E-05	0.012	0.010	9.0	*2.9E-05*	3.3	0.00016	0.000010	0.00020	6.4E-04	6.1E-06	0.61	1.3	0.06	0.0006	0.91	0.0006	0.005	8.8E-06	0.0004	7.0E-05	0.8	0.04	0.0004	1.5E-04	0.00008	0.0015	0.0018
1.25	East Pit	7.1	43	1.3E-04	0.03	0.001	0.0011	3.3E-05	0.017	0.031	13.2	*3.7E-05*	4.2	0.00021	0.000008	0.00018	5.4E-04	5.8E-06	0.84	2.7	0.09	0.0020	2.06	0.0008	0.006	8.7E-06	0.0004	8.1E-05	1.0	0.10	0.0005	1.5E-04	0.00011	0.0020	0.0021
1.5	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0001	8.9E-06	0.002	0.008	8.2	1.0E-05	3.3	0.00028	0.000001	0.00008	1.3E-03	6.0E-06	0.36	1.2	0.10	0.0003	0.86	0.0008	0.005	4.9E-07	0.0003	2.5E-05	1.5	0.03	0.0001	8.6E-05	0.00002	0.0002	0.0020
1.75	East Pit	6.9	23	2.3E-04	0.03	0.001	0.0010	3.4E-05	0.011	0.007	8.4	*2.8E-05*	3.1	0.00015	0.000011	0.00021	6.7E-04	6.2E-06	0.58	1.1	0.05	0.0004	0.75	0.0006	0.005	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.5E-04	0.00008	0.0014	0.0018
2	East Pit	6.9	25	2.2E-04	0.03	0.001	0.0011	3.2E-05	0.011	0.009	8.9	*2.9E-05*	3.2	0.00016	0.000010	0.00021	6.5E-04	6.1E-06	0.61	1.3	0.06	0.0005	0.86	0.0006	0.005	8.8E-06	0.0004	6.9E-05	0.8	0.03	0.0004	1.5E-04	0.00008	0.0015	0.0018
2.25	East Pit	7.1	39	1.5E-04	0.03	0.001	0.0012	3.0E-05	0.016	0.026	12.4	*3.6E-05*	4.0	0.00021	0.000008	0.00018	5.7E-04	5.8E-06	0.80	2.4	0.08	0.0017	1.80	0.0008	0.006	8.4E-06	0.0004	8.1E-05	1.0	0.08	0.0005	1.5E-04	0.00010	0.0019	0.0021
2.5	East Pit	6.8	21	3.7E-04	0.03	0.001	0.0001	8.6E-06	0.002	0.008	8.1	1.0E-05	3.3	0.00028	0.000001	0.00008	1.4E-03	5.9E-06	0.36	1.2	0.10	0.0003	0.84	0.0008	0.005	4.9E-07	0.0003	2.5E-05	1.5	0.03	0.0001	8.5E-05	0.00002	0.0002	0.0020
2.75	East Pit	6.9	22	2.4E-04	0.03	0.001	0.0010	3.2E-05	0.011	0.007	8.3	*2.8E-05*	3.1	0.00015	0.000011	0.00021	6.8E-04	6.1E-06	0.58	1.1	0.05	0.0004	0.73	0.0006	0.005	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.5E-04	0.00008	0.0014	0.0018
3	East Pit	6.9	24	2.3E-04	0.03	0.001	0.0011	3.1E-05	0.011	0.009	8.7	*2.9E-05*	3.2	0.00016	0.000010	0.00021	6.7E-04	6.0E-06	0.60	1.2	0.05	0.0005	0.83	0.0006	0.005	8.8E-06	0.0004	6.9E-05	0.8	0.03	0.0004	1.5E-04	0.00008	0.0015	0.0018
3.25	East Pit	7.0	36	1.6E-04	0.03	0.001	0.0012	2.8E-05	0.015	0.022	11.7	*3.5E-05*	4.0	0.00020	0.000008	0.00018	6.1E-04	5.7E-06	0.76	2.2	0.08	0.0014	1.60	0.0008	0.006	8.3E-06	0.0004	8.0E-05	0.9	0.07	0.0005	1.4E-04	0.00010	0.0019	0.0021
3.5	East Pit	6.7	21	3.9E-04	0.02	0.001	0.0001	8.4E-06	0.002	0.008	8.1	9.9E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.8E-06	0.36	1.2	0.10	0.0003	0.83	0.0008	0.005	4.9E-07	0.0003	2.5E-05	1.5	0.03	0.0001	8.3E-05	0.00002	0.0002	0.0020
3.75	East Pit	6.9	22	2.6E-04	0.03	0.001	0.0010	3.2E-05	0.011	0.007	8.3	*2.8E-05*	3.1	0.00015	0.000011	0.00021	6.8E-04	6.0E-06	0.58	1.1	0.05	0.0004	0.72	0.0006	0.005	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.5E-04	0.00008	0.0014	0.0018
4	East Pit	6.9	24	2.4E-04	0.03	0.001	0.0011	3.0E-05	0.011	0.008	8.6	*2.9E-05*	3.2	0.00016	0.000010	0.00021	6.8E-04	5.9E-06	0.60	1.2	0.05	0.0005	0.80	0.0006	0.005	8.8E-06	0.0004	6.9E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0015	0.0018
4.25	East Pit	7.0	34	1.8E-04	0.03	0.001	0.0012	2.7E-05	0.015	0.019	11.2	*3.5E-05*	3.9	0.00020	0.000008	0.00018	6.4E-04	5.7E-06	0.74	2.0	0.07	0.0012	1.44	0.0008	0.005	8.2E-06	0.0004	8.0E-05	0.9	0.06	0.0005	1.4E-04	0.00010	0.0018	0.0020
4.5	East Pit	6.7	21	4.0E-04	0.02	0.001	0.0001	8.2E-06	0.002	0.007	8.0	9.8E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.8E-06	0.36	1.2	0.10	0.0003	0.82	0.0008	0.005	4.9E-07	0.0003	2.5E-05	1.5	0.03	0.0001	8.3E-05	0.00002	0.0002	0.0020
4.75	East Pit	6.9	22	2.6E-04	0.03	0.001	0.0010	3.1E-05	0.011	0.007	8.2	*2.8E-05*	3.1	0.00015	0.000011	0.00021	6.9E-04	6.0E-06	0.58	1.1	0.05	0.0004	0.71	0.0006	0.004	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.5E-04	0.00007	0.0014	0.0018
5	East Pit	6.9	23	2.6E-04	0.03	0.001	0.0010	2.9E-05	0.011	0.008	8.5	*2.8E-05*	3.2	0.00016	0.000010	0.00021	6.9E-04	5.9E-06	0.60	1.2	0.05	0.0004	0.77	0.0006	0.004	8.8E-06	0.0004	6.9E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0015	0.0018
5.25	East Pit	7.0	32	2.0E-04	0.03	0.001	0.0012	2.5E-05	0.014	0.016	10.7	*3.4E-05*	3.8	0.00019	0.000008	0.00019	6.7E-04	5.7E-06	0.71	1.8	0.07	0.0010	1.29	0.0008	0.005	8.1E-06	0.0004	8.0E-05	0.9	0.05	0.0005	1.4E-04	0.00009	0.0018	0.0020
5.5	East Pit	6.7	21	4.2E-04	0.02	0.001	0.0001	8.0E-06	0.002	0.007	8.0	9.8E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.8E-06	0.36	1.2	0.10	0.0003	0.81	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.03	0.0001	8.2E-05	0.00002	0.0002	0.0020
5.75	East Pit	6.9	22	2.7E-04	0.03	0.001	0.0010	3.0E-05	0.011	0.007	8.2	*2.7E-05*	3.1	0.00015	0.000011	0.00021	6.9E-04	5.9E-06	0.58	1.1	0.05	0.0003	0.70	0.0006	0.004	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.4E-04	0.00007	0.0014	0.0017
6	East Pit	6.9	23	2.7E-04	0.03	0.001	0.0010	2.9E-05	0.011	0.007	8.4	*2.8E-05*	3.2	0.00016	0.000010	0.00021	7.0E-04	5.8E-06	0.60	1.2	0.05	0.0004	0.75	0.0006	0.004	8.8E-06	0.0004	6.9E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
6.25	East Pit	7.0	30	2.1E-04	0.03	0.001	0.0012	2.4E-05	0.014	0.014	10.3	*3.4E-05*	3.7	0.00019	0.000008	0.00019	7.1E-04	5.6E-06	0.69	1.7	0.07	0.0008	1.16	0.0007	0.005	8.1E-06	0.0004	7.9E-05	0.9	0.05	0.0005	1.3E-04	0.00009	0.0017	0.0020
6.5	East Pit	6.7	20	4.3E-04	0.02	0.001	0.0001	7.9E-06	0.002	0.007	7.9	9.7E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.7E-06	0.36	1.2	0.10	0.0002	0.80	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	8.1E-05	0.00002	0.0002	0.0020
6.75	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	3.0E-05	0.011	0.006	8.1	*2.7E-05*	3.0	0.00015	0.000011	0.00021	6.9E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.69	0.0006	0.004	9.0E-06	0.0004	6.7E-05	0.7	0.03	0.0004	1.4E-04	0.00007	0.0014	0.0017
7	East Pit	6.9	22	2.8E-04	0.03	0.001	0.0010	2.8E-05	0.011	0.007	8.3	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.1E-04	5.8E-06	0.59	1.1	0.05	0.0004	0.73	0.0006	0.004	8.8E-06	0.0004	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
7.25	East Pit	6.9	28	2.3E-04	0.03	0.001	0.0012	2.2E-05	0.013	0.012	9.9	*3.3E-05*	3.7	0.00019	0.000008	0.00020	7.4E-04	5.6E-06	0.67	1.5	0.06	0.0007	1.03	0.0007	0.004	8.1E-06	0.0004	7.9E-05	0.8	0.04	0.0005	1.3E-04	0.00009	0.0017	0.0020
7.5	East Pit	6.7	20	4.5E-04	0.02	0.001	0.0001	7.7E-06	0.002	0.007	7.9	9.7E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.7E-06	0.36	1.2	0.10	0.0002	0.80	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	8.0E-05	0.00002	0.0002	0.0020
7.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.1	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.7E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
8	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.007	8.3	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.1E-04	5.8E-06	0.59	1.1	0.05	0.0004	0.71	0.0006	0.004	8.8E-06	0.0004	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
8.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.6	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.8E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.92	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0020
8.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
8.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
9	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
9.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
9.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
9.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
10	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
10.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
10.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
10.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
11	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
11.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
11.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
11.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
12	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
12.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
12.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
12.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
13	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
13.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
13.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
13.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
14	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
14.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
14.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
14.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
15	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
15.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
15.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
15.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
16	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
16.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
16.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
16.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
17	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
17.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
17.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
17.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
18	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
18.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
18.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
18.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
19	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
19.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
19.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
19.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
20	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
20.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
20.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
20.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
21	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
21.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
21.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
21.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
22	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
22.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than MISA Regulation																																		
22.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
22.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
23	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
23.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
23.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
23.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
24	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
24.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
24.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
24.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
25	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
25.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
25.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
25.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
26	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
26.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
26.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
26.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
27	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
27.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
27.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
27.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
28	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
28.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
28.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
28.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
29	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
29.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
29.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
29.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
30	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
30.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
30.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
30.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
31	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
31.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
31.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
31.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
32	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
32.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
32.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
32.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
33	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
33.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
33.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
33.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
34	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
34.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
34.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
34.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
35	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
35.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
35.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
35.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
36	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
36.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
36.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
36.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
37	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
37.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
37.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
37.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
38	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
38.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
38.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
38.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
39	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
39.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
39.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
39.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
40	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
40.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
40.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
40.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
41	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
41.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
41.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
41.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
42	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
42.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
42.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
42.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
43	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
43.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
43.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
43.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
44	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
44.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than PWQO guideline																																		
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life																																		
0.01	Parameter concentrations is greater than MISA Regulation																																		
44.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
44.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
45	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
45.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
45.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
45.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
46	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
46.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
46.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
46.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
47	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
47.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
47.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
47.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
48	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
48.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
48.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
48.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
49	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
49.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
49.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
49.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
50	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
50.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
50.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
50.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
51	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
51.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
51.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
51.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
52	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
52.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
52.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
52.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
53	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
53.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
53.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
53.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
54	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
54.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
54.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
54.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
55	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
55.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
55.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
55.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
56	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
56.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
56.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
56.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
57	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
57.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
57.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
57.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
58	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
58.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
58.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
58.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
59	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
59.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
59.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
59.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
60	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
60.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
60.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
60.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
61	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
61.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
61.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
61.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
62	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
62.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
62.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
62.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
63	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
63.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
63.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
63.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
64	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
64.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
64.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
64.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
65	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
65.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
65.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
65.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
66	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
66.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
66.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
66.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
67	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
67.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
67.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
67.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
68	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
68.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
68.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
68.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
69	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
69.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
69.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
69.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
70	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
70.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
70.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
70.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
71	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
71.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
71.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
71.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
72	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
72.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
72.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
72.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
73	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
73.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
73.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
73.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
74	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
74.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
74.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
74.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
75	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
75.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
75.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
75.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
76	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
76.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
76.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
76.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
77	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
77.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
77.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
77.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
78	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
78.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
78.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
78.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
79	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
79.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
79.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
79.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
80	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
80.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
80.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
80.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
81	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
81.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
81.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
81.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
82	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
82.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
82.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
82.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
83	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
83.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
83.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
83.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
84	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
84.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
84.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
84.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
85	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
85.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
85.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
85.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
86	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
86.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
86.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
86.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

87	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
87.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
87.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
87.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
88	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
88.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
88.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
88.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
89	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
89.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
89.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
89.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
90	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
90.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
90.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
90.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
91	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
91.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
91.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
91.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
92	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
92.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
92.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
92.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
93	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
93.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
93.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
93.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
94	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
94.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
94.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
94.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
95	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
95.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
95.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
95.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
96	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
96.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
96.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
96.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
97	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
97.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
97.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
97.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
98	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
98.25	East Pit	6.9	26	2.5E-04	0.02	0.001	0.0012	2.1E-05	0.013	0.009	9.5	*3.3E-05*	3.6	0.00018	0.000009	0.00020	7.9E-04	5.6E-06	0.65	1.4	0.06	0.0005	0.90	0.0007	0.004	8.2E-06	0.0004	7.9E-05	0.8	0.03	0.0005	1.2E-04	0.00009	0.0017	0.0019
98.5	East Pit	6.7	20	4.6E-04	0.02	0.001	0.0001	7.6E-06	0.002	0.007	7.9	9.6E-06	3.3	0.00028	0.000001	0.00008	1.4E-03	5.6E-06	0.36	1.1	0.10	0.0002	0.79	0.0008	0.004	4.9E-07	0.0003	2.4E-05	1.5	0.02	0.0001	7.9E-05	0.00002	0.0001	0.0020
98.75	East Pit	6.9	21	3.0E-04	0.03	0.001	0.0010	2.9E-05	0.010	0.006	8.0	*2.7E-05*	3.0	0.00015	0.000011	0.00021	7.0E-04	5.8E-06	0.58	1.1	0.05	0.0003	0.68	0.0006	0.004	9.0E-06	0.0004	6.6E-05	0.7	0.02	0.0004	1.4E-04	0.00007	0.0014	0.0017
99	East Pit	6.9	22	2.9E-04	0.03	0.001	0.0010	2.7E-05	0.011	0.006	8.2	*2.8E-05*	3.1	0.00016	0.000010	0.00021	7.2E-04	5.7E-06	0.59	1.1	0.05	0.0003	0.71	0.0006	0.004	8.8E-06	0.0003	6.8E-05	0.7	0.03	0.0004	1.4E-04	0.00008	0.0014	0.0018
WEST PIT																																			
0.25	West Pit	7.5	154	5.7E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.172	38.2	*5.9E-05*	7.3	0.00037	0.000065	0.00045	1.4E-04	0.0000	2.3	11.2	0.29	0.0118	9.43	0.0015	0.03	9.6E-05	0.001	8.5E-05	2.5	0.52	0.0008	4.3E-04	0.00024	0.0041	0.0037
0.5	West Pit	7.4	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.029	11.2	1.4E-05	2.0	0.00007	0.000485	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0019	1.56	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.11	0.0002	4.8E-04	0.00007	0.0012	0.0021
0.75	West Pit	7.3	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.1	1.3E-05	2.0	0.00007	0.000488	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.53	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
1	West Pit	7.4	63	1.0E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.061	17.3	*2.4E-05*	3.2	0.00014	0.000406	0.00044	1.3E-04	0.0000	1.1	4.1	0.11	0.0041	3.34	0.0007	0.02	1.1E-04	0.001	4.1E-05	1.2	0.20	0.0004	5.0E-04	0.00011	0.0018	0.0025
1.25	West Pit	7.5	153	5.8E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.171	38.0	*5.8E-05*	7.3	0.00037	0.000065	0.00045	1.4E-04	0.0000	2.3	11.2	0.29	0.0118	9.39	0.0015	0.03	9.6E-05	0.001	8.5E-05	2.5	0.52	0.0008	4.3E-04	0.00024	0.0041	0.0037
1.5	West Pit	7.3	37	1.3E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.1	1.3E-05	2.0	0.00007	0.000488	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.53	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
1.75	West Pit	7.3	36	1.4E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000492	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.51	0.0004	0.02	7.8E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
2	West Pit	7.4	63	1.1E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.061	17.1	*2.4E-05*	3.2	0.00014	0.000408	0.00044	1.3E-04	0.0000	1.1	4.1	0.11	0.0041	3.30	0.0006	0.02	1.1E-04	0.001	4.1E-05	1.2	0.20	0.0004	5.0E-04	0.00011	0.0018	0.0025
2.25	West Pit	7.5	152	5.9E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.171	37.9	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.3	11.1	0.29	0.0117	9.34	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0041	0.0037
2.5	West Pit	7.3	36	1.4E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000492	0.00053	1.4E-04	0.0000	0.8	2.0	0.06	0.0018	1.51	0.0004	0.02	7.8E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
2.75	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	10.9	1.3E-05	1.9	0.00007	0.000496	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.48	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
3	West Pit	7.4	62	1.1E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.060	17.0	*2.3E-05*	3.1	0.00014	0.000410	0.00044	1.3E-04	0.0000	1.1	4.0	0.11	0.0040	3.25	0.0006	0.02	1.1E-04	0.001	4.0E-05	1.2	0.19	0.0004	5.0E-04	0.00010	0.0018	0.0025
3.25	West Pit	7.5	151	6.0E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.170	37.7	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.3	11.1	0.29	0.0117	9.29	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
3.5	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.6E-04	0.006	0.028	10.9	1.3E-05	1.9	0.00007	0.000496	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.49	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
3.75	West Pit	7.3	35	1.5E-04	0.16	0.002	0.0004	9.7E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000500	0.00053	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
4	West Pit	7.4	61	1.2E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.059	16.8	*2.3E-05*	3.1	0.00014	0.000413	0.00044	1.3E-04	0.0000	1.1	4.0	0.11	0.0040	3.22	0.0006	0.02	1.1E-04	0.001	4.0E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
4.25	West Pit	7.5	151	6.2E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.169	37.5	*5.8E-05*	7.2	0.00037	0.000066	0.00045	1.4E-04	0.0000	2.2	11.0	0.29	0.0116	9.25	0.0015	0.03	9.6E-05	0.001	8.4E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
4.5	West Pit	7.3	36	1.5E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.028	11.0	1.3E-05	1.9	0.00007	0.000500	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0018	1.49	0.0004	0.02	7.9E-05	0.001	2.8E-05	0.9	0.10	0.0002	4.8E-04	0.00007	0.0012	0.0021
4.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.9	1.3E-05	1.9	0.00007	0.000504	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
5	West Pit	7.4	61	1.2E-04	0.16	0.003	0.0005	6.0E-04	0.013	0.059	16.7	*2.3E-05*	3.1	0.00013	0.000414	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0039	3.18	0.0006	0.02	1.0E-04	0.001	4.0E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
5.25	West Pit	7.5	150	6.2E-05	0.16	0.002	0.0007	2.2E-04	0.037	0.168	37.4	*5.7E-05*	7.1	0.00036	0.000067	0.00045	1.4E-04	0.0000	2.2	11.0	0.29	0.0116	9.21	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.51	0.0008	4.3E-04	0.00024	0.0040	0.0037
5.5	West Pit	7.3	36	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.9	1.3E-05	1.9	0.00007	0.000502	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.47	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00007	0.0012	0.0021
5.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000506	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.45	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
6	West Pit	7.4	60	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.058	16.6	*2.3E-05*	3.0	0.00013	0.000415	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0039	3.15	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0004	4.9E-04	0.00010	0.0018	0.0024
6.25	West Pit	7.5	150	6.3E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.168	37.3	*5.7E-05*	7.1	0.00036	0.000067	0.00045	1.4E-04	0.0000	2.2	10.9	0.28	0.0115	9.18	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.51	0.0008	4.4E-04	0.00024	0.0040	0.0036
6.5	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.8	1.3E-05	1.9	0.00007	0.000504	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.45	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
6.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.7	1.3E-05	1.9	0.00007	0.000508	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.43	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
7	West Pit	7.4	60	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.057	16.5	*2.3E-05*	3.0	0.00013	0.000416	0.00044	1.3E-04	0.0000	1.1	3.9	0.11	0.0038	3.12	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0003	4.9E-04	0.00010	0.0018	0.0024
7.25	West Pit	7.5	149	6.3E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.167	37.2	*5.7E-05*	7.1	0.00036	0.000068	0.00045	1.4E-04	0.0000	2.2	10.9	0.28	0.0115	9.15	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.5	0.50	0.0008	4.4E-04	0.00024	0.0040	0.0036
7.5	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.027	10.7	1.3E-05	1.9	0.00007	0.000506	0.00054	1.4E-04	0.0000	0.8	1.9	0.06	0.0017	1.44	0.0004	0.02	7.8E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
7.75	West Pit	7.3	35	1.6E-04	0.16	0.002	0.0004	9.8E-04	0.006	0.026	10.6	1.3E-05	1.9	0.00007	0.000510	0.00054	1.4E-04	0.0000	0.8	1.8	0.06	0.0017	1.41	0.0004	0.02	7.7E-05	0.001	2.7E-05	0.9	0.10	0.0002	4.7E-04	0.00006	0.0011	0.0021
8	West Pit	7.4	59	1.2E-04	0.16	0.003	0.0005	6.1E-04	0.012	0.057	16.3	*2.2E-05*	3.0	0.00013	0.000417	0.00044	1.3E-04	0.0000	1.1	3.8	0.11	0.0038	3.09	0.0006	0.02	1.0E-04	0.001	3.9E-05	1.2	0.19	0.0003	4.9E-04	0.00010	0.0017	0.0024

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
8.25	West Pit	7.5	149	6.4E-05	0.16	0.002	0.0007	2.3E-04	0.036	0.166	37.0	5.7E-05	7.1	0.00036	0.000068	0.00045	1.4E-04	0.0000	2.2	10.9	0.28	0.0114	9.11	0.0015	0.03	9.6E-05	0.001	8.3E-05	2.4	0.50	0.0008	4.4E-04	0.00024	0.0040	0.0036
8.5	West Pit	6.9	30	3.2E-04	0.12	0.001	0.0003	9.0E-04	0.003	0.012	11.3	1.3E-05	3.5	0.00025	0.000526	0.00061	5.3E-04	0.0000	0.6	1.4	0.10	0.0005	0.97	0.0008	0.02	4.3E-05	0.001	3.3E-05	1.6	0.05	0.0002	3.5E-04	0.00004	0.0006	0.0029
8.75	West Pit	7.0	31	2.6E-04	0.12	0.001	0.0011	9.0E-04	0.010	0.010	11.5	2.8E-05	3.4	0.00015	0.000526	0.00071	3.7E-04	0.0000	0.8	1.3	0.06	0.0005	0.84	0.0007	0.02	4.4E-05	0.001	7.0E-05	1.0	0.05	0.0004	3.9E-04	0.00009	0.0017	0.0027
9	West Pit	7.0	35	2.3E-04	0.12	0.001	0.0011	8.0E-04	0.011	0.015	12.3	3.0E-05	3.6	0.00016	0.000494	0.00067	3.5E-04	0.0000	0.8	1.6	0.07	0.0009	1.10	0.0007	0.02	5.7E-05	0.001	7.2E-05	1.0	0.06	0.0005	4.0E-04	0.00010	0.0018	0.0027
9.25	West Pit	7.2	63	1.5E-04	0.13	0.001	0.0012	4.5E-04	0.019	0.050	19.0	4.1E-05	4.9	0.00023	0.000312	0.00052	2.6E-04	0.0000	1.2	3.9	0.12	0.0033	3.01	0.0010	0.02	1.1E-04	0.001	8.7E-05	1.4	0.16	0.0006	4.5E-04	0.00014	0.0025	0.0032
9.5	West Pit	6.8	30	3.4E-04	0.12	0.001	0.0003	8.8E-04	0.003	0.010	11.3	1.3E-05	3.6	0.00026	0.000512	0.00060	5.7E-04	0.0000	0.6	1.4	0.10	0.0004	0.92	0.0008	0.02	3.6E-05	0.001	3.3E-05	1.6	0.05	0.0001	3.4E-04	0.00004	0.0006	0.0029
9.75	West Pit	7.0	31	2.6E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.010	11.4	2.8E-05	3.4	0.00015	0.000524	0.00070	3.7E-04	0.0000	0.8	1.3	0.06	0.0005	0.82	0.0006	0.02	4.3E-05	0.001	7.0E-05	1.0	0.05	0.0004	3.9E-04	0.00009	0.0017	0.0026
10	West Pit	7.0	34	2.4E-04	0.12	0.001	0.0011	8.1E-04	0.011	0.014	12.2	2.9E-05	3.5	0.00016	0.000496	0.00067	3.5E-04	0.0000	0.8	1.6	0.07	0.0008	1.06	0.0007	0.02	5.5E-05	0.001	7.2E-05	1.0	0.06	0.0005	4.0E-04	0.00009	0.0018	0.0027
10.25	West Pit	7.2	61	1.5E-04	0.12	0.001	0.0012	4.7E-04	0.018	0.047	18.4	4.0E-05	4.8	0.00023	0.000326	0.00053	2.7E-04	0.0000	1.2	3.7	0.12	0.0031	2.84	0.0010	0.02	1.0E-04	0.001	8.6E-05	1.4	0.15	0.0006	4.4E-04	0.00014	0.0025	0.0031
10.5	West Pit	6.8	30	3.5E-04	0.12	0.001	0.0003	8.8E-04	0.003	0.010	11.2	1.2E-05	3.6	0.00026	0.000510	0.00060	5.8E-04	0.0000	0.6	1.4	0.10	0.0004	0.91	0.0008	0.02	3.5E-05	0.001	3.3E-05	1.6	0.05	0.0001	3.4E-04	0.00004	0.0006	0.0029
10.75	West Pit	7.0	30	2.7E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.010	11.3	2.8E-05	3.3	0.00015	0.000522	0.00070	3.7E-04	0.0000	0.8	1.3	0.06	0.0005	0.81	0.0006	0.02	4.2E-05	0.001	7.0E-05	1.0	0.05	0.0004	3.9E-04	0.00009	0.0017	0.0026
11	West Pit	7.0	34	2.5E-04	0.12	0.001	0.0011	8.2E-04	0.011	0.014	12.1	2.9E-05	3.5	0.00016	0.000497	0.00067	3.5E-04	0.0000	0.8	1.6	0.07	0.0008	1.03	0.0007	0.02	5.3E-05	0.001	7.2E-05	1.0	0.06	0.0005	3.9E-04	0.00009	0.0018	0.0027
11.25	West Pit	7.2	59	1.6E-04	0.12	0.001	0.0012	4.9E-04	0.018	0.044	18.0	4.0E-05	4.7	0.00023	0.000339	0.00054	2.8E-04	0.0000	1.1	3.5	0.12	0.0029	2.69	0.0009	0.02	1.0E-04	0.001	8.6E-05	1.4	0.15	0.0006	4.4E-04	0.00013	0.0024	0.0031
11.5	West Pit	6.8	29	3.5E-04	0.12	0.001	0.0003	8.8E-04	0.003	0.010	11.2	1.2E-05	3.6	0.00026	0.000509	0.00060	5.8E-04	0.0000	0.6	1.4	0.10	0.0004	0.90	0.0008	0.02	3.4E-05	0.001	3.3E-05	1.6	0.05	0.0001	3.3E-04	0.00004	0.0006	0.0029
11.75	West Pit	7.0	30	2.8E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.2	2.8E-05	3.3	0.00015	0.000521	0.00070	3.7E-04	0.0000	0.8	1.3	0.06	0.0005	0.79	0.0006	0.02	4.1E-05	0.001	6.9E-05	1.0	0.05	0.0004	3.9E-04	0.00009	0.0017	0.0026
12	West Pit	7.0	33	2.6E-04	0.12	0.001	0.0011	8.2E-04	0.011	0.013	12.0	2.9E-05	3.5	0.00016	0.000497	0.00067	3.6E-04	0.0000	0.8	1.5	0.07	0.0007	1.00	0.0007	0.02	5.2E-05	0.001	7.2E-05	1.0	0.06	0.0005	3.9E-04	0.00009	0.0017	0.0027
12.25	West Pit	7.2	57	1.7E-04	0.12	0.001	0.0012	5.0E-04	0.017	0.041	17.5	3.9E-05	4.7	0.00022	0.000351	0.00054	2.8E-04	0.0000	1.1	3.4	0.11	0.0027	2.55	0.0009	0.02	9.9E-05	0.001	8.5E-05	1.3	0.14	0.0006	4.4E-04	0.00013	0.0024	0.0031
12.5	West Pit	6.8	29	3.6E-04	0.12	0.001	0.0003	8.8E-04	0.003	0.010	11.1	1.2E-05	3.6	0.00026	0.000508	0.00059	5.8E-04	0.0000	0.6	1.4	0.10	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	3.3E-05	1.6	0.05	0.0001	3.3E-04	0.00004	0.0006	0.0029
12.75	West Pit	7.0	30	2.8E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.2	2.8E-05	3.3	0.00015	0.000520	0.00070	3.8E-04	0.0000	0.8	1.3	0.06	0.0005	0.78	0.0006	0.02	4.1E-05	0.001	6.9E-05	1.0	0.05	0.0004	3.9E-04	0.00009	0.0017	0.0026
13	West Pit	7.0	33	2.6E-04	0.12	0.001	0.0011	8.3E-04	0.011	0.013	11.9	2.9E-05	3.5	0.00016	0.000498	0.00068	3.6E-04	0.0000	0.8	1.5	0.06	0.0007	0.97	0.0007	0.02	5.0E-05	0.001	7.2E-05	1.0	0.06	0.0005	3.9E-04	0.00009	0.0017	0.0027
13.25	West Pit	7.1	55	1.7E-04	0.12	0.001	0.0012	5.2E-04	0.017	0.039	17.1	3.9E-05	4.6	0.00022	0.000362	0.00055	2.9E-04	0.0000	1.1	3.2	0.11	0.0025	2.42	0.0009	0.02	9.7E-05	0.001	8.5E-05	1.3	0.13	0.0006	4.3E-04	0.00013	0.0023	0.0031
13.5	West Pit	6.8	29	3.7E-04	0.11	0.001	0.0003	8.8E-04	0.003	0.010	11.1	1.2E-05	3.6	0.00026	0.000506	0.00059	5.9E-04	0.0000	0.6	1.3	0.10	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	3.3E-05	1.6	0.04	0.0001	3.3E-04	0.00004	0.0006	0.0029
13.75	West Pit	7.0	30	2.9E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.1	2.7E-05	3.3	0.00015	0.000518	0.00070	3.8E-04	0.0000	0.8	1.3	0.06	0.0004	0.77	0.0006	0.02	4.0E-05	0.001	6.9E-05	1.0	0.05	0.0004	3.8E-04	0.00009	0.0016	0.0026
14	West Pit	7.0	32	2.7E-04	0.12	0.001	0.0011	8.3E-04	0.011	0.012	11.8	2.9E-05	3.5	0.00015	0.000499	0.00068	3.6E-04	0.0000	0.8	1.5	0.06	0.0007	0.95	0.0007	0.02	4.9E-05	0.001	7.1E-05	1.0	0.05	0.0005	3.9E-04	0.00009	0.0017	0.0027
14.25	West Pit	7.1	53	1.8E-04	0.12	0.001	0.0012	5.4E-04	0.017	0.036	16.7	3.8E-05	4.5	0.00021	0.000373	0.00056	3.0E-04	0.0000	1.1	3.1	0.10	0.0023	2.30	0.0009	0.02	9.4E-05	0.001	8.5E-05	1.3	0.12	0.0006	4.3E-04	0.00013	0.0023	0.0030
14.5	West Pit	6.8	29	3.7E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	11.0	1.2E-05	3.5	0.00026	0.000505	0.00059	5.9E-04	0.0000	0.6	1.3	0.10	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	3.3E-05	1.6	0.04	0.0001	3.3E-04	0.00004	0.0006	0.0029
14.75	West Pit	7.0	30	2.9E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.1	2.7E-05	3.3	0.00015	0.000518	0.00070	3.8E-04	0.0000	0.8	1.2	0.06	0.0004	0.76	0.0006	0.02	3.9E-05	0.001	6.9E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
15	West Pit	7.0	32	2.7E-04	0.12	0.001	0.0011	8.4E-04	0.011	0.012	11.7	2.9E-05	3.5	0.00015	0.000500	0.00068	3.7E-04	0.0000	0.8	1.4	0.06	0.0006	0.93	0.0007	0.02	4.7E-05	0.001	7.1E-05	1.0	0.05	0.0005	3.9E-04	0.00009	0.0017	0.0026
15.25	West Pit	7.1	51	1.9E-04	0.12	0.001	0.0012	5.5E-04	0.016	0.034	16.3	3.8E-05	4.5	0.00021	0.000383	0.00057	3.0E-04	0.0000	1.1	2.9	0.10	0.0022	2.19	0.0009	0.02	9.1E-05	0.001	8.4E-05	1.3	0.12	0.0006	4.2E-04	0.00012	0.0023	0.0030
15.5	West Pit	6.8	29	3.8E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	11.0	1.2E-05	3.5	0.00026	0.000504	0.00059	5.9E-04	0.0000	0.6	1.3	0.10	0.0003	0.86	0.0008	0.02	3.1E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.3E-04	0.00004	0.0006	0.0029
15.75	West Pit	7.0	29	3.0E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.0	2.7E-05	3.3	0.00014	0.000516	0.00070	3.8E-04	0.0000	0.8	1.2	0.06	0.0004	0.75	0.0006	0.02	3.9E-05	0.001	6.9E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
16	West Pit	7.0	32	2.8E-04	0.12	0.001	0.0011	8.4E-04	0.010	0.011	11.6	2.9E-05	3.4	0.00015	0.000500	0.00068	3.7E-04	0.0000	0.8	1.4	0.06	0.0006	0.90	0.0007	0.02	4.6E-05	0.001	7.1E-05	1.0	0.05	0.0005	3.8E-04	0.00009	0.0017	0.0026
16.25	West Pit	7.1	50	1.9E-04	0.12	0.001	0.0012	5.7E-04	0.016	0.032	16.0	3.7E-05	4.4	0.00021	0.000393	0.00057	3.1E-04	0.0000	1.0	2.8	0.10	0.0021	2.08	0.0009	0.02	8.8E-05	0.001	8.4E-05	1.3	0.11	0.0006	4.2E-04	0.00012	0.0022	0.0030
16.5	West Pit	6.8	28	3.8E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	10.9	1.2E-05	3.5	0.00026	0.000504	0.00059	6.0E-04	0.0000	0.6	1.3	0.10	0.0003	0.85	0.0008	0.02	3.1E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.3E-04	0.00004	0.0006	0.0029
16.75	West Pit	7.0	29	3.0E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.009	11.0	2.7E-05	3.3	0.00014	0.000516	0.00070	3.8E-04	0.0000	0.8	1.2	0.06	0.0004	0.75	0.0006	0.02	3.8E-05	0.001	6.9E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
17	West Pit	7.0	31	2.8E-04	0.12	0.001	0.0011	8.5E-04	0.010	0.011	11.5	2.9E-05	3.4	0.00015	0.000501	0.00068	3.7E-04	0.0000	0.8	1.4	0.06	0.0006	0.88	0.0007	0.02	4.5E-05	0.001	7.1E-05	1.0	0.05	0.0004	3.8E-04	0.00009	0.0017	0.0026
17.25	West Pit	7.1	48	2.0E-04	0.12	0.001	0.0012	5.9E-04	0.015	0.030	15.6	3.7E-05	4.4	0.00021	0.000402	0.00058	3.2E-04	0.0000	1.0	2.7	0.10	0.0019	1.97	0.0009	0.02	8.5E-05	0.001	8.4E-05	1.2	0.11	0.0006	4.1E-04	0.00012	0.0022	0.0030
17.5	West Pit	6.8	28	3.9E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	10.9	1.2E-05	3.5	0.00026	0.000503	0.00059	6.0E-04	0.0000	0.6	1.3	0.10	0.0003	0.85	0.0008	0.02	3.0E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.3E-04	0.00004	0.0005	0.0028
17.75	West Pit	7.0	29	3.1E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.9	2.7E-05	3.3	0.00014	0.000515	0.00070	3.8E-04	0.0000	0.8	1.2	0.06	0.0004	0.74	0.0006	0.02	3.7E-05	0.001	6.9E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
18	West Pit	7.0	31	2.9E-04	0.12	0.001	0.0011	8.5E-04	0.010	0.011	11.5	2.8E-05	3.4	0.00015	0.000501	0.00068	3.8E-04	0.0000	0.8	1.4	0.06	0.0006	0.87	0.0007	0.02	4.4E-05	0.001	7.1E-05	1.0	0.05	0.0004	3.8E-04	0.00009	0.0017	0.0026
18.25	West Pit	7.1	47	2.1E-04	0.12	0.001	0.0012	6.1E-04	0.015	0.028	15.3	3.6E-05	4.3	0.00020	0.000411	0.00059	3.2E-04	0.0000	1.0	2.6	0.09	0.0018	1.87	0.0009	0.02	8.1E-05	0.001	8.4E-05	1.2	0.10	0.0006	4.1E-04	0.00012	0.0022	0.0030
18.5	West Pit	6.8	28	3.9E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	10.9	1.2E-05	3.5	0.00026	0.000502	0.00059	6.0E-04	0.0000	0.6	1.3	0.10	0.0003	0.84	0.0008	0.02	3.0E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
18.75	West Pit	7.0	29	3.1E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.9	2.7E-05	3.3	0.00014	0.000514	0.00070	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.73	0.0006	0.02	3.7E-05	0.001	6.9E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
19	West Pit	7.0	31	2.9E-04	0.12	0.001	0.0011	8.5E-04	0.010	0.010	11.4	2.8E-05	3.4	0.00015	0.000502	0.00068	3.8E-04	0.0000	0.8	1.3	0.06	0.0005	0.85	0.0007	0.02	4.2E-05	0.001	7.1E-05	1.0	0.05	0.0004	3.8E-04	0.00009	0.0017	0.0026
19.25	West Pit	7.1	45	2.1E-04	0.12	0.001	0.0012	6.3E-04	0.015	0.026	15.0	3.6E-05	4.3	0.00020	0.000421	0.00060	3.3E-04	0.0000	1.0	2.5	0.09	0.0016	1.77	0.0008	0.02	7.8E-05	0.001	8.3E-05	1.2	0.10	0.0005	4.0E-04	0.00012	0.0021	0.0029
19.5	West Pit	6.8	28	4.0E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	10.8	1.2E-05	3.5	0.00026	0.000502	0.00059	6.0E-04	0.0000	0.6	1.3	0.10	0.0003	0.83	0.0008	0.02	2.9E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
19.75	West Pit	7.0	29	3.2E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.9	2.7E-05	3.3	0.00014	0.000514	0.00070	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.6E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.8E-04	0.00009	0.0016	0.0026
20	West Pit	7.0	31	3.0E-04	0.12	0.001	0.0011	8.6E-04	0.010	0.010	11.3	2.8E-05	3.4	0.00015	0.000502	0.00068	3.8E-04	0.0000	0.8	1.3	0.06	0.0005	0.83	0.0007	0.02	4.1E-05	0.001	7.1E-05	1.0	0.05	0.0004	3.8E-04	0.00009	0.0017	0.0026
20.25	West Pit	7.1	44	2.2E-04	0.12	0.001	0.0013	6.5E-04	0.014	0.025	14.7	3.6E-05	4.2	0.00020	0.000429	0.00061	3.4E-04	0.0000	1.0	2.3	0.09	0.0015	1.67	0.0008	0.02	7.4E-05	0.001	8.3E-05	1.2	0.09	0.0005	4.0E-04	0.00011	0.0021	0.0029
20.5	West Pit	6.8	28	4.1E-04	0.11	0.001	0.0003	8.8E-04	0.002	0.009	10.8	1.2E-05	3.5	0.00026	0.000500	0.00058	6.0E-04	0.0000	0.6	1.3	0.10	0.0003	0.83	0.0008	0.02	2.9E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
20.75	West Pit	7.0	29	3.3E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.8	2.7E-05	3.3	0.00014	0.000511	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.6E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0026
21	West Pit	7.0	30	3.1E-04	0.12	0.001	0.0011	8.6E-04	0.010	0.010	11.2	2.8E-05	3.4	0.00015	0.000501	0.00068	3.8E-04	0.0000	0.8	1.3	0.06	0.0005	0.81	0.0007	0.02	4.0E-05	0.001	7.0E-05	1.0	0.05	0.0004	3.7E-04	0.00009	0.0017	0.0026
21.25	West Pit	7.0	42	2.3E-04	0.12	0.001	0.0013	6.7E-04	0.014	0.023	14.3	3.5E-05	4.2	0.00019	0.000436	0.00061	3.5E-04	0.0000	1.0	2.2	0.08	0.0014	1.57	0.0008	0.02	7.0E-05	0.001	8.3E-05	1.2	0.08	0.0005	3.9E-04	0.00011	0.0021	0.0029
21.5	West Pit	6.8	28	4.2E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.009	10.8	1.2E-05	3.5	0.00026	0.000498	0.00058	6.1E-04	0.0000	0.6	1.3	0.10	0.0003	0.82	0.0008	0.02	2.8E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
21.75	West Pit	6.9	28	3.3E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.8	2.7E-05	3.2	0.00014	0.000510	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.71	0.0006	0.02	3.5E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0025
22	West Pit	7.0	30	3.1E-04	0.12	0.001	0.0011	8.6E-04	0.010	0.009	11.2	2.8E-05	3.4	0.00015	0.000501	0.00068	3.9E-04	0.0000	0.8	1.3	0.06	0.0005	0.80	0.0007	0.02	3.9E-05	0.001	7.0E-05	1.0	0.05	0.0004	3.7E-04	0.00009	0.0017	0.0026
22.25	West Pit	7.0	41	2.4E-04	0.12	0.001	0.0013	6.9E-04	0.014	0.021	14.1	3.5E-05	4.1	0.00019	0.000444	0.00062	3.6E-04	0.0000	0.9	2.1	0.08	0.0013	1.49	0.0008	0.02	6.6E-05	0.001	8.3E-05	1.1	0.08	0.0005	3.9E-04	0.00011	0.0020	0.0029
22.5	West Pit	6.8	28	4.2E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.7	1.2E-05	3.5	0.00026	0.000498	0.00058	6.1E-04	0.0000	0.6	1.3	0.10	0.0003	0.81	0.0008	0.02	2.8E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
22.75	West Pit	6.9	28	3.3E-04	0.12	0.001	0.0011	8.9E-04	0.010	0.008	10.8	2.7E-05	3.2	0.00014	0.000509	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.70	0.0006	0.02	3.5E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0025
23	West Pit	7.0	30	3.2E-04	0.12	0.001	0.0011	8.6E-04	0.010	0.009	11.1	2.8E-05	3.4	0.00015	0.000502	0.00068	3.9E-04	0.0000	0.8	1.3	0.06	0.0005	0.78	0.0006	0.02	3.8E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0017	0.0026
23.25	West Pit	7.0	40	2.4E-04	0.11	0.001	0.0013	7.1E-04	0.014	0.020	13.8	3.5E-05	4.1	0.00019	0.000451	0.00063	3.6E-04	0.0000	0.9	2.0	0.08	0.0012	1.42	0.0008	0.02	6.3E-05	0.001	8.2E-05	1.1	0.08	0.0005	3.8E-04	0.00011	0.0020	0.0029
23.5	West Pit	6.8	28	4.2E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.7	1.2E-05	3.5	0.00025	0.000497	0.00058	6.1E-04	0.0000	0.6	1.3	0.10	0.0003	0.81	0.0008	0.02	2.8E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
23.75	West Pit	6.9	28	3.4E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.008	10.7	2.7E-05	3.2	0.00014	0.000508	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.70	0.0006	0.02	3.5E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0025
24	West Pit	7.0	30	3.2E-04	0.12	0.001	0.0011	8.7E-04	0.010	0.009	11.1	2.8E-05	3.4	0.00015	0.000501	0.00068	3.9E-04	0.0000	0.8	1.3	0.06	0.0004	0.78	0.0006	0.02	3.8E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0017	0.0026
24.25	West Pit	7.0	40	2.5E-04	0.11	0.001	0.0013	7.2E-04	0.013	0.019	13.7	3.4E-05	4.1	0.00019	0.000454	0.00063	3.7E-04	0.0000	0.9	2.0	0.08	0.0011	1.38	0.0008	0.02	6.1E-05	0.001	8.2E-05	1.1	0.07	0.0005	3.8E-04	0.00011	0.0020	0.0029
24.5	West Pit	6.8	27	4.3E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.7	1.2E-05	3.5	0.00025	0.000496	0.00058	6.1E-04	0.0000	0.6	1.3	0.10	0.0003	0.81	0.0008	0.02	2.7E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
24.75	West Pit	6.9	28	3.4E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.008	10.7	2.7E-05	3.2	0.00014	0.000507	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.70	0.0006	0.02	3.4E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0025
25	West Pit	7.0	29	3.3E-04	0.12	0.001	0.0011	8.7E-04	0.010	0.009	11.1	2.8E-05	3.3	0.00015	0.000500	0.00068	3.9E-04	0.0000	0.8	1.3	0.06	0.0004	0.77	0.0006	0.02	3.7E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0017	0.0026
25.25	West Pit	7.0	39	2.6E-04	0.11	0.001	0.0013	7.3E-04	0.013	0.018	13.5	3.4E-05	4.0	0.00019	0.000458	0.00064	3.7E-04	0.0000	0.9	1.9	0.08	0.0011	1.33	0.0008	0.02	5.9E-05	0.001	8.2E-05	1.1	0.07	0.0005	3.8E-04	0.00011	0.0020	0.0028
25.5	West Pit	6.8	27	4.3E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.7	1.2E-05	3.5	0.00025	0.000495	0.00058	6.1E-04	0.0000	0.6	1.2	0.10	0.0003	0.81	0.0008	0.02	2.7E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
25.75	West Pit	6.9	28	3.5E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.008	10.7	2.7E-05	3.2	0.00014	0.000506	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.69	0.0006	0.02	3.4E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
26	West Pit	7.0	29	3.3E-04	0.12	0.001	0.0011	8.7E-04	0.010	0.009	11.0	2.8E-05	3.3	0.00015	0.000500	0.00068	3.9E-04	0.0000	0.8	1.2	0.06	0.0004	0.76	0.0006	0.02	3.7E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0026
26.25	West Pit	7.0	38	2.6E-04	0.11	0.001	0.0013	7.4E-04	0.013	0.017	13.4	3.4E-05	4.0	0.00019	0.000461	0.00064	3.8E-04	0.0000	0.9	1.9	0.08	0.0010	1.29	0.0008	0.02	5.7E-05	0.001	8.2E-05	1.1	0.07	0.0005	3.8E-04	0.00011	0.0020	0.0028
26.5	West Pit	6.8	27	4.4E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000494	0.00058	6.1E-04	0.0000	0.6	1.2	0.10	0.0003	0.80	0.0008	0.02	2.7E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
26.75	West Pit	6.9	28	3.5E-04	0.12	0.001	0.0011	8.8E-04	0.009	0.008	10.7	2.7E-05	3.2	0.00014	0.000505	0.00069	3.9E-04	0.0000	0.8	1.2	0.06	0.0003	0.69	0.0006	0.02	3.4E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
27	West Pit	6.9	29	3.3E-04	0.12	0.001	0.0011	8.7E-04	0.010	0.008	11.0	2.8E-05	3.3	0.00015	0.000500	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.75	0.0006	0.02	3.6E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0026
27.25	West Pit	7.0	37	2.7E-04	0.11	0.001	0.0013	7.6E-04	0.013	0.016	13.2	3.4E-05	4.0	0.00018	0.000468	0.00065	3.9E-04	0.0000	0.9	1.8	0.07	0.0009	1.22	0.0008	0.02	5.3E-05	0.001	8.2E-05	1.1	0.06	0.0005	3.7E-04	0.00011	0.0020	0.0028
27.5	West Pit	6.8	27	4.4E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000494	0.00058	6.2E-04	0.0000	0.6	1.2	0.10	0.0003	0.80	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.2E-04	0.00004	0.0005	0.0028
27.75	West Pit	6.9	28	3.5E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.69	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
28	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.7E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.74	0.0006	0.02	3.5E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.7E-04	0.00009	0.0016	0.0026
28.25	West Pit	7.0	36	2.8E-04	0.11	0.001	0.0013	7.9E-04	0.013	0.015	12.9	3.3E-05	3.9	0.00018	0.000475	0.00066	3.9E-04	0.0000	0.9	1.7	0.07	0.0008	1.14	0.0008	0.02	4.8E-05	0.001	8.2E-05	1.1	0.06	0.0005	3.7E-04	0.00010	0.0019	0.0028
28.5	West Pit	6.8	27	4.4E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000494	0.00058	6.2E-04	0.0000	0.6	1.2	0.10	0.0003	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
28.75	West Pit	6.9	28	3.5E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
29	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.7E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.73	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
29.25	West Pit	7.0	35	2.8E-04	0.11	0.001	0.0013	8.0E-04	0.013	0.014	12.8	3.3E-05	3.9	0.00018	0.000479	0.00066	4.0E-04	0.0000	0.9	1.7	0.07	0.0008	1.10	0.0008	0.02	4.6E-05	0.001	8.1E-05	1.1	0.06	0.0005	3.6E-04	0.00010	0.0019	0.0028
29.5	West Pit	6.8	27	4.4E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000494	0.00058	6.2E-04	0.0000	0.6	1.2	0.10	0.0003	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
29.75	West Pit	6.9	28	3.5E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
30	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.73	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
30.25	West Pit	7.0	35	2.8E-04	0.11	0.001	0.0013	8.1E-04	0.012	0.013	12.7	3.3E-05	3.9	0.00018	0.000483	0.00066	4.0E-04	0.0000	0.9	1.6	0.07	0.0007	1.06	0.0008	0.02	4.3E-05	0.001	8.1E-05	1.1	0.06	0.0005	3.6E-04	0.00010	0.0019	0.0028

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
30.5	West Pit	6.8	27	4.4E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
30.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
31	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
31.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
31.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
31.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

32	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
32.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
32.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
32.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
33	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
33.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
33.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
33.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
34	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
34.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
34.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
34.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
35	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
35.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
35.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
35.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
36	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
36.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
36.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
36.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
37	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
37.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
37.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
37.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
38	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
38.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
38.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
38.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
39	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
39.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
39.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
39.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
40	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
40.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
40.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
40.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
41	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
41.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
41.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
41.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
42	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
42.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
42.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
42.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
43	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
43.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
43.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
43.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
44	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
44.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
44.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
44.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
45	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
45.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
45.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
45.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
46	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
46.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
46.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
46.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
47	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
47.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
47.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
47.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
48	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
48.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
48.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
48.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
49	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
49.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
49.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
49.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
50	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
50.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
50.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
50.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	2.7E-05	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
51	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	2.8E-05	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
51.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	3.3E-05	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
51.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
51.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
52	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
52.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
52.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
52.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
53	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
53.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
53.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
53.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
54	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
54.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
54.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
54.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
55	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
55.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
55.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
55.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
56	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
56.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
56.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
56.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
57	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
57.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
57.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
57.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
58	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
58.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
58.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
58.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
59	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
59.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
59.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
59.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
60	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
60.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
60.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
60.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
61	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
61.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
61.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
61.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
62	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
62.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
62.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
62.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
63	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
63.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
63.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
63.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
64	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
64.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
64.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
64.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
65	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
65.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
65.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
65.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
66	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
66.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
66.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
66.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
67	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
67.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
67.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
67.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
68	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
68.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
68.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
68.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
69	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
69.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
69.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
69.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
70	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
70.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
70.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
70.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
71	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
71.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
71.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
71.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
72	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
72.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
72.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
72.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
73	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
73.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
73.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
73.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
74	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
74.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
74.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
74.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
75	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
75.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
75.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
75.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
76	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
76.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
76.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
76.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
77	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
77.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
77.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
77.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
78	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
78.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
78.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
78.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
79	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
79.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
79.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
79.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
80	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
80.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
80.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
80.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
81	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
81.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
81.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
81.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
82	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
82.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
82.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
82.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
83	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
83.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
83.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
83.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
84	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
84.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
84.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
84.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
85	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
85.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
85.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
85.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
86	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
86.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
86.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
86.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
87	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
87.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
87.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
87.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
88	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
88.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
88.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
88.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
89	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
89.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
89.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
89.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
90	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
90.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
90.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
90.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
91	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
91.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
91.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
91.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
92	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
92.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
92.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
92.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

TABLE 2
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
93	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
93.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
93.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
93.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
94	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
94.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
94.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
94.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
95	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
95.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
95.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
95.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
96	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
96.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
96.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
96.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
97	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
97.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
97.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
97.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
98	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026
98.25	West Pit	7.0	35	2.9E-04	0.11	0.001	0.0013	8.2E-04	0.012	0.013	12.6	*3.3E-05*	3.9	0.00018	0.000486	0.00067	4.1E-04	0.0000	0.9	1.6	0.07	0.0007	1.03	0.0008	0.02	4.1E-05	0.001	8.1E-05	1.1	0.05	0.0005	3.6E-04	0.00010	0.0019	0.0028
98.5	West Pit	6.8	27	4.5E-04	0.11	0.001	0.0003	8.7E-04	0.002	0.008	10.6	1.2E-05	3.5	0.00025	0.000493	0.00057	6.2E-04	0.0000	0.6	1.2	0.10	0.0002	0.79	0.0008	0.02	2.6E-05	0.001	3.2E-05	1.6	0.04	0.0001	3.1E-04	0.00004	0.0005	0.0028
98.75	West Pit	6.9	28	3.6E-04	0.12	0.001	0.0011	8.9E-04	0.009	0.007	10.6	*2.7E-05*	3.2	0.00014	0.000505	0.00069	4.0E-04	0.0000	0.8	1.1	0.05	0.0003	0.68	0.0006	0.02	3.3E-05	0.001	6.8E-05	1.0	0.04	0.0004	3.7E-04	0.00008	0.0016	0.0025
99	West Pit	6.9	29	3.4E-04	0.11	0.001	0.0011	8.8E-04	0.010	0.008	10.9	*2.8E-05*	3.3	0.00015	0.000501	0.00068	4.0E-04	0.0000	0.8	1.2	0.06	0.0004	0.72	0.0006	0.02	3.4E-05	0.001	7.0E-05	1.0	0.04	0.0004	3.6E-04	0.00009	0.0016	0.0026

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
EAST PIT																																			
0.25	East Pit	7.4	80	3.4E-05	0.06	0.001	0.0007	7.3E-05	0.022	0.084	20.6	*3.9E-05*	4.7	0.00024	0.000015	0.00020	2.4E-04	9.9E-06	1.2	5.7	0.16	0.0057	4.74	0.0010	0.014	1.9E-05	0.0004	6.8E-05	1.4	0.25	0.0006	2.1E-04	0.00014	0.0025	0.0022
0.5	East Pit	7.0	24	1.0E-04	0.06	0.001	0.0002	4.2E-05	0.004	0.015	8.0	*1.1E-05*	2.5	0.00018	0.000002	0.00009	5.1E-04	9.8E-06	0.40	1.4	0.07	0.0009	1.04	0.0005	0.009	5.6E-07	0.0004	2.4E-05	1.0	0.05	0.0001	1.6E-04	0.00003	0.0005	0.0017
0.75	East Pit	7.0	22	9.8E-05	0.06	0.001	0.0004	1.3E-04	0.005	0.012	7.5	*1.3E-05*	2.2	0.00014	0.000041	0.00020	4.3E-04	9.8E-06	0.42	1.2	0.06	0.0007	0.87	0.0005	0.009	1.7E-05	0.0004	3.1E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0007	0.0016
1	East Pit	7.0	23	9.5E-05	0.06	0.001	0.0004	1.3E-04	0.006	0.013	7.7	*1.4E-05*	2.3	0.00013	0.000039	0.00022	4.1E-04	9.8E-06	0.44	1.2	0.06	0.0008	0.90	0.0005	0.009	1.9E-05	0.0004	3.3E-05	0.8	0.05	0.0002	2.1E-04	0.00005	0.0008	0.0016
1.25	East Pit	7.0	24	9.2E-05	0.06	0.001	0.0004	1.1E-04	0.006	0.015	8.0	*1.5E-05*	2.3	0.00014	0.000033	0.00022	3.9E-04	9.8E-06	0.46	1.4	0.06	0.0009	0.99	0.0005	0.009	2.1E-05	0.0004	3.4E-05	0.8	0.05	0.0002	2.2E-04	0.00005	0.0008	0.0016
1.5	East Pit	7.0	23	1.0E-04	0.06	0.001	0.0004	5.0E-05	0.005	0.013	7.7	*1.3E-05*	2.3	0.00015	0.000002	0.00012	4.5E-04	9.8E-06	0.42	1.3	0.06	0.0008	0.92	0.0005	0.009	8.1E-07	0.0004	3.0E-05	0.9	0.05	0.0002	1.9E-04	0.00004	0.0007	0.0016
1.75	East Pit	7.0	22	1.0E-04	0.06	0.001	0.0004	1.1E-04	0.005	0.012	7.5	*1.4E-05*	2.2	0.00013	0.000026	0.00017	4.2E-04	9.8E-06	0.43	1.2	0.06	0.0007	0.86	0.0005	0.009	1.0E-05	0.0004	3.2E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
2	East Pit	7.0	22	1.0E-04	0.06	0.001	0.0004	1.1E-04	0.005	0.012	7.6	*1.4E-05*	2.3	0.00013	0.000029	0.00018	4.1E-04	9.8E-06	0.44	1.2	0.06	0.0007	0.87	0.0005	0.009	1.3E-05	0.0004	3.3E-05	0.8	0.05	0.0002	2.0E-04	0.00005	0.0008	0.0016
2.25	East Pit	7.0	23	1.0E-04	0.06	0.001	0.0004	1.1E-04	0.006	0.013	7.7	*1.5E-05*	2.3	0.00013	0.000027	0.00018	4.1E-04	9.8E-06	0.44	1.3	0.06	0.0008	0.91	0.0005	0.009	1.5E-05	0.0004	3.4E-05	0.8	0.05	0.0002	2.1E-04	0.00005	0.0008	0.0016
2.5	East Pit	7.0	22	1.1E-04	0.06	0.001	0.0004	5.5E-05	0.005	0.012	7.6	*1.3E-05*	2.3	0.00014	0.000002	0.00012	4.4E-04	9.8E-06	0.43	1.2	0.06	0.0007	0.88	0.0005	0.009	9.4E-07	0.0004	3.1E-05	0.8	0.05	0.0002	1.9E-04	0.00004	0.0007	0.0016
2.75	East Pit	7.0	22	1.1E-04	0.06	0.001	0.0004	9.6E-05	0.005	0.012	7.5	*1.4E-05*	2.2	0.00013	0.000020	0.00016	4.3E-04	9.8E-06	0.43	1.2	0.06	0.0007	0.84	0.0005	0.009	8.0E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
3	East Pit	7.0	22	1.1E-04	0.06	0.001	0.0004	1.0E-04	0.005	0.012	7.5	*1.4E-05*	2.2	0.00013	0.000023	0.00017	4.2E-04	9.7E-06	0.44	1.2	0.06	0.0007	0.85	0.0005	0.009	1.0E-05	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00005	0.0008	0.0016
3.25	East Pit	7.0	22	1.1E-04	0.06	0.001	0.0004	1.0E-04	0.005	0.012	7.6	*1.4E-05*	2.3	0.00013	0.000022	0.00017	4.2E-04	9.7E-06	0.44	1.2	0.06	0.0007	0.87	0.0005	0.009	1.2E-05	0.0004	3.4E-05	0.8	0.05	0.0002	2.0E-04	0.00005	0.0008	0.0016
3.5	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.012	7.5	*1.4E-05*	2.3	0.00014	0.000002	0.00013	4.4E-04	9.8E-06	0.43	1.2	0.06	0.0007	0.85	0.0005	0.009	1.0E-06	0.0004	3.2E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
3.75	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	9.0E-05	0.005	0.012	7.4	*1.4E-05*	2.2	0.00013	0.000017	0.00015	4.3E-04	9.8E-06	0.43	1.2	0.06	0.0007	0.83	0.0005	0.009	6.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
4	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	9.7E-05	0.005	0.012	7.4	*1.4E-05*	2.2	0.00013	0.000020	0.00016	4.3E-04	9.7E-06	0.44	1.2	0.06	0.0007	0.83	0.0005	0.009	8.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
4.25	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	9.5E-05	0.005	0.012	7.5	*1.4E-05*	2.3	0.00013	0.000019	0.00016	4.2E-04	9.7E-06	0.44	1.2	0.06	0.0007	0.85	0.0005	0.009	9.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00005	0.0008	0.0016
4.5	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	6.0E-05	0.005	0.012	7.4	*1.4E-05*	2.3	0.00014	0.000002	0.00013	4.4E-04	9.7E-06	0.43	1.2	0.06	0.0007	0.83	0.0005	0.009	1.1E-06	0.0004	3.2E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
4.75	East Pit	7.0	21	1.2E-04	0.06	0.001	0.0004	8.6E-05	0.005	0.011	7.4	*1.4E-05*	2.2	0.00013	0.000015	0.00015	4.3E-04	9.7E-06	0.43	1.1	0.06	0.0007	0.81	0.0005	0.008	5.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
5	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	9.2E-05	0.005	0.011	7.4	*1.4E-05*	2.2	0.00013	0.000017	0.00016	4.3E-04	9.7E-06	0.44	1.1	0.05	0.0007	0.82	0.0005	0.008	7.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
5.25	East Pit	7.0	22	1.2E-04	0.06	0.001	0.0004	9.1E-05	0.005	0.012	7.4	*1.4E-05*	2.2	0.00013	0.000017	0.00016	4.3E-04	9.7E-06	0.44	1.2	0.06	0.0007	0.83	0.0005	0.008	8.4E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
5.5	East Pit	7.0	21	1.3E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.011	7.4	*1.4E-05*	2.2	0.00014	0.000002	0.00013	4.4E-04	9.7E-06	0.43	1.1	0.06	0.0006	0.82	0.0005	0.008	1.1E-06	0.0004	3.2E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
5.75	East Pit	7.0	21	1.3E-04	0.06	0.001	0.0004	8.3E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000013	0.00015	4.4E-04	9.7E-06	0.43	1.1	0.05	0.0006	0.80	0.0005	0.008	5.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
6	East Pit	7.0	21	1.3E-04	0.06	0.001	0.0004	8.8E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000016	0.00015	4.3E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.80	0.0005	0.008	6.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
6.25	East Pit	7.0	21	1.3E-04	0.06	0.001	0.0004	8.8E-05	0.005	0.011	7.4	*1.4E-05*	2.2	0.00013	0.000015	0.00015	4.3E-04	9.7E-06	0.44	1.1	0.05	0.0007	0.81	0.0005	0.008	7.4E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
6.5	East Pit	7.0	21	1.3E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00014	0.000002	0.00013	4.5E-04	9.7E-06	0.43	1.1	0.06	0.0006	0.80	0.0005	0.008	1.1E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
6.75	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	8.0E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000012	0.00015	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.79	0.0005	0.008	4.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
7	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	8.5E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000014	0.00015	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.79	0.0005	0.008	6.1E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
7.25	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	8.5E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000014	0.00015	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.80	0.0005	0.008	6.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
7.5	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000003	0.00013	4.5E-04	9.7E-06	0.43	1.1	0.06	0.0006	0.79	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
7.75	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	7.9E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000011	0.00014	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.78	0.0005	0.008	4.3E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
8	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	8.3E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000013	0.00015	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.78	0.0005	0.008	5.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
8.25	East Pit	7.0	21	1.4E-04	0.06	0.001	0.0004	8.3E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000013	0.00015	4.4E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.78	0.0005	0.008	6.1E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
8.5	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000003	0.00013	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.78	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
8.75	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	7.7E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.77	0.0005	0.008	4.0E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
9	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	8.1E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000012	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.77	0.0005	0.008	5.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
9.25	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	8.1E-05	0.005	0.011	7.3	*1.4E-05*	2.2	0.00013	0.000012	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.77	0.0005	0.008	5.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	2.0E-04	0.00004	0.0008	0.0016
9.5	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000003	0.00013	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.77	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
9.75	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	7.6E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.76	0.0005	0.008	3.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
10	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	7.9E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000012	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.76	0.0005	0.008	4.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
10.25	East Pit	7.0	21	1.5E-04	0.06	0.001	0.0004	7.9E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000012	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.76	0.0005	0.008	5.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
10.5	East Pit	7.0	21	1.6E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000003	0.00013	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.76	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
10.75	East Pit	7.0	21	1.6E-04	0.06	0.001	0.0004	7.4E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.75	0.0005	0.008	3.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
11	East Pit	7.0	21	1.6E-04	0.06	0.001	0.0004	7.8E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000011	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.75	0.0005	0.008	4.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
11.25	East Pit	7.0	21	1.6E-04	0.06	0.001	0.0004	7.8E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000011	0.00015	4.5E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.75	0.0005	0.008	4.9E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
11.5	East Pit	7.0	20	1.6E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000003	0.00013	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.75	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
11.75	East Pit	7.0	20	1.6E-04	0.06	0.001	0.0004	7.3E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.74	0.0005	0.008	3.4E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
12	East Pit	7.0	20	1.6E-04	0.06	0.001	0.0004	7.7E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000010	0.00015	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0005	0.74	0.0005	0.008	4.3E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
12.25	East Pit	7.0	20	1.6E-04	0.06	0.001	0.0004	7.7E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000010	0.00015	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0006	0.74	0.0005	0.008	4.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0008	0.0016
12.5	East Pit	7.0	20	1.7E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.010	7.2	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0005	0.74	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
12.75	East Pit	7.0	20	1.7E-04	0.06	0.001	0.0004	7.2E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.6E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.73	0.0005	0.008	3.3E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
13	East Pit	7.0	20	1.7E-04	0.06	0.001	0.0004	7.6E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.6E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.73	0.0005	0.008	4.1E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
13.25	East Pit	7.0	20	1.7E-04	0.06	0.001	0.0004	7.6E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.6E-04	9.7E-06	0.44	1.1	0.05	0.0005	0.73	0.0005	0.008	4.4E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
13.5	East Pit	6.9	20	1.7E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.73	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
13.75	East Pit	6.9	20	1.7E-04	0.06	0.001	0.0004	7.1E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.6E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
14	East Pit	6.9	20	1.7E-04	0.06	0.001	0.0004	7.4E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.6E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	3.9E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
14.25	East Pit	6.9	20	1.7E-04	0.06	0.001	0.0004	7.5E-05	0.005	0.010	7.1	*1.4E-05*	2.2	0.00013	0.000010	0.00014	4.6E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.73	0.0005	0.008	4.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
14.5	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
14.75	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.1E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
15	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.3E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	3.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
15.25	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.4E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.72	0.0005	0.008	4.0E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
15.5	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.71	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
15.75	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.0E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.71	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
16	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.3E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.71	0.0005	0.008	3.6E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
16.25	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	7.3E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.71	0.0005	0.008	3.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
16.5	East Pit	6.9	20	1.8E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.009	7.1	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.71	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
16.75	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.70	0.0005	0.008	2.8E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
17	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	7.2E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.70	0.0005	0.008	3.5E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
17.25	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	7.2E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000009	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.70	0.0005	0.008	3.7E-06	0.0004	3.3E-05	0.8	0.04	0.0002	1.9E-04	0.00004	0.0007	0.0016
17.5	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	6.1E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.70	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
17.75	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	2.8E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
18	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	7.1E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	3.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
18.25	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	7.1E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.7E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	3.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
18.5	East Pit	6.9	20	1.9E-04	0.06	0.001	0.0004	6.0E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
18.75	East Pit	6.9	20	2.0E-04	0.06	0.001	0.0004	6.8E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	2.7E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
19	East Pit	6.9	20	2.0E-04	0.06	0.001	0.0004	7.0E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	3.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
19.25	East Pit	6.9	20	2.0E-04	0.06	0.001	0.0004	7.0E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	3.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
19.5	East Pit	6.9	20	2.0E-04	0.06	0.001	0.0004	6.0E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.69	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
19.75	East Pit	6.9	19	2.0E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.68	0.0005	0.008	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
20	East Pit	6.9	19	2.0E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.8E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.68	0.0005	0.008	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
20.25	East Pit	6.9	19	2.0E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.8E-04	9.6E-06	0.44	1.0	0.05	0.0005	0.68	0.0005	0.008	3.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
20.5	East Pit	6.9	19	2.0E-04	0.06	0.001	0.0004	6.0E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.9E-04	9.7E-06	0.44	1.0	0.05	0.0005	0.68	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
20.75	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000006	0.00014	4.8E-04	9.7E-06	0.45	1.0	0.05	0.0005	0.67	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
21	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.8E-04	9.6E-06	0.45	1.0	0.05	0.0005	0.67	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
21.25	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.9E-05	0.005	0.009	7.0	*1.4E-05*	2.2	0.00013	0.000008	0.00014	4.8E-04	9.6E-06	0.45	1.0	0.05	0.0005	0.67	0.0005	0.008	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
21.5	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	5.9E-05	0.005	0.008	7.0	*1.4E-05*	2.2	0.00013	0.000003	0.00014	4.9E-04	9.6E-06	0.44	1.0	0.05	0.0005	0.67	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
21.75	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000006	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.67	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
22	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.8E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.67	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
22.25	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.8E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.67	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than MISA Regulation																																		
22.5	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	5.9E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.67	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
22.75	East Pit	6.9	19	2.1E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000006	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
23	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
23.25	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.8E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
23.5	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	5.9E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
23.75	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000006	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
24	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
24.25	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.66	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
24.5	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	5.9E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.0E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
24.75	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000006	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
25	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
25.25	East Pit	6.9	19	2.2E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	4.9E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
25.5	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.0E-04	9.6E-06	0.45	1.0	0.05	0.0004	0.65	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
25.75	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000006	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
26	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
26.25	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.7E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
26.5	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
26.75	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
27	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
27.25	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.9	*1.4E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
27.5	East Pit	6.9	19	2.3E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.008	6.9	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.64	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
27.75	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
28	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
28.25	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.8	*1.4E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
28.5	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
28.75	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
29	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
29.25	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.0E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
29.5	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.63	0.0005	0.008	1.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
29.75	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.008	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
30	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
30.25	East Pit	6.9	19	2.4E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
30.5	East Pit	6.9	19	2.5E-04	0.06	0.001	0.0004	5.8E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
30.75	East Pit	6.9	19	2.5E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
31	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
31.25	East Pit	6.9	19	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
31.5	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	5.7E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
31.75	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.62	0.0005	0.008	2.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
32	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
32.25	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
32.5	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	5.7E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
32.75	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.4E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
33	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
33.25	East Pit	6.9	18	2.5E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
33.5	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	5.7E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
33.75	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.3E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
34	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
34.25	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.6E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.1E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
34.5	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	5.7E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.61	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
34.75	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.3E-05	0.005	0.007	6.8	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.60	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
35	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.60	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
35.25	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.60	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
35.5	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	5.7E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0004	0.60	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
35.75	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.3E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
36	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	2.9E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
36.25	East Pit	6.9	18	2.6E-04	0.06	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
36.5	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	5.7E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
36.75	East Pit	6.9	18	2.7E-04	0.06	0.001	0.0004	6.3E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
37	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
37.25	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.60	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
37.5	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	5.7E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
37.75	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.3E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
38	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
38.25	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
38.5	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	5.7E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
38.75	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.3E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00014	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
39	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
39.25	East Pit	6.9	18	2.7E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
39.5	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	5.7E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
39.75	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.3E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
40	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.008	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
40.25	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.2E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.59	0.0005	0.008	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
40.5	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	5.7E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.008	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
40.75	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.3E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.008	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
41	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
41.25	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
41.5	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
41.75	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.3E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
42	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
42.25	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.005	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.58	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
42.5	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
42.75	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.3E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.58	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
43	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.58	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
43.25	East Pit	6.9	18	2.8E-04	0.05	0.001	0.0004	6.5E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.58	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
43.5	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.007	6.7	*1.3E-05*	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.58	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
43.75	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.7	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
44	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.4E-05	0.004	0.006	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
44.25	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.5E-05	0.004	0.006	6.7	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than PWQO guideline																																		
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life																																		
0.01	Parameter concentrations is greater than MISA Regulation																																		
44.5	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.7	1.3E-05	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.57	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
44.75	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.7	1.3E-05	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
45	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.4E-05	0.004	0.006	6.7	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
45.25	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.7	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
45.5	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.7	1.3E-05	2.2	0.00013	0.000003	0.00014	5.3E-04	9.6E-06	0.45	0.9	0.05	0.0003	0.57	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
45.75	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
46	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
46.25	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
46.5	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00014	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
46.75	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
47	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
47.25	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
47.5	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00014	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.57	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
47.75	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
48	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
48.25	East Pit	6.9	18	2.9E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.3E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
48.5	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00014	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
48.75	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
49	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
49.25	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
49.5	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00014	5.4E-04	9.6E-06	0.46	0.9	0.05	0.0003	0.56	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
49.75	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
50	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
50.25	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
50.5	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
50.75	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
51	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
51.25	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
51.5	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	5.6E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
51.75	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
52	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
52.25	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
52.5	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.56	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
52.75	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
53	East Pit	6.9	17	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
53.25	East Pit	6.9	18	3.0E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
53.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.3E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
53.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.5E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
54	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
54.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
54.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
54.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	6.2E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
55	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
55.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
55.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
55.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
56	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
56.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
56.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
56.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
57	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
57.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.4E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
57.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
57.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
58	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
58.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
58.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.55	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
58.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
59	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
59.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.4E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
59.5	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
59.75	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
60	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
60.25	East Pit	6.9	17	3.1E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
60.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
60.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
61	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.0E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
61.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
61.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
61.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
62	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
62.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
62.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
62.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
63	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
63.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
63.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
63.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
64	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
64.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
64.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
64.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
65	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
65.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.6	1.3E-05	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
65.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.6	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
0.01	Parameter concentrations is greater than PWQO guideline																																		
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life																																		
0.01	Parameter concentrations is greater than MISA Regulation																																		
65.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.6	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
66	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
66.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
66.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.54	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
66.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
67	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
67.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
67.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.5E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
67.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
68	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
68.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
68.5	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
68.75	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
69	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
69.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.9E-04	0.00004	0.0007	0.0016
69.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.03	0.0002	1.8E-04	0.00004	0.0007	0.0016
69.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
70	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
70.25	East Pit	6.9	17	3.2E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
70.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
70.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
71	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
71.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
71.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
71.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
72	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
72.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0003	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
72.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
72.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.1E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
73	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
73.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
73.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
73.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
74	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00015	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
74.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
74.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
74.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.5E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
75.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
75.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
75.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
76	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
76.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.3E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
76.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
76.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
77	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
77.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.5E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
77.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
77.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
78	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
78.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
78.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.006	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
78.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
79	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
79.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
79.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.53	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
79.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
80	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
80.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
80.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
80.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
81	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
81.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
81.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
81.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
82	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
82.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
82.5	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
82.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
83	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
83.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
83.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
83.75	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.6E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
84	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
84.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
84.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
84.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
85	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
85.25	East Pit	6.9	17	3.3E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
85.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
85.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000006	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
86	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	*1.3E-05*	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
86.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
86.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
86.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
87	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
87.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
87.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
87.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
88	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
88.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
88.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
88.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
89	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
89.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
89.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
89.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
90	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
90.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
90.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
90.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
91	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
91.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
91.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
91.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
92	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
92.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
92.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
92.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
93	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
93.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
93.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
93.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
94	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
94.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
94.5	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
94.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
95	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
95.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
95.5	East Pit	6.8	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
95.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
96	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
96.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
96.5	East Pit	6.8	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
96.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
97	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
97.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
97.5	East Pit	6.8	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
97.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
98	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
98.25	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.2E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.9E-04	0.00004	0.0007	0.0016
98.5	East Pit	6.8	17	3.4E-04	0.05	0.001	0.0004	5.4E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000003	0.00015	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	1.4E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
98.75	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.0E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000006	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	2.6E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
99	East Pit	6.9	17	3.4E-04	0.05	0.001	0.0005	6.2E-05	0.004	0.005	6.5	1.3E-05	2.2	0.00013	0.000007	0.00016	5.6E-04	9.5E-06	0.46	0.8	0.05	0.0002	0.52	0.0005	0.007	3.1E-06	0.0004	3.3E-05	0.8	0.02	0.0002	1.8E-04	0.00004	0.0007	0.0016
WEST PIT																																			
0.25	West Pit	7.5	154	4.2E-05	0.17	0.002	0.0007	2.3E-04	0.038	0.173	38.4	5.9E-05	7.3	0.00037	0.000069	0.00046	1.4E-04	0.0000	2.3	11.3	0.29	0.0119	9.46	0.0015	0.03	1.0E-04	0.001	8.6E-05	2.5	0.52	0.0008	4.4E-04	0.00024	0.0041	0.0038
0.5	West Pit	7.4	55	5.2E-05	0.18	0.003	0.0005	9.8E-04	0.011	0.049	15.5	2.0E-05	2.8	0.00012	0.000410	0.00060	1.2E-04	0.0000	0.9	3.3	0.10	0.0032	2.65	0.0006	0.03	8.5E-05	0.001	3.8E-05	1.1	0.17	0.0003	5.0E-04	0.00009	0.0017	0.0025
0.75	West Pit	7.4	48	5.4E-05	0.18	0.003	0.0005	1.0E-03	0.009	0.040	13.8	1.7E-05	2.5	0.00010	0.000426	0.00059	1.2E-04	0.0000	0.8	2.7	0.08	0.0026	2.16	0.0005	0.03	8.3E-05	0.001	3.4E-05	0.9	0.14	0.0003	5.1E-04	0.00008	0.0015	0.0024
1	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	9.2E-04	0.009	0.044	14.5	1.9E-05	2.6	0.00011	0.000418	0.00053	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.37	0.0005	0.03	8.9E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0016	0.0024
1.25	West Pit	7.4	57	5.2E-05	0.18	0.003	0.0005	7.8E-04	0.011	0.051	15.9	2.1E-05	2.9	0.00012	0.000379	0.00046	1.2E-04	0.0000	0.9	3.5	0.10	0.0034	2.77	0.0006	0.03	9.7E-05	0.001	3.8E-05	1.1	0.17	0.0003	5.3E-04	0.00010	0.0017	0.0025
1.5	West Pit	7.4	52	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.045	14.8	1.9E-05	2.6	0.00011	0.000416	0.00052	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.44	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.16	0.0003	5.2E-04	0.00009	0.0016	0.0025
1.75	West Pit	7.4	49	5.4E-05	0.18	0.003	0.0005	9.4E-04	0.009	0.042	14.2	1.8E-05	2.5	0.00010	0.000422	0.00054	1.2E-04	0.0000	0.8	2.9	0.08	0.0027	2.26	0.0005	0.03	8.8E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
2	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	9.0E-04	0.009	0.044	14.5	1.9E-05	2.6	0.00010	0.000419	0.00052	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.35	0.0005	0.03	9.0E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
2.25	West Pit	7.4	53	5.3E-05	0.18	0.003	0.0005	8.2E-04	0.010	0.047	15.2	2.0E-05	2.7	0.00011	0.000399	0.00048	1.2E-04	0.0000	0.9	3.2	0.09	0.0031	2.55	0.0006	0.03	9.4E-05	0.001	3.7E-05	1.0	0.16	0.0003	5.3E-04	0.00009	0.0016	0.0025
2.5	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.044	14.6	1.9E-05	2.6	0.00011	0.000417	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0024
2.75	West Pit	7.4	49	5.4E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.042	14.2	1.8E-05	2.5	0.00010	0.000421	0.00053	1.2E-04	0.0000	0.8	2.9	0.09	0.0028	2.28	0.0005	0.03	8.9E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
3	West Pit	7.4	50	5.4E-05	0.18	0.003	0.0005	8.9E-04	0.009	0.043	14.4	1.9E-05	2.6	0.00010	0.000419	0.00052	1.2E-04	0.0000	0.9	3.0	0.09	0.0028	2.34	0.0005	0.03	9.0E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
3.25	West Pit	7.4	52	5.3E-05	0.18	0.003	0.0005	8.4E-04	0.010	0.046	14.9	1.9E-05	2.7	0.00011	0.000406	0.00049	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.47	0.0005	0.03	9.3E-05	0.001	3.6E-05	1.0	0.16	0.0003	5.3E-04	0.00009	0.0016	0.0025
3.5	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.009	0.044	14.5	1.9E-05	2.6	0.00011	0.000418	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.36	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
3.75	West Pit	7.4	50	5.6E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.042	14.3	1.8E-05	2.5	0.00010	0.000422	0.00053	1.2E-04	0.0000	0.8	2.9	0.09	0.0028	2.29	0.0005	0.03	8.9E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
4	West Pit	7.4	50	5.9E-05	0.18	0.003	0.0005	8.9E-04	0.009	0.043	14.4	1.9E-05	2.6	0.00010	0.000422	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0028	2.33	0.0005	0.03	9.1E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
4.25	West Pit	7.4	52	5.9E-05	0.18	0.003	0.0005	8.5E-04	0.010	0.045	14.8	1.9E-05	2.6	0.00011	0.000411	0.00049	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.3E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0025
4.5	West Pit	7.4	51	6.6E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.044	14.7	1.9E-05	2.6	0.00011	0.000424	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.2E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0025
4.75	West Pit	7.4	51	7.4E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.044	14.6	1.9E-05	2.6	0.00010	0.000429	0.00053	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.36	0.0005	0.03	9.2E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5	West Pit	7.4	51	7.5E-05	0.18	0.003	0.0005	8.9E-04	0.010	0.044	14.7	1.9E-05	2.6	0.00011	0.000428	0.00052	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.3E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.25	West Pit	7.4	52	7.5E-05	0.18	0.003	0.0005	8.6E-04	0.010	0.046	15.0	1.9E-05	2.7	0.00011	0.000420	0.00050	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.47	0.0005	0.03	9.5E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.5	West Pit	7.4	52	8.1E-05	0.18	0.003	0.0005	8.9E-04	0.010	0.045	14.9	1.9E-05	2.7	0.00011	0.000429	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.4E-05	0.001	3.7E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.75	West Pit	7.4	52	8.7E-05	0.18	0.003	0.0005	9.1E-04	0.010	0.044	14.8	1.9E-05	2.7	0.00011	0.000433	0.00053	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.40	0.0005	0.03	9.4E-05	0.001	3.6E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
6	West Pit	7.4	52	8.8E-05	0.18	0.003	0.0005	9.0E-04	0.010	0.045	14.9	1.9E-05	2.7	0.00011	0.000433	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.4E-05	0.001	3.7E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
6.25	West Pit	7.4	53	8.7E-05	0.18	0.003	0.0005	8.7E-04	0.010	0.046	15.1	2.0E-05	2.7	0.00011	0.000426	0.00051	1.3E-04	0.0000	0.9	3.2	0.09	0.0030	2.50	0.0005	0.03	9.6E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.4E-04	0.00009	0.0016	0.0025
6.5	West Pit	7.4	52	9.2E-05	0.18	0.003	0.0005	9.0E-04	0.010	0.046	15.1	1.9E-05	2.7	0.00011	0.000434	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.46	0.0005	0.03	9.5E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
6.75	West Pit	7.4	52	9.7E-05	0.18	0.003	0.0005	9.2E-04	0.010	0.045	15.0	1.9E-05	2.7	0.00011	0.000437	0.00053	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.5E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7	West Pit	7.4	52	9.8E-05	0.18	0.003	0.0005	9.1E-04	0.010	0.045	15.1	1.9E-05	2.7	0.00011	0.000436	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.45	0.0005	0.03	9.6E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.25	West Pit	7.4	53	9.7E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.046	15.3	2.0E-05	2.7	0.00011	0.000430	0.00051	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.51	0.0006	0.03	9.7E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.5	West Pit	7.4	53	1.0E-04	0.18	0.003	0.0005	9.0E-04	0.010	0.046	15.2	2.0E-05	2.7	0.00011	0.000437	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.48	0.0005	0.03	9.6E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.75	West Pit	7.4	52	1.1E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.045	15.1	1.9E-05	2.7	0.00011	0.000440	0.00054	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.45	0.0005	0.03	9.6E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026
8	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.1E-04	0.010	0.046	15.2	2.0E-05	2.7	0.00011	0.000439	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.47	0.0005	0.03	9.6E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
8.25	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	8.9E-04	0.010	0.047	15.3	2.0E-05	2.8	0.00011	0.000434	0.00052	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026
8.5	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.1E-04	0.010	0.046	15.3	2.0E-05	2.7	0.00011	0.000440	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.49	0.0006	0.03	9.7E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
8.75	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.3E-04	0.010	0.046	15.2	2.0E-05	2.7	0.00011	0.000442	0.00054	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.47	0.0005	0.03	9.7E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
9	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.046	15.3	2.0E-05	2.7	0.00011	0.000442	0.00054	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.48	0.0006	0.03	9.7E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
9.25	West Pit	7.4	54	1.1E-04	0.18	0.003	0.0005	9.0E-04	0.010	0.047	15.4	2.0E-05	2.8	0.00011	0.000437	0.00053	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.53	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

9.5	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.046	15.3	2.0E-05	2.8	0.00011	0.000442	0.00053	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.50	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
9.75	West Pit	7.4	53	1.2E-04	0.18	0.003	0.0005	9.3E-04	0.010	0.046	15.3	2.0E-05	2.7	0.00011	0.000444	0.00054	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.48	0.0006	0.03	9.7E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
10	West Pit	7.4	53	1.2E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.046	15.3	2.0E-05	2.7	0.00011	0.000444	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.49	0.0006	0.03	9.8E-05	0.001	3.7E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
10.25	West Pit	7.4	54	1.2E-04	0.18	0.003	0.0005	9.1E-04	0.010	0.047	15.4	2.0E-05	2.8	0.00011	0.000440	0.00053	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.53	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
10.5	West Pit	7.4	53	1.2E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000444	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
10.75	West Pit	7.4	53	1.2E-04	0.18	0.003	0.0005	9.4E-04	0.010	0.046	15.3	2.0E-05	2.8	0.00011	0.000446	0.00055	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.49	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
11	West Pit	7.4	53	1.2E-04	0.18	0.003	0.0005	9.3E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000446	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.50	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
11.25	West Pit	7.4	54	1.2E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000442	0.00053	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
11.5	West Pit	7.4	53	1.3E-04	0.18	0.003	0.0005	9.3E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000446	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.51	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
11.75	West Pit	7.4	53	1.3E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000448	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.50	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
12	West Pit	7.4	53	1.3E-04	0.18	0.003	0.0005	9.4E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000448	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0016	0.0026
12.25	West Pit	7.4	54	1.3E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000444	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.1	0.16	0.0003	5.6E-04	0.00009	0.0017	0.0026
12.5	West Pit	7.4	54	1.3E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000448	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
12.75	West Pit	7.4	53	1.3E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000450	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.50	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
13	West Pit	7.4	53	1.3E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.046	15.4	2.0E-05	2.8	0.00011	0.000450	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
13.25	West Pit	7.4	54	1.3E-04	0.19	0.003	0.0005	9.3E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000446	0.00054	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
13.5	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000450	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
13.75	West Pit	7.4	53	1.4E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000452	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.50	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
14	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000451	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	9.9E-05	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
14.25	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000448	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
14.5	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000452	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
14.75	West Pit	7.4	53	1.4E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000453	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
15	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000453	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0016	0.0026
15.25	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.4E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000450	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
15.5	West Pit	7.4	54	1.4E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.047	15.5	2.0E-05	2.8	0.00011	0.000453	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
15.75	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000455	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
16	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000454	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
16.25	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000452	0.00055	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
16.5	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000455	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
16.75	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000456	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
17	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000456	0.00056	1.3E-04	0.0000	1.0	3.2	0.09	0.0030	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
17.25	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.5E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000453	0.00055	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00010	0.0017	0.0026
17.5	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000456	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
17.75	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000457	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
18	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000457	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.7E-04	0.00009	0.0017	0.0026
18.25	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000455	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.54	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0026
18.5	West Pit	7.4	54	1.5E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000457	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
18.75	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000458	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
19	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000458	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
19.25	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.6E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000456	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.53	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0026
19.5	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000458	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
19.75	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000460	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
20	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000459	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
20.25	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000457	0.00056	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.53	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0026
20.5	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000460	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
20.75	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000461	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.50	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
21	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000461	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0026
21.25	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.7E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000459	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.53	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0027
21.5	West Pit	7.4	54	1.6E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000461	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
21.75	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.9E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000462	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.50	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
22	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.9E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000462	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
22.25	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.047	15.6	2.0E-05	2.8	0.00011	0.000460	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0027
22.5	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.9E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000462	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
22.75	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.9E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000463	0.00058	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.50	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
23	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.9E-04	0.010	0.046	15.6	2.0E-05	2.8	0.00011	0.000463	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0030	2.51	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0017	0.0027
23.25	West Pit	7.4	54	1.7E-04	0.19	0.003	0.0005	9.8E-04	0.010	0.047	15.7	2.0E-05	2.8	0.00011	0.000461	0.00057	1.3E-04	0.0000	1.1	3.2	0.09	0.0031	2.52	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00010	0.0017	0.0027
23.5	West Pit	7.4	53	1.7E-04	0.19	0.002	0.0005	9.9E-04	0.010	0.046	15.5	2.0E-05	2.8	0.00011	0.000469	0.00057	1.3E-04	0.0000	1.1	3.1	0.09	0.0030	2.47	0.0006	0.03	1.0E-04	0.001	3.8E-05	1.2	0.16	0.0003	5.8E-04	0.00009	0.0016	0.0027
23.75	West Pit	7.4	52	1.7E-04	0.19	0.002	0.0005	9.9E-04	0.010	0.044	15.3	2.0E-05	2.8	0.00011	0.000476	0.00058	1.4E-04	0.0000	1.1	3.0	0.09	0.0029	2.39	0.0006	0.03	9.7E-05	0.001	3.9E-05	1.2	0.15	0.0003	5.7E-04	0.00009	0.0016	0.0027
24	West Pit	7.3	52	1.8E-04	0.19	0.002	0.0005	9.9E-04	0.010	0.043	15.2	2.0E-05	2.8	0.00011	0.000477	0.00058	1.4E-04	0.0000	1.0	3.0	0.09	0.0028	2.37	0.0006	0.03	9.6E-05	0.001	3.9E-05	1.2	0.15	0.0003	5.7E-04	0.00009	0.0016	0.0027
24.25	West Pit	7.3	52	1.7E-04	0.19	0.002	0.0005	9.8E-04	0.010	0.044	15.3	2.0E-05	2.8	0.00011	0.000476	0.00058	1.4E-04	0.0000	1.0	3.0	0.09	0.0028	2.38	0.0006	0.03	9.6E-05	0.001	3.9E-05	1.2	0.15	0.0003	5.7E-04	0.00009	0.0016	0.0027
24.5	West Pit	7.3	51	1.8E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.042	15.0	2.0E-05	2.8	0.00012	0.000482	0.00058	1.4E-04	0.0000	1.0	2.9	0.09	0.0027	2.30	0.0006	0.03	9.3E-05	0.001	3.9E-05	1.2	0.15	0.0003	5.6E-04	0.00009	0.0016	0.0027
24.75	West Pit	7.3	50	1.8E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.041	14.9	1.9E-05	2.8	0.00012	0.000488	0.00059	1.5E-04	0.0000	1.0	2.9	0.09	0.0027	2.24	0.0006	0.03	9.1E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.6E-04	0.00009	0.0016	0.0027
25	West Pit	7.3	50	1.8E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.041	14.8	1.9E-05	2.8	0.00012	0.000489	0.00059	1.5E-04	0.0000	1.0	2.9	0.09	0.0026	2.23	0.0006	0.03	9.0E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.6E-04	0.00009	0.0016	0.0027
25.25	West Pit	7.3	50	1.8E-04	0.18	0.002	0.0005	9.8E-04	0.009	0.041	14.8	1.9E-05	2.8	0.00012	0.000487	0.00058	1.5E-04	0.0000	1.0	2.9	0.09	0.0026	2.23	0.0006	0.03	9.0E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.6E-04	0.00009	0.0016	0.0027
25.5	West Pit	7.3	49	1.8E-04	0.18	0.002	0.0005	9.8E-04	0.009	0.039	14.7	1.9E-05	2.8	0.00012	0.000493	0.00059	1.5E-04	0.0000	1.0	2.8	0.09	0.0026	2.17	0.0006	0.03	8.8E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.5E-04	0.00009	0.0016	0.0027
25.75	West Pit	7.3	48	1.9E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.038	14.5	1.9E-05	2.8	0.00012	0.000498	0.00059	1.6E-04	0.0000	1.0	2.7	0.09	0.0025	2.12	0.0006	0.03	8.6E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.5E-04	0.00009	0.0015	0.0027
26	West Pit	7.3	48	1.9E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.038	14.5	1.9E-05	2.8	0.00012	0.000498	0.00059	1.6E-04	0.0000	1.0	2.7	0.09	0.0025	2.11	0.0006	0.03	8.6E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.5E-04	0.00009	0.0015	0.0026
26.25	West Pit	7.3	48	1.9E-04	0.18	0.002	0.0005	9.8E-04	0.009	0.038	14.5	1.9E-05	2.8	0.00012	0.000497	0.00059	1.6E-04	0.0000	1.0	2.7	0.09	0.0025	2.12	0.0006	0.03	8.6E-05	0.001	3.9E-05	1.2	0.14	0.0003	5.5E-04	0.00009	0.0015	0.0027
26.5	West Pit	7.3	47	1.9E-04	0.18	0.002	0.0005	9.8E-04	0.009	0.037	14.4	1.9E-05	2.8	0.00012	0.000501	0.00059	1.6E-04	0.0000	1.0	2.7	0.09	0.0024	2.07	0.0006	0.03	8.4E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.5E-04	0.00009	0.0015	0.0027
26.75	West Pit	7.3	47	1.9E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.036	14.3	1.9E-05	2.8	0.00012	0.000506	0.00060	1.6E-04	0.0000	1.0	2.6	0.09	0.0023	2.03	0.0006	0.03	8.3E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00009	0.0015	0.0027
27	West Pit	7.3	47	1.9E-04	0.18	0.002	0.0005	9.9E-04	0.009	0.036	14.2	1.9E-05	2.8	0.00012	0.000506	0.00060	1.6E-04	0.0000	1.0	2.6	0.08	0.0023	2.01	0.0006	0.03	8.2E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00009	0.0015	0.0026
27.25	West Pit	7.3	47	1.9E-04	0.18	0.002	0.0005	9.8E-04	0.009	0.036	14.2	1.9E-05	2.8	0.00012	0.000505	0.00060	1.6E-04	0.0000	1.0	2.6	0.09	0.0023	2.02	0.0006	0.03	8.3E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00009	0.0015	0.0026
27.5	West Pit	7.3	46	2.0E-04	0.18	0.002	0.0006	9.8E-04	0.008	0.035	14.1	1.9E-05	2.8	0.00012	0.000508	0.00060	1.7E-04	0.0000	1.0	2.6	0.08	0.0023	1.98	0.0006	0.03	8.1E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00009	0.0015	0.0026
27.75	West Pit	7.3	46	2.0E-04	0.18	0.002	0.0006	9.9E-04	0.008	0.035	14.0	1.9E-05	2.8	0.00012	0.000512	0.00060	1.7E-04	0.0000	1.0	2.5	0.08	0.0022	1.94	0.0006	0.03	8.0E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00008	0.0015	0.0026
28	West Pit	7.3	46	2.0E-04	0.18	0.002	0.0006	9.9E-04	0.008	0.035	14.0	1.9E-05	2.8	0.00012	0.000512	0.00060	1.7E-04	0.0000	1.0	2.5	0.08	0.0022	1.93	0.0006	0.03	8.0E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00008	0.0015	0.0026
28.25	West Pit	7.3	46	2.0E-04	0.18	0.002	0.0006	9.8E-04	0.008	0.035	14.0	1.9E-05	2.8	0.00012	0.000511	0.00060	1.7E-04	0.0000	1.0	2.5	0.08	0.0022	1.94	0.0006	0.03	8.0E-05	0.001	4.0E-05	1.2	0.13	0.0003	5.4E-04	0.00008	0.0015	0.0026
28.5	West Pit	7.3	45	2.0E-04	0.18	0.002	0.0006	9.9E-04	0.008	0.034	13.9	1.9E-05	2.8	0.00012	0.000515	0.00060	1.7E-04	0.0000	1.0	2.5	0.08	0.0022	1.91	0.0006	0.03	7.9E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.4E-04	0.00008	0.0015	0.0026
28.75	West Pit	7.2	45	2.0E-04	0.18	0.002	0.0006	9.9E-04	0.008	0.033	13.8	1.9E-05	2.8	0.00012	0.000518	0.00061	1.8E-04	0.0000	0.9	2.5	0.08	0.0021	1.88	0.0006	0.03	7.8E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0015	0.0026
29	West Pit	7.2	45	2.0E-04	0.18	0.002	0.0006	9.9E-04	0.008	0.033	13.8	1.9E-05	2.8	0.00012	0.000518	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0021	1.87	0.0006	0.03	7.7E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0015	0.0026
29.25	West Pit	7.2	45	2.0E-04	0.18	0.002	0.0006	9.8E-04	0.008	0.033	13.8	1.9E-05	2.8	0.00012	0.000517	0.00060	1.8E-04	0.0000	0.9	2.5	0.08	0.0021	1.87	0.0006	0.03	7.8E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0015	0.0026
29.5	West Pit	7.2	44	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.033	13.7	1.9E-05	2.8	0.00012	0.000520	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0021	1.84	0.0006	0.03	7.7E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0015	0.0026
29.75	West Pit	7.2	44	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.032	13.7	1.9E-05	2.8	0.00012	0.000523	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0020	1.82	0.0006	0.03	7.6E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0014	0.0026
30	West Pit	7.2	44	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.032	13.6	1.9E-05	2.8	0.00012	0.000523	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0020	1.81	0.0006	0.03	7.5E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0014	0.0026
30.25	West Pit	7.2	44	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.032	13.7	1.9E-05	2.8	0.00012	0.000522	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0020	1.81	0.0006	0.03	7.6E-05	0.001	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0014	0.0026

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
30.5	West Pit	7.2	43	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.032	13.6	*1.9E-05*	2.8	0.00012	0.000525	0.00061	1.8E-04	0.0000	0.9	2.4	0.08	0.0020	1.79	0.0006	0.02	7.5E-05	*0.001*	4.0E-05	1.2	0.12	0.0003	5.3E-04	0.00008	0.0014	0.0026
30.75	West Pit	7.2	43	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.031	13.5	*1.8E-05*	2.8	0.00012	0.000527	0.00061	1.9E-04	0.0000	0.9	2.3	0.08	0.0020	1.76	0.0006	0.02	7.4E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.3E-04	0.00008	0.0014	0.0026
31	West Pit	7.2	43	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.031	13.5	*1.8E-05*	2.8	0.00012	0.000527	0.00061	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.76	0.0006	0.02	7.4E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.3E-04	0.00008	0.0014	0.0026
31.25	West Pit	7.2	43	2.1E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.031	13.5	*1.8E-05*	2.8	0.00012	0.000527	0.00061	1.9E-04	0.0000	0.9	2.3	0.08	0.0020	1.76	0.0006	0.02	7.4E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.3E-04	0.00008	0.0014	0.0026
31.5	West Pit	7.2	43	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.031	13.4	*1.8E-05*	2.8	0.00012	0.000529	0.00062	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.74	0.0006	0.02	7.3E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0026
31.75	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.030	13.4	*1.8E-05*	2.8	0.00012	0.000531	0.00062	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.72	0.0006	0.02	7.3E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
32	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.030	13.4	*1.8E-05*	2.8	0.00012	0.000531	0.00062	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.71	0.0006	0.02	7.2E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0026
32.25	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.030	13.4	*1.8E-05*	2.8	0.00012	0.000531	0.00062	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.71	0.0006	0.02	7.3E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0026
32.5	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.030	13.3	*1.8E-05*	2.8	0.00012	0.000533	0.00062	1.9E-04	0.0000	0.9	2.3	0.08	0.0019	1.69	0.0006	0.02	7.2E-05	*0.001*	4.0E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
32.75	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.029	13.3	*1.8E-05*	2.8	0.00012	0.000535	0.00062	1.9E-04	0.0000	0.9	2.2	0.08	0.0018	1.67	0.0006	0.02	7.1E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
33	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.029	13.3	*1.8E-05*	2.8	0.00012	0.000535	0.00062	1.9E-04	0.0000	0.9	2.2	0.08	0.0018	1.67	0.0006	0.02	7.1E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0026
33.25	West Pit	7.2	42	2.2E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.029	13.3	*1.8E-05*	2.8	0.00012	0.000534	0.00062	1.9E-04	0.0000	0.9	2.2	0.08	0.0018	1.67	0.0006	0.02	7.1E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
33.5	West Pit	7.2	42	2.3E-04	0.17	0.002	0.0006	9.9E-04	0.008	0.029	13.2	*1.8E-05*	2.8	0.00012	0.000536	0.00062	2.0E-04	0.0000	0.9	2.2	0.08	0.0018	1.65	0.0006	0.02	7.1E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
33.75	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.029	13.2	*1.8E-05*	2.8	0.00012	0.000538	0.00062	2.0E-04	0.0000	0.9	2.2	0.08	0.0018	1.64	0.0006	0.02	7.0E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
34	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.028	13.2	*1.8E-05*	2.8	0.00012	0.000538	0.00062	2.0E-04	0.0000	0.9	2.2	0.08	0.0018	1.63	0.0006	0.02	7.0E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
34.25	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	9.9E-04	0.007	0.028	13.2	*1.8E-05*	2.8	0.00013	0.000538	0.00062	2.0E-04	0.0000	0.9	2.2	0.08	0.0018	1.63	0.0006	0.02	7.0E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
34.5	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.028	13.1	*1.8E-05*	2.8	0.00013	0.000539	0.00063	2.0E-04	0.0000	0.9	2.2	0.08	0.0017	1.62	0.0006	0.02	7.0E-05	*0.001*	4.1E-05	1.2	0.11	0.0003	5.2E-04	0.00008	0.0014	0.0027
34.75	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.028	13.1	*1.8E-05*	2.8	0.00013	0.000541	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.60	0.0006	0.02	6.9E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.2E-04	0.00008	0.0014	0.0027
35	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.028	13.1	*1.8E-05*	2.8	0.00013	0.000541	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.60	0.0006	0.02	6.9E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.2E-04	0.00008	0.0014	0.0027
35.25	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.028	13.1	*1.8E-05*	2.8	0.00013	0.000541	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.60	0.0006	0.02	6.9E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.2E-04	0.00008	0.0014	0.0027
35.5	West Pit	7.2	41	2.3E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	13.0	*1.8E-05*	2.8	0.00013	0.000542	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.58	0.0006	0.02	6.9E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
35.75	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	13.0	*1.8E-05*	2.8	0.00013	0.000544	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.57	0.0006	0.02	6.8E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
36	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	13.0	*1.8E-05*	2.8	0.00013	0.000544	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.57	0.0006	0.02	6.8E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
36.25	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	13.0	*1.8E-05*	2.8	0.00013	0.000544	0.00063	2.0E-04	0.0000	0.9	2.1	0.08	0.0017	1.57	0.0006	0.02	6.8E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
36.5	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	12.9	*1.8E-05*	2.8	0.00013	0.000545	0.00063	2.1E-04	0.0000	0.9	2.1	0.08	0.0017	1.55	0.0006	0.02	6.8E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
36.75	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	12.9	*1.8E-05*	2.8	0.00013	0.000547	0.00063	2.1E-04	0.0000	0.9	2.1	0.08	0.0016	1.54	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
37	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.9	*1.8E-05*	2.8	0.00013	0.000547	0.00063	2.1E-04	0.0000	0.9	2.1	0.08	0.0016	1.54	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
37.25	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.027	12.9	*1.8E-05*	2.8	0.00013	0.000546	0.00063	2.1E-04	0.0000	0.9	2.1	0.08	0.0016	1.54	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
37.5	West Pit	7.2	40	2.4E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.9	*1.8E-05*	2.8	0.00013	0.000548	0.00063	2.1E-04	0.0000	0.9	2.1	0.08	0.0016	1.53	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
37.75	West Pit	7.2	40	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.8	*1.8E-05*	2.8	0.00013	0.000549	0.00064	2.1E-04	0.0000	0.9	2.1	0.08	0.0016	1.52	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
38	West Pit	7.2	40	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.8	*1.8E-05*	2.8	0.00013	0.000549	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.51	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
38.25	West Pit	7.2	40	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.8	*1.8E-05*	2.8	0.00013	0.000549	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.51	0.0006	0.02	6.7E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0014	0.0027
38.5	West Pit	7.2	39	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.8	*1.8E-05*	2.8	0.00013	0.000550	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.50	0.0006	0.02	6.6E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
38.75	West Pit	7.2	39	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.026	12.8	*1.8E-05*	2.8	0.00013	0.000552	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.49	0.0006	0.02	6.6E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
39	West Pit	7.2	39	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.025	12.8	*1.8E-05*	2.8	0.00013	0.000552	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.49	0.0006	0.02	6.6E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
39.25	West Pit	7.2	39	2.5E-04	0.17	0.002	0.0006	1.0E-03	0.007	0.025	12.8	*1.8E-05*	2.8	0.00013	0.000551	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0016	1.49	0.0006	0.02	6.6E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
39.5	West Pit	7.2	39	2.5E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000552	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0015	1.48	0.0006	0.02	6.6E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
39.75	West Pit	7.2	39	2.5E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000554	0.00064	2.1E-04	0.0000	0.9	2.0	0.08	0.0015	1.47	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
40	West Pit	7.2	39	2.5E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000554	0.00064	2.2E-04	0.0000	0.9	2.0	0.08	0.0015	1.46	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
40.25	West Pit	7.2	39	2.5E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000553	0.00064	2.2E-04	0.0000	0.9	2.0	0.08	0.0015	1.47	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
40.5	West Pit	7.2	39	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000555	0.00064	2.2E-04	0.0000	0.9	2.0	0.08	0.0015	1.45	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
40.75	West Pit	7.2	39	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.7	*1.8E-05*	2.8	0.00013	0.000556	0.00064	2.2E-04	0.0000	0.9	2.0	0.08	0.0015	1.44	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
41	West Pit	7.2	39	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.6	*1.8E-05*	2.8	0.00013	0.000556	0.00064	2.2E-04	0.0000	0.9	2.0	0.07	0.0015	1.44	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
41.25	West Pit	7.2	39	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.025	12.6	*1.8E-05*	2.8	0.00013	0.000555	0.00064	2.2E-04	0.0000	0.9	2.0	0.07	0.0015	1.44	0.0006	0.02	6.5E-05	*0.001*	4.1E-05	1.2	0.10	0.0003	5.1E-04	0.00008	0.0013	0.0027
41.5	West Pit	7.2	38	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000557	0.00064	2.2E-04	0.0000	0.9	2.0	0.07	0.0015	1.43	0.0006	0.02	6.4E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00008	0.0013	0.0027
41.75	West Pit	7.1	38	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000558	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0015	1.42	0.0006	0.02	6.4E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00008	0.0013	0.0027
42	West Pit	7.1	38	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000558	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0015	1.42	0.0006	0.02	6.4E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
42.25	West Pit	7.1	38	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000558	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0015	1.42	0.0006	0.02	6.4E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
42.5	West Pit	7.1	38	2.6E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000559	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0015	1.41	0.0006	0.02	6.4E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
42.75	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.6	*1.8E-05*	2.8	0.00013	0.000560	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.40	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
43	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.5	*1.8E-05*	2.8	0.00013	0.000560	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.40	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
43.25	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.5	*1.8E-05*	2.8	0.00013	0.000559	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.40	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
43.5	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.024	12.5	*1.8E-05*	2.8	0.00013	0.000560	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.39	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
43.75	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000562	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.39	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.1E-04	0.00007	0.0013	0.0027
44	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000562	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.38	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
44.25	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000561	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.38	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
44.5	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000562	0.00065	2.2E-04	0.0000	0.9	1.9	0.07	0.0014	1.38	0.0006	0.02	6.3E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
44.75	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000563	0.00065	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.37	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
45	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000563	0.00065	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.37	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
45.25	West Pit	7.1	38	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.5	*1.8E-05*	2.8	0.00013	0.000563	0.00065	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.37	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
45.5	West Pit	7.1	37	2.7E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000564	0.00065	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.36	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
45.75	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000565	0.00066	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.35	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
46	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000565	0.00066	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.35	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
46.25	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000565	0.00065	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.35	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
46.5	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.023	12.4	*1.8E-05*	2.8	0.00013	0.000566	0.00066	2.3E-04	0.0000	0.9	1.9	0.07	0.0014	1.34	0.0006	0.02	6.2E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
46.75	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.4	*1.8E-05*	2.8	0.00013	0.000567	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.34	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
47	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.4	*1.8E-05*	2.8	0.00013	0.000567	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.33	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
47.25	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.4	*1.8E-05*	2.8	0.00013	0.000566	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.33	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
47.5	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000567	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.33	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
47.75	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000568	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.32	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
48	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000568	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.32	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
48.25	West Pit	7.1	37	2.8E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000568	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.32	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
48.5	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000569	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.31	0.0006	0.02	6.1E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
48.75	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.007	0.022	12.3	*1.8E-05*	2.8	0.00013	0.000570	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.31	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
49	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.022	12.3	*1.7E-05*	2.8	0.00013	0.000570	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.30	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
49.25	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.022	12.3	*1.7E-05*	2.8	0.00013	0.000570	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.30	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
49.5	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.022	12.3	*1.7E-05*	2.8	0.00013	0.000570	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.30	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
49.75	West Pit	7.1	37	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.3	*1.7E-05*	2.8	0.00013	0.000571	0.00066	2.3E-04	0.0000	0.9	1.8	0.07	0.0013	1.29	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
50	West Pit	7.1	36	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.3	*1.7E-05*	2.8	0.00013	0.000571	0.00066	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.29	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
50.25	West Pit	7.1	36	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.3	*1.7E-05*	2.8	0.00013	0.000571	0.00066	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.29	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
50.5	West Pit	7.1	36	2.9E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	*1.7E-05*	2.8	0.00013	0.000572	0.00066	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.28	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
50.75	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	*1.7E-05*	2.8	0.00013	0.000573	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.28	0.0006	0.02	6.0E-05	*0.001*	4.2E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
51	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	*1.7E-05*	2.8	0.00013	0.000573	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.28	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
51.25	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	*1.7E-05*	2.8	0.00013	0.000572	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0013	1.28	0.0006	0.02	6.0E-05	*0.001*	4.1E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
51.5	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000573	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.27	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.09	0.0003	5.0E-04	0.00007	0.0013	0.0027
51.75	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000574	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.27	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
52	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000574	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.26	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
52.25	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000574	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.26	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
52.5	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000575	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.26	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
52.75	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000576	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.25	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
53	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000575	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.25	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
53.25	West Pit	7.1	36	3.0E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.2	1.7E-05	2.8	0.00013	0.000575	0.00067	2.4E-04	0.0000	0.9	1.8	0.07	0.0012	1.25	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

53.5	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.021	12.1	1.7E-05	2.8	0.00013	0.000576	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.25	0.0006	0.02	5.9E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
53.75	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000577	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.24	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
54	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000577	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.24	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
54.25	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000577	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.24	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
54.5	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000577	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.23	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
54.75	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000578	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.23	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
55	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000578	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.23	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
55.25	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000578	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.23	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
55.5	West Pit	7.1	36	3.1E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000579	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.22	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
55.75	West Pit	7.1	36	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000580	0.00068	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.22	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
56	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000579	0.00068	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.22	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
56.25	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000579	0.00067	2.4E-04	0.0000	0.9	1.7	0.07	0.0012	1.22	0.0006	0.02	5.8E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
56.5	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000580	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0012	1.21	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
56.75	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000581	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0012	1.21	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
57	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000581	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0012	1.21	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
57.25	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.1	1.7E-05	2.8	0.00013	0.000581	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0012	1.21	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
57.5	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.0	1.7E-05	2.8	0.00013	0.000581	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.20	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
57.75	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.0	1.7E-05	2.8	0.00013	0.000582	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.20	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
58	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.0	1.7E-05	2.8	0.00013	0.000582	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.19	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
58.25	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.020	12.0	1.7E-05	2.8	0.00013	0.000582	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.20	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
58.5	West Pit	7.1	35	3.2E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000582	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.19	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
58.75	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000583	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.19	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
59	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000583	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.18	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
59.25	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.0E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000583	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.19	0.0006	0.02	5.7E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
59.5	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000584	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.18	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
59.75	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000584	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.18	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
60	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000584	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.18	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
60.25	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000584	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.18	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
60.5	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000585	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.17	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
60.75	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000585	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.17	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
61	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000585	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.17	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
61.25	West Pit	7.1	35	3.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000585	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.17	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
61.5	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	12.0	1.7E-05	2.8	0.00013	0.000586	0.00068	2.5E-04	0.0000	0.9	1.7	0.07	0.0011	1.16	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
61.75	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000587	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.16	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
62	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000586	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.16	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
62.25	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000586	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.16	0.0006	0.02	5.6E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
62.5	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000587	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.15	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
62.75	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000588	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.15	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
63	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000587	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.15	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
63.25	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000587	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.15	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
63.5	West Pit	7.1	35	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.019	11.9	1.7E-05	2.8	0.00013	0.000588	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.14	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
63.75	West Pit	7.1	34	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000589	0.00069	2.5E-04	0.0000	0.9	1.6	0.07	0.0011	1.14	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0013	0.0027
64	West Pit	7.1	34	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000588	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0011	1.14	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
64.25	West Pit	7.1	34	3.4E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000588	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0011	1.14	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
64.5	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000589	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0011	1.14	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
64.75	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000590	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0011	1.13	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
65	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000589	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.13	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
65.25	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000589	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.13	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
65.5	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000590	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.13	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
65.75	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000591	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.13	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
66	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000590	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
66.25	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000590	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.5E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
66.5	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000591	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
66.75	West Pit	7.1	34	3.5E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000592	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
67	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000591	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
67.25	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.9	1.7E-05	2.8	0.00013	0.000591	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.12	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
67.5	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000592	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.11	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
67.75	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000592	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.11	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
68	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000592	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.11	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
68.25	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000592	0.00069	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.11	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
68.5	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000593	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.11	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
68.75	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000593	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.10	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
69	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000593	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.10	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
69.25	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000593	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.10	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.08	0.0003	5.0E-04	0.00007	0.0012	0.0027
69.5	West Pit	7.1	34	3.6E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000594	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.10	0.0006	0.02	5.4E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
69.75	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.018	11.8	1.7E-05	2.8	0.00013	0.000594	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.10	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
70	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000594	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
70.25	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000594	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
70.5	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000595	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
70.75	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000595	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
71	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000595	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
71.25	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000595	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.09	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
71.5	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000595	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.08	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
71.75	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000596	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.08	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
72	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000596	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.08	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
72.25	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000596	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.08	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
72.5	West Pit	7.1	34	3.7E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000596	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.08	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
72.75	West Pit	7.1	34	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000597	0.00070	2.6E-04	0.0000	0.9	1.6	0.07	0.0010	1.07	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
73	West Pit	7.1	34	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000597	0.00070	2.7E-04	0.0000	0.9	1.6	0.07	0.0010	1.07	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
73.25	West Pit	7.1	34	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000597	0.00070	2.7E-04	0.0000	0.9	1.6	0.07	0.0010	1.07	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
73.5	West Pit	7.1	34	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.8	1.7E-05	2.8	0.00013	0.000597	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0010	1.07	0.0006	0.02	5.3E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
73.75	West Pit	7.1	34	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000598	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0010	1.07	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
74	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000598	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0010	1.07	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
74.25	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000598	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0010	1.07	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
74.5	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000598	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.06	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
74.75	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.06	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
75	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.06	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
75.25	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000598	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.06	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
75.5	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.06	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
75.75	West Pit	7.1	33	3.8E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
76	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
76.25	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000599	0.00070	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
76.5	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000600	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
76.75	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000600	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
77	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000600	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
77.25	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.017	11.7	1.7E-05	2.8	0.00013	0.000600	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.05	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
77.5	West Pit	7.1	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000601	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
77.75	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000601	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.2E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
78	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000601	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
78.25	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000601	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
78.5	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000601	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
78.75	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.04	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
79	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
79.25	West Pit	7.0	33	3.9E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
79.5	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
79.75	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000603	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
80	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
80.25	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000602	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
80.5	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000603	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.03	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
80.75	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.7	1.7E-05	2.8	0.00013	0.000603	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	5.0E-04	0.00007	0.0012	0.0027
81	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000603	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
81.25	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000603	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
81.5	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000604	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
81.75	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000604	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
82	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000604	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
82.25	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000604	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.02	0.0006	0.02	5.1E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
82.5	West Pit	7.0	33	4.0E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000604	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
82.75	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
83	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
83.25	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
83.5	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.7E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
83.75	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
84	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
84.25	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000605	0.00071	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.01	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
84.5	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000606	0.00071	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
84.75	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000606	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
85	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000606	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
85.25	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000606	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
85.5	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.016	11.6	1.7E-05	2.8	0.00013	0.000606	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
85.75	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0009	1.00	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
86	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
86.25	West Pit	7.0	33	4.1E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
86.5	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
86.75	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
87	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
87.25	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000607	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	5.0E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
87.5	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.99	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
87.75	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
88	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
88.25	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.5	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
88.5	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000608	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
88.75	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.6	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
89	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
89.25	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
89.5	West Pit	7.0	32	4.2E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.98	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
89.75	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
90	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
90.25	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.006	0.015	11.5	1.7E-05	2.8	0.00013	0.000609	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
90.5	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
90.75	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
91	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
91.25	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
91.5	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000610	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.97	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
91.75	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.9E-05	0.001	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
92	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
92.25	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
92.5	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.9E-05	0.001	4.2E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
92.75	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	1.7E-05	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.8E-05	0.001	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 3
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
93	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
93.25	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000611	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
93.5	West Pit	7.0	32	4.3E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.96	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
93.75	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
94	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
94.25	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00072	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
94.5	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00073	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
94.75	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
95	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
95.25	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.015	11.5	*1.7E-05*	2.8	0.00013	0.000612	0.00073	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
95.5	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.8E-04	0.0000	0.9	1.4	0.07	0.0008	0.95	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
95.75	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

96	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
96.25	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
96.5	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000613	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
96.75	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
97	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
97.25	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
97.5	West Pit	7.0	32	4.4E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.94	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
97.75	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
98	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.5	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
98.25	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.4	*1.7E-05*	2.8	0.00013	0.000614	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.8E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
98.5	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.4	*1.7E-05*	2.8	0.00013	0.000615	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.7E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
98.75	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.4	*1.7E-05*	2.8	0.00013	0.000615	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.7E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027
99	West Pit	7.0	32	4.5E-04	0.17	0.001	0.0006	1.1E-03	0.005	0.014	11.4	*1.7E-05*	2.8	0.00013	0.000615	0.00073	2.9E-04	0.0000	0.9	1.4	0.07	0.0008	0.93	0.0006	0.02	4.7E-05	*0.001*	4.3E-05	1.2	0.07	0.0003	4.9E-04	0.00007	0.0012	0.0027

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
EAST PIT																																			
0.25	East Pit	7.2	51	9.9E-05	0.04	0.001	0.0011	3.7E-05	0.018	0.042	15.0	3.9E-05	4.4	0.00023	0.000008	0.00017	4.8E-04	5.9E-06	0.9	3.4	0.11	0.0028	2.62	0.0009	0.008	9.5E-06	0.0004	8.2E-05	1.1	0.13	0.0006	1.7E-04	0.00012	0.0022	0.0022
0.5	East Pit	6.8	24	2.9E-04	0.03	0.001	0.0002	9.9E-06	0.003	0.010	8.7	1.2E-05	3.4	0.00028	0.000001	0.00007	1.2E-03	6.1E-06	0.40	1.4	0.10	0.0005	0.99	0.0008	0.005	4.7E-07	0.0004	2.9E-05	1.5	0.04	0.0001	9.1E-05	0.00003	0.0003	0.0020
0.75	East Pit	6.8	24	2.5E-04	0.03	0.001	0.0006	3.4E-05	0.007	0.009	8.7	1.9E-05	3.3	0.00022	0.000012	0.00018	9.3E-04	6.2E-06	0.48	1.3	0.08	0.0005	0.89	0.0007	0.005	9.6E-06	0.0004	4.6E-05	1.1	0.03	0.0002	1.4E-04	0.00005	0.0008	0.0019
1	East Pit	6.9	24	2.4E-04	0.03	0.001	0.0006	3.4E-05	0.007	0.009	8.7	2.1E-05	3.3	0.00021	0.000012	0.00020	8.8E-04	6.2E-06	0.50	1.3	0.08	0.0005	0.90	0.0007	0.005	1.0E-05	0.0004	5.0E-05	1.1	0.03	0.0003	1.5E-04	0.00005	0.0009	0.0019
1.25	East Pit	6.9	24	2.4E-04	0.03	0.001	0.0006	3.2E-05	0.008	0.010	8.8	2.1E-05	3.3	0.00021	0.000011	0.00020	8.7E-04	6.2E-06	0.51	1.3	0.08	0.0005	0.92	0.0007	0.005	1.1E-05	0.0004	5.1E-05	1.1	0.03	0.0003	1.5E-04	0.00006	0.0010	0.0019
1.5	East Pit	6.8	24	2.7E-04	0.03	0.001	0.0005	1.0E-05	0.006	0.009	8.7	1.8E-05	3.3	0.00023	0.000001	0.00009	9.9E-04	6.1E-06	0.47	1.3	0.08	0.0005	0.91	0.0007	0.005	5.1E-07	0.0004	4.3E-05	1.2	0.03	0.0002	1.0E-04	0.00004	0.0007	0.0020
1.75	East Pit	6.8	24	2.6E-04	0.03	0.001	0.0006	3.1E-05	0.007	0.009	8.7	2.0E-05	3.3	0.00022	0.000010	0.00015	9.2E-04	6.2E-06	0.49	1.3	0.08	0.0005	0.88	0.0007	0.005	7.8E-06	0.0004	4.8E-05	1.1	0.03	0.0003	1.3E-04	0.00005	0.0009	0.0019
2	East Pit	6.9	24	2.6E-04	0.03	0.001	0.0006	3.3E-05	0.007	0.009	8.7	2.1E-05	3.3	0.00021	0.000011	0.00016	8.9E-04	6.2E-06	0.50	1.3	0.07	0.0005	0.88	0.0007	0.005	9.0E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.3E-04	0.00005	0.0009	0.0019
2.25	East Pit	6.9	24	2.6E-04	0.03	0.001	0.0006	3.2E-05	0.008	0.009	8.7	2.1E-05	3.3	0.00021	0.000010	0.00016	8.9E-04	6.2E-06	0.51	1.3	0.08	0.0005	0.89	0.0007	0.005	9.5E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.3E-04	0.00005	0.0009	0.0019
2.5	East Pit	6.8	23	2.8E-04	0.03	0.001	0.0005	1.1E-05	0.007	0.009	8.7	1.9E-05	3.3	0.00023	0.000001	0.00010	9.6E-04	6.1E-06	0.48	1.3	0.08	0.0004	0.88	0.0007	0.005	5.6E-07	0.0004	4.6E-05	1.2	0.03	0.0002	1.1E-04	0.00005	0.0008	0.0019
2.75	East Pit	6.8	23	2.7E-04	0.03	0.001	0.0006	2.9E-05	0.007	0.009	8.6	2.0E-05	3.3	0.00022	0.000009	0.00013	9.2E-04	6.2E-06	0.50	1.3	0.08	0.0004	0.87	0.0007	0.005	6.7E-06	0.0004	4.9E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
3	East Pit	6.8	23	2.7E-04	0.03	0.001	0.0006	3.2E-05	0.007	0.009	8.7	2.1E-05	3.3	0.00021	0.000010	0.00014	9.0E-04	6.2E-06	0.50	1.3	0.07	0.0004	0.86	0.0007	0.005	8.1E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.3E-04	0.00005	0.0009	0.0019
3.25	East Pit	6.9	24	2.7E-04	0.03	0.001	0.0006	3.1E-05	0.007	0.009	8.7	2.1E-05	3.3	0.00021	0.000010	0.00015	9.0E-04	6.1E-06	0.51	1.3	0.07	0.0004	0.87	0.0007	0.005	8.5E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.3E-04	0.00005	0.0009	0.0019
3.5	East Pit	6.8	23	2.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.009	8.6	1.9E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.49	1.3	0.08	0.0004	0.87	0.0007	0.005	6.1E-07	0.0004	4.7E-05	1.1	0.03	0.0002	1.1E-04	0.00005	0.0008	0.0019
3.75	East Pit	6.8	23	2.8E-04	0.03	0.001	0.0006	2.7E-05	0.007	0.009	8.6	2.0E-05	3.3	0.00022	0.000008	0.00013	9.2E-04	6.1E-06	0.50	1.3	0.08	0.0004	0.86	0.0007	0.005	6.0E-06	0.0004	4.9E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
4	East Pit	6.8	23	2.8E-04	0.03	0.001	0.0006	3.0E-05	0.007	0.009	8.6	2.1E-05	3.3	0.00022	0.000009	0.00014	9.1E-04	6.1E-06	0.50	1.3	0.07	0.0004	0.85	0.0007	0.005	7.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
4.25	East Pit	6.8	23	2.8E-04	0.03	0.001	0.0006	3.0E-05	0.007	0.009	8.6	2.1E-05	3.3	0.00022	0.000009	0.00014	9.1E-04	6.1E-06	0.51	1.3	0.07	0.0004	0.86	0.0007	0.005	7.7E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
4.5	East Pit	6.8	23	2.9E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.009	8.6	2.0E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.49	1.3	0.08	0.0004	0.86	0.0007	0.005	6.4E-07	0.0004	4.8E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0008	0.0019
4.75	East Pit	6.8	23	2.9E-04	0.03	0.001	0.0006	2.6E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000007	0.00012	9.2E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.85	0.0007	0.005	5.5E-06	0.0004	4.9E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
5	East Pit	6.8	23	2.9E-04	0.03	0.001	0.0006	2.9E-05	0.007	0.008	8.6	2.1E-05	3.3	0.00022	0.000008	0.00013	9.2E-04	6.1E-06	0.50	1.2	0.07	0.0004	0.85	0.0007	0.005	6.7E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
5.25	East Pit	6.8	23	2.9E-04	0.03	0.001	0.0006	2.9E-05	0.007	0.008	8.6	2.1E-05	3.3	0.00022	0.000008	0.00013	9.1E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.85	0.0007	0.005	7.0E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
5.5	East Pit	6.8	23	3.0E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.85	0.0007	0.005	6.7E-07	0.0004	4.8E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
5.75	East Pit	6.8	23	3.0E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000007	0.00012	9.3E-04	6.1E-06	0.50	1.2	0.07	0.0004	0.84	0.0007	0.005	5.0E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
6	East Pit	6.8	23	3.0E-04	0.03	0.001	0.0006	2.7E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000008	0.00013	9.2E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.84	0.0007	0.005	6.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
6.25	East Pit	6.8	23	3.0E-04	0.03	0.001	0.0006	2.8E-05	0.007	0.008	8.6	2.1E-05	3.3	0.00022	0.000008	0.00013	9.2E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.84	0.0007	0.005	6.5E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
6.5	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.84	0.0007	0.005	7.0E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
6.75	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.4E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000006	0.00012	9.3E-04	6.1E-06	0.50	1.2	0.07	0.0004	0.83	0.0007	0.005	4.7E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
7	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.6E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000007	0.00012	9.3E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.83	0.0007	0.005	5.8E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
7.25	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.6E-05	0.007	0.008	8.6	2.1E-05	3.3	0.00022	0.000007	0.00012	9.3E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.83	0.0007	0.005	6.0E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
7.5	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.83	0.0007	0.005	7.2E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
7.75	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.3E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000006	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.83	0.0007	0.005	4.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
8	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.6	2.0E-05	3.3	0.00022	0.000007	0.00012	9.3E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.83	0.0007	0.005	5.5E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
8.25	East Pit	6.8	23	3.1E-04	0.03	0.001	0.0006	2.6E-05	0.007	0.008	8.6	2.1E-05	3.3	0.00022	0.000007	0.00012	9.3E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.83	0.0007	0.005	5.7E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
8.5	East Pit	6.8	23	3.2E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.5E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.83	0.0007	0.005	7.3E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
8.75	East Pit	6.8	23	3.2E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.82	0.0007	0.005	4.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
9	East Pit	6.8	23	3.2E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.82	0.0007	0.005	5.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
9.25	East Pit	6.8	23	3.2E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.82	0.0007	0.005	5.6E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.2E-04	0.00005	0.0009	0.0019
9.5	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.6E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.82	0.0007	0.005	7.3E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
9.75	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.82	0.0007	0.005	4.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
10	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	5.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
10.25	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	5.6E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
10.5	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.6E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.82	0.0007	0.005	7.3E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
10.75	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	4.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
11	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	5.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
11.25	East Pit	6.8	23	3.3E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	5.6E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
11.5	East Pit	6.8	23	3.4E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.6E-04	6.1E-06	0.50	1.2	0.08	0.0004	0.81	0.0007	0.005	7.3E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
11.75	East Pit	6.8	23	3.4E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.81	0.0007	0.005	4.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
12	East Pit	6.8	23	3.4E-04	0.03	0.001	0.0006	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
12.25	East Pit	6.8	23	3.4E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.008	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.4E-04	6.1E-06	0.51	1.2	0.07	0.0004	0.81	0.0007	0.005	5.6E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
12.5	East Pit	6.8	22	3.4E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.008	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.7E-04	6.1E-06	0.50	1.2	0.08	0.0003	0.81	0.0007	0.005	7.4E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
12.75	East Pit	6.8	22	3.4E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	4.3E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
13	East Pit	6.8	22	3.4E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
13.25	East Pit	6.8	23	3.4E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.6E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
13.5	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00010	9.7E-04	6.0E-06	0.50	1.2	0.08	0.0003	0.80	0.0007	0.005	7.4E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
13.75	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.5E-04	6.1E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	4.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
14	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
14.25	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
14.5	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	7.4E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
14.75	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	4.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
15	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
15.25	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
15.5	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.80	0.0007	0.005	7.4E-07	0.0004	4.9E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
15.75	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	4.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
16	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
16.25	East Pit	6.8	22	3.5E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
16.5	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
16.75	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	4.4E-06	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
17	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
17.25	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
17.5	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
17.75	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
18	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
18.25	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.5E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
18.5	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
18.75	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
19	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
19.25	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
19.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
19.75	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
20	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
20.25	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
20.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
20.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
21	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
21.25	East Pit	6.8	22	3.6E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
21.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
21.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	2.2E-05	0.007	0.007	8.5	2.0E-05	3.3	0.00022	0.000006	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
22	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
22.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than MISA Regulation																																		
22.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.79	0.0007	0.005	7.5E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
22.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
23	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
23.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.5E-05	0.007	0.007	8.5	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
23.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
23.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
24	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
24.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
24.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
24.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
25.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
25.5	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0006	1.2E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
25.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
26	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
26.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
26.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
26.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
27	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
27.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
27.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
27.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
28	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
28.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
28.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
28.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
29	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
29.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
29.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
29.75	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
30	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
30.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
30.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
30.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
31	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
31.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
31.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
31.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
32	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
32.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
32.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
32.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
33	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
33.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
33.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
33.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
34	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
34.25	East Pit	6.8	22	3.7E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.78	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
34.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
34.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
35	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
35.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
35.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
35.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
36	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
36.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
36.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.8E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
36.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
37	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
37.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
37.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
37.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
38	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
38.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
38.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
38.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
39	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
39.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
39.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
39.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
40	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
40.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
40.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
40.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
41	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
41.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
41.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
41.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
42	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
42.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
42.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
42.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
43	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
43.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
43.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	2.0E-05	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
43.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
44	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
44.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	2.1E-05	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
0.01	Parameter concentrations is greater than PWQO guideline																																		
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life																																		
0.01	Parameter concentrations is greater than MISA Regulation																																		
44.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
44.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
45	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
45.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
45.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
45.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
46	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
46.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
46.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
46.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
47	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
47.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
47.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
47.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
48	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
48.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
48.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
48.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
49	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
49.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.6E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
49.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
49.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
50	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
50.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
50.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
50.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
51	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
51.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
51.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
51.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
52	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
52.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
52.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
52.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
53	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
53.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
53.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
53.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
54	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
54.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
54.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
54.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
55	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
55.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
55.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
55.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
56	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
56.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
56.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
56.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
57	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
57.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
57.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
57.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
58	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
58.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
58.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
58.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
59	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
59.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
59.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
59.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
60	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
60.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
60.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
60.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
61	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
61.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
61.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
61.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
62	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
62.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
62.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
62.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
63	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
63.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
63.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
63.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
64	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
64.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
64.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
64.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
65	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
65.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
65.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
65.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
66	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
66.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
66.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
66.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
67	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
67.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
67.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
67.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
68	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
68.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
68.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
68.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
69	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
69.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
69.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
69.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
70	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
70.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
70.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
70.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
71	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
71.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
71.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
71.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
72	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
72.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
72.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
72.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
73	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
73.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
73.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
73.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
74	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
74.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
74.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
74.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
75.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
75.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
75.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
76	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
76.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
76.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
76.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
77	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
77.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
77.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
77.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
78	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
78.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
78.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
78.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
79	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
79.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
79.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
79.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
80	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
80.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
80.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
80.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
81	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
81.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
81.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
81.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
82	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
82.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
82.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
82.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
83	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
83.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
83.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
83.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
84	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
84.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
84.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
84.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
85	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
85.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
85.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
85.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
86	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness Dependent	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-		-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
86.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
86.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
86.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
87	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
87.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
87.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
87.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
88	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
88.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
88.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
88.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
89	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
89.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
89.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
89.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
90	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
90.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
90.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
90.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
91	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
91.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
91.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
91.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
92	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
92.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
92.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
92.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
93	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
93.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
93.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
93.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
94	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
94.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
94.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
94.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
95	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
95.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
95.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
95.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
96	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
96.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
96.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
96.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
97	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
97.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
97.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
97.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
98	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
98.25	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00013	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.7E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
98.5	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0006	1.1E-05	0.007	0.007	8.4	*2.0E-05*	3.3	0.00022	0.000001	0.00011	9.9E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.78	0.0007	0.005	7.6E-07	0.0004	5.0E-05	1.1	0.03	0.0003	1.0E-04	0.00005	0.0009	0.0020
98.75	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.2E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000006	0.00012	9.7E-04	6.0E-06	0.51	1.2	0.07	0.0003	0.77	0.0007	0.005	4.4E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0020
99	East Pit	6.8	22	3.8E-04	0.03	0.001	0.0007	2.4E-05	0.007	0.007	8.4	*2.1E-05*	3.3	0.00022	0.000007	0.00012	9.7E-04	6.0E-06	0.52	1.2	0.07	0.0003	0.77	0.0007	0.005	5.5E-06	0.0004	5.1E-05	1.1	0.03	0.0003	1.1E-04	0.00005	0.0009	0.0019
WEST PIT																																			
0.25	West Pit	7.5	154	4.2E-05	0.17	0.002	0.0007	2.3E-04	0.038	0.173	38.4	*5.9E-05*	7.3	0.00037	0.000069	0.00046	1.4E-04	0.0000	2.3	11.3	0.29	0.0119	9.46	0.0015	0.03	1.0E-04	0.001	8.6E-05	2.5	0.52	0.0008	4.4E-04	0.00024	0.0041	0.0038
0.5	West Pit	7.4	55	5.2E-05	0.18	0.003	0.0005	9.8E-04	0.011	0.049	15.5	*2.0E-05*	2.8	0.00012	0.000410	0.00060	1.2E-04	0.0000	0.9	3.3	0.10	0.0032	2.65	0.0006	0.03	8.5E-05	0.001	3.8E-05	1.1	0.17	0.0003	5.0E-04	0.00009	0.0017	0.0025
0.75	West Pit	7.4	48	5.4E-05	0.18	0.003	0.0005	1.0E-03	0.009	0.040	13.8	*1.7E-05*	2.5	0.00010	0.000426	0.00059	1.2E-04	0.0000	0.8	2.7	0.08	0.0026	2.16	0.0005	0.03	8.3E-05	0.001	3.4E-05	0.9	0.14	0.0003	5.1E-04	0.00008	0.0015	0.0024
1	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	9.2E-04	0.009	0.044	14.5	*1.9E-05*	2.6	0.00011	0.000418	0.00053	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.37	0.0005	0.03	8.9E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0016	0.0024
1.25	West Pit	7.4	57	5.2E-05	0.18	0.003	0.0005	7.8E-04	0.011	0.051	15.9	*2.1E-05*	2.9	0.00012	0.000379	0.00046	1.2E-04	0.0000	0.9	3.5	0.10	0.0034	2.77	0.0006	0.03	9.7E-05	0.001	3.8E-05	1.1	0.17	0.0003	5.3E-04	0.00010	0.0017	0.0025
1.5	West Pit	7.4	52	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.045	14.8	*1.9E-05*	2.6	0.00011	0.000416	0.00052	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.44	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.16	0.0003	5.2E-04	0.00009	0.0016	0.0025
1.75	West Pit	7.4	49	5.4E-05	0.18	0.003	0.0005	9.4E-04	0.009	0.042	14.2	*1.8E-05*	2.5	0.00010	0.000422	0.00054	1.2E-04	0.0000	0.8	2.9	0.08	0.0027	2.26	0.0005	0.03	8.8E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
2	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	9.0E-04	0.009	0.044	14.5	*1.9E-05*	2.6	0.00010	0.000419	0.00052	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.35	0.0005	0.03	9.0E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
2.25	West Pit	7.4	53	5.3E-05	0.18	0.003	0.0005	8.2E-04	0.010	0.047	15.2	*2.0E-05*	2.7	0.00011	0.000399	0.00048	1.2E-04	0.0000	0.9	3.2	0.09	0.0031	2.55	0.0006	0.03	9.4E-05	0.001	3.7E-05	1.0	0.16	0.0003	5.3E-04	0.00009	0.0016	0.0025
2.5	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.044	14.6	*1.9E-05*	2.6	0.00011	0.000417	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0024
2.75	West Pit	7.4	49	5.4E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.042	14.2	*1.8E-05*	2.5	0.00010	0.000421	0.00053	1.2E-04	0.0000	0.8	2.9	0.09	0.0028	2.28	0.0005	0.03	8.9E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.2E-04	0.00009	0.0015	0.0024
3	West Pit	7.4	50	5.4E-05	0.18	0.003	0.0005	8.9E-04	0.009	0.043	14.4	*1.9E-05*	2.6	0.00010	0.000419	0.00052	1.2E-04	0.0000	0.9	3.0	0.09	0.0028	2.34	0.0005	0.03	9.0E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
3.25	West Pit	7.4	52	5.3E-05	0.18	0.003	0.0005	8.4E-04	0.010	0.046	14.9	*1.9E-05*	2.7	0.00011	0.000406	0.00049	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.47	0.0005	0.03	9.3E-05	0.001	3.6E-05	1.0	0.16	0.0003	5.3E-04	0.00009	0.0016	0.0025
3.5	West Pit	7.4	51	5.3E-05	0.18	0.003	0.0005	8.8E-04	0.009	0.044	14.5	*1.9E-05*	2.6	0.00011	0.000418	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.36	0.0005	0.03	9.1E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
3.75	West Pit	7.4	50	5.6E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.042	14.3	*1.8E-05*	2.5	0.00010	0.000422	0.00053	1.2E-04	0.0000	0.8	2.9	0.09	0.0028	2.29	0.0005	0.03	8.9E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
4	West Pit	7.4	50	5.9E-05	0.18	0.003	0.0005	8.9E-04	0.009	0.043	14.4	*1.9E-05*	2.6	0.00010	0.000422	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0028	2.33	0.0005	0.03	9.1E-05	0.001	3.5E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0015	0.0024
4.25	West Pit	7.4	52	5.9E-05	0.18	0.003	0.0005	8.5E-04	0.010	0.045	14.8	*1.9E-05*	2.6	0.00011	0.000411	0.00049	1.2E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.3E-05	0.001	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0025
4.5	West Pit	7.4	51	6.6E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.044	14.7	*1.9E-05*	2.6	0.00011	0.000424	0.00051	1.2E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.2E-05	*0.001*	3.6E-05	1.0	0.15	0.0003	5.3E-04	0.00009	0.0016	0.0025
4.75	West Pit	7.4	51	7.4E-05	0.18	0.003	0.0005	9.1E-04	0.009	0.044	14.6	*1.9E-05*	2.6	0.00010	0.000429	0.00053	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.36	0.0005	0.03	9.2E-05	*0.001*	3.6E-05	1.0	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5	West Pit	7.4	51	7.5E-05	0.18	0.003	0.0005	8.9E-04	0.010	0.044	14.7	*1.9E-05*	2.6	0.00011	0.000428	0.00052	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.39	0.0005	0.03	9.3E-05	*0.001*	3.6E-05	1.0	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.25	West Pit	7.4	52	7.5E-05	0.18	0.003	0.0005	8.6E-04	0.010	0.046	15.0	*1.9E-05*	2.7	0.00011	0.000420	0.00050	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.47	0.0005	0.03	9.5E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.5	West Pit	7.4	52	8.1E-05	0.18	0.003	0.0005	8.9E-04	0.010	0.045	14.9	*1.9E-05*	2.7	0.00011	0.000429	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.4E-05	*0.001*	3.7E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
5.75	West Pit	7.4	52	8.7E-05	0.18	0.003	0.0005	9.1E-04	0.010	0.044	14.8	*1.9E-05*	2.7	0.00011	0.000433	0.00053	1.3E-04	0.0000	0.9	3.0	0.09	0.0029	2.40	0.0005	0.03	9.4E-05	*0.001*	3.6E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
6	West Pit	7.4	52	8.8E-05	0.18	0.003	0.0005	9.0E-04	0.010	0.045	14.9	*1.9E-05*	2.7	0.00011	0.000433	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.4E-05	*0.001*	3.7E-05	1.1	0.15	0.0003	5.4E-04	0.00009	0.0016	0.0025
6.25	West Pit	7.4	53	8.7E-05	0.18	0.003	0.0005	8.7E-04	0.010	0.046	15.1	*2.0E-05*	2.7	0.00011	0.000426	0.00051	1.3E-04	0.0000	0.9	3.2	0.09	0.0030	2.50	0.0005	0.03	9.6E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.4E-04	0.00009	0.0016	0.0025
6.5	West Pit	7.4	52	9.2E-05	0.18	0.003	0.0005	9.0E-04	0.010	0.046	15.1	*1.9E-05*	2.7	0.00011	0.000434	0.00052	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.46	0.0005	0.03	9.5E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
6.75	West Pit	7.4	52	9.7E-05	0.18	0.003	0.0005	9.2E-04	0.010	0.045	15.0	*1.9E-05*	2.7	0.00011	0.000437	0.00053	1.3E-04	0.0000	0.9	3.1	0.09	0.0030	2.43	0.0005	0.03	9.5E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7	West Pit	7.4	52	9.8E-05	0.18	0.003	0.0005	9.1E-04	0.010	0.045	15.1	*1.9E-05*	2.7	0.00011	0.000436	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.45	0.0005	0.03	9.6E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.25	West Pit	7.4	53	9.7E-05	0.18	0.003	0.0005	8.8E-04	0.010	0.046	15.3	*2.0E-05*	2.7	0.00011	0.000430	0.00051	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.51	0.0006	0.03	9.7E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.5	West Pit	7.4	53	1.0E-04	0.18	0.003	0.0005	9.0E-04	0.010	0.046	15.2	*2.0E-05*	2.7	0.00011	0.000437	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.48	0.0005	0.03	9.6E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0025
7.75	West Pit	7.4	52	1.1E-04	0.18	0.003	0.0005	9.2E-04	0.010	0.045	15.1	*1.9E-05*	2.7	0.00011	0.000440	0.00054	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.45	0.0005	0.03	9.6E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026
8	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	9.1E-04	0.010	0.046	15.2	*2.0E-05*	2.7	0.00011	0.000439	0.00053	1.3E-04	0.0000	1.0	3.1	0.09	0.0030	2.47	0.0005	0.03	9.6E-05	*0.001*	3.7E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
8.25	West Pit	7.4	53	1.1E-04	0.18	0.003	0.0005	8.9E-04	0.010	0.047	15.3	2.0E-05	2.8	0.00011	0.000434	0.00052	1.3E-04	0.0000	1.0	3.2	0.09	0.0031	2.52	0.0006	0.03	9.8E-05	0.001	3.8E-05	1.1	0.16	0.0003	5.5E-04	0.00009	0.0016	0.0026
8.5	West Pit	7.3	49	1.3E-04	0.17	0.002	0.0006	9.0E-04	0.009	0.039	14.7	2.0E-05	3.0	0.00013	0.000458	0.00054	1.7E-04	0.0000	0.9	2.8	0.09	0.0025	2.20	0.0006	0.02	8.4E-05	0.001	4.1E-05	1.2	0.14	0.0003	5.2E-04	0.00009	0.0016	0.0026
8.75	West Pit	7.2	46	1.6E-04	0.16	0.002	0.0006	9.1E-04	0.009	0.033	14.1	2.1E-05	3.1	0.00015	0.000475	0.00056	2.1E-04	0.0000	0.9	2.5	0.09	0.0021	1.93	0.0006	0.02	7.3E-05	0.001	4.5E-05	1.2	0.12	0.0003	4.9E-04	0.00009	0.0015	0.0027
9	West Pit	7.2	45	1.6E-04	0.16	0.001	0.0006	9.0E-04	0.009	0.032	14.0	2.1E-05	3.2	0.00016	0.000477	0.00057	2.2E-04	0.0000	0.9	2.5	0.09	0.0020	1.86	0.0007	0.02	7.1E-05	0.001	4.6E-05	1.2	0.11	0.0003	4.8E-04	0.00008	0.0015	0.0027
9.25	West Pit	7.2	45	1.6E-04	0.16	0.001	0.0006	8.9E-04	0.009	0.032	14.1	2.1E-05	3.2	0.00016	0.000474	0.00056	2.2E-04	0.0000	0.9	2.5	0.09	0.0020	1.88	0.0007	0.02	7.2E-05	0.001	4.6E-05	1.2	0.12	0.0003	4.8E-04	0.00009	0.0015	0.0027
9.5	West Pit	7.1	43	1.8E-04	0.15	0.001	0.0007	9.0E-04	0.009	0.028	13.7	2.1E-05	3.3	0.00017	0.000484	0.00057	2.5E-04	0.0000	0.9	2.3	0.09	0.0017	1.71	0.0007	0.02	6.5E-05	0.001	4.8E-05	1.2	0.10	0.0003	4.6E-04	0.00008	0.0014	0.0028
9.75	West Pit	7.1	41	1.9E-04	0.15	0.001	0.0007	9.0E-04	0.009	0.026	13.5	2.2E-05	3.4	0.00017	0.000492	0.00058	2.7E-04	0.0000	0.8	2.2	0.09	0.0016	1.61	0.0007	0.02	6.1E-05	0.001	5.0E-05	1.3	0.10	0.0003	4.5E-04	0.00008	0.0014	0.0028
10	West Pit	7.1	41	2.0E-04	0.15	0.001	0.0007	9.0E-04	0.008	0.025	13.5	2.2E-05	3.4	0.00018	0.000492	0.00058	2.8E-04	0.0000	0.8	2.2	0.09	0.0015	1.58	0.0007	0.02	6.1E-05	0.001	5.0E-05	1.3	0.09	0.0003	4.4E-04	0.00008	0.0014	0.0028
10.25	West Pit	7.1	41	2.0E-04	0.15	0.001	0.0007	8.9E-04	0.009	0.026	13.5	2.2E-05	3.4	0.00018	0.000490	0.00058	2.8E-04	0.0000	0.8	2.2	0.09	0.0016	1.60	0.0007	0.02	6.2E-05	0.001	5.0E-05	1.3	0.10	0.0003	4.4E-04	0.00008	0.0014	0.0028
10.5	West Pit	7.1	40	2.1E-04	0.14	0.001	0.0007	8.9E-04	0.008	0.024	13.3	2.2E-05	3.4	0.00018	0.000495	0.00059	3.0E-04	0.0000	0.8	2.1	0.09	0.0014	1.51	0.0007	0.02	5.8E-05	0.001	5.1E-05	1.3	0.09	0.0003	4.3E-04	0.00008	0.0014	0.0028
10.75	West Pit	7.1	39	2.2E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.022	13.2	2.2E-05	3.5	0.00019	0.000500	0.00060	3.1E-04	0.0000	0.8	2.0	0.09	0.0013	1.46	0.0007	0.02	5.6E-05	0.001	5.2E-05	1.3	0.09	0.0003	4.3E-04	0.00008	0.0014	0.0028
11	West Pit	7.1	39	2.2E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.022	13.2	2.2E-05	3.5	0.00019	0.000500	0.00060	3.1E-04	0.0000	0.8	2.0	0.09	0.0013	1.44	0.0007	0.02	5.6E-05	0.001	5.2E-05	1.3	0.08	0.0003	4.3E-04	0.00008	0.0014	0.0028
11.25	West Pit	7.1	39	2.2E-04	0.14	0.001	0.0007	8.9E-04	0.008	0.022	13.2	2.2E-05	3.5	0.00019	0.000499	0.00059	3.1E-04	0.0000	0.8	2.0	0.09	0.0013	1.45	0.0007	0.02	5.6E-05	0.001	5.2E-05	1.3	0.09	0.0003	4.3E-04	0.00008	0.0014	0.0028
11.5	West Pit	7.0	39	2.3E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.021	13.1	2.2E-05	3.5	0.00019	0.000502	0.00060	3.3E-04	0.0000	0.8	2.0	0.09	0.0012	1.40	0.0007	0.02	5.4E-05	0.001	5.3E-05	1.3	0.08	0.0003	4.2E-04	0.00008	0.0014	0.0028
11.75	West Pit	7.0	38	2.3E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.020	13.1	2.2E-05	3.5	0.00019	0.000505	0.00060	3.3E-04	0.0000	0.8	1.9	0.09	0.0012	1.37	0.0007	0.02	5.3E-05	0.001	5.3E-05	1.3	0.08	0.0003	4.2E-04	0.00008	0.0014	0.0028
12	West Pit	7.0	38	2.3E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.020	13.0	2.2E-05	3.5	0.00019	0.000505	0.00060	3.4E-04	0.0000	0.8	1.9	0.09	0.0012	1.36	0.0007	0.02	5.3E-05	0.001	5.3E-05	1.3	0.08	0.0003	4.2E-04	0.00008	0.0014	0.0028
12.25	West Pit	7.0	38	2.3E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.020	13.1	2.2E-05	3.5	0.00019	0.000504	0.00060	3.4E-04	0.0000	0.8	1.9	0.09	0.0012	1.36	0.0007	0.02	5.3E-05	0.001	5.3E-05	1.3	0.08	0.0003	4.2E-04	0.00008	0.0014	0.0028
12.5	West Pit	7.0	38	2.4E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.020	13.0	2.2E-05	3.6	0.00020	0.000506	0.00061	3.5E-04	0.0000	0.8	1.9	0.09	0.0011	1.33	0.0007	0.02	5.2E-05	0.001	5.4E-05	1.3	0.08	0.0003	4.1E-04	0.00008	0.0014	0.0029
12.75	West Pit	7.0	37	2.5E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.019	12.9	2.2E-05	3.6	0.00020	0.000509	0.00061	3.5E-04	0.0000	0.8	1.9	0.09	0.0011	1.30	0.0007	0.02	5.1E-05	0.001	5.4E-05	1.3	0.08	0.0003	4.1E-04	0.00008	0.0014	0.0029
13	West Pit	7.0	37	2.5E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.019	12.9	2.2E-05	3.6	0.00020	0.000509	0.00061	3.5E-04	0.0000	0.8	1.9	0.09	0.0011	1.30	0.0007	0.02	5.1E-05	0.001	5.4E-05	1.3	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0029
13.25	West Pit	7.0	37	2.5E-04	0.14	0.001	0.0007	9.0E-04	0.008	0.019	12.9	2.2E-05	3.6	0.00020	0.000508	0.00061	3.5E-04	0.0000	0.8	1.9	0.09	0.0011	1.30	0.0007	0.02	5.1E-05	0.001	5.4E-05	1.3	0.08	0.0003	4.1E-04	0.00008	0.0014	0.0029
13.5	West Pit	7.0	37	2.5E-04	0.14	0.001	0.0008	9.0E-04	0.008	0.018	12.9	2.2E-05	3.6	0.00020	0.000510	0.00061	3.6E-04	0.0000	0.8	1.8	0.09	0.0010	1.28	0.0007	0.02	5.0E-05	0.001	5.4E-05	1.3	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0029
13.75	West Pit	7.0	37	2.6E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.018	12.8	2.2E-05	3.6	0.00020	0.000512	0.00061	3.7E-04	0.0000	0.8	1.8	0.09	0.0010	1.26	0.0007	0.02	4.9E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0029
14	West Pit	7.0	37	2.6E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.018	12.8	2.2E-05	3.6	0.00020	0.000511	0.00061	3.7E-04	0.0000	0.8	1.8	0.09	0.0010	1.25	0.0007	0.02	4.9E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.1E-04	0.00008	0.0013	0.0029
14.25	West Pit	7.0	37	2.6E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.018	12.8	2.2E-05	3.6	0.00020	0.000511	0.00061	3.7E-04	0.0000	0.8	1.8	0.09	0.0010	1.26	0.0007	0.02	4.9E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.1E-04	0.00008	0.0014	0.0029
14.5	West Pit	7.0	36	2.6E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.017	12.8	2.2E-05	3.6	0.00020	0.000512	0.00061	3.7E-04	0.0000	0.8	1.8	0.09	0.0010	1.24	0.0007	0.02	4.8E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
14.75	West Pit	7.0	36	2.6E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.017	12.8	2.2E-05	3.6	0.00020	0.000514	0.00062	3.8E-04	0.0000	0.8	1.8	0.09	0.0009	1.22	0.0008	0.02	4.8E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
15	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.017	12.8	2.2E-05	3.6	0.00020	0.000514	0.00062	3.8E-04	0.0000	0.8	1.8	0.09	0.0009	1.22	0.0008	0.02	4.8E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
15.25	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.017	12.8	2.2E-05	3.6	0.00020	0.000513	0.00062	3.8E-04	0.0000	0.8	1.8	0.09	0.0009	1.22	0.0008	0.02	4.8E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
15.5	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.017	12.7	2.2E-05	3.6	0.00020	0.000515	0.00062	3.8E-04	0.0000	0.8	1.8	0.09	0.0009	1.21	0.0008	0.02	4.7E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
15.75	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.017	12.7	2.2E-05	3.6	0.00020	0.000516	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.19	0.0008	0.02	4.7E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
16	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.2E-05	3.6	0.00020	0.000516	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.19	0.0008	0.02	4.7E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
16.25	West Pit	7.0	36	2.7E-04	0.13	0.001	0.0008	9.0E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00020	0.000515	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.19	0.0008	0.02	4.7E-05	0.001	5.5E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
16.5	West Pit	7.0	36	2.8E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00021	0.000516	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.18	0.0008	0.02	4.6E-05	0.001	5.6E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
16.75	West Pit	7.0	36	2.8E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00021	0.000518	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.17	0.0008	0.02	4.6E-05	0.001	5.6E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
17	West Pit	7.0	36	2.8E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00021	0.000518	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.17	0.0008	0.02	4.6E-05	0.001	5.6E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
17.25	West Pit	7.0	36	2.8E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00021	0.000517	0.00062	3.9E-04	0.0000	0.8	1.7	0.09	0.0009	1.17	0.0008	0.02	4.6E-05	0.001	5.6E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
17.5	West Pit	7.0	35	2.8E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.7	2.3E-05	3.7	0.00021	0.000518	0.00062	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.16	0.0008	0.02	4.5E-05	0.001	5.6E-05	1.3	0.07	0.0003	4.0E-04	0.00008	0.0013	0.0029
17.75	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.016	12.6	2.3E-05	3.7	0.00021	0.000519	0.00062	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.15	0.0008	0.02	4.5E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
18	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000519	0.00062	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.15	0.0008	0.02	4.5E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
18.25	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000519	0.00062	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.15	0.0008	0.02	4.5E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
18.5	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000520	0.00063	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.14	0.0008	0.02	4.5E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
18.75	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000521	0.00063	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.13	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
19	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000521	0.00063	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.13	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
19.25	West Pit	7.0	35	2.9E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000520	0.00063	4.0E-04	0.0000	0.8	1.7	0.09	0.0008	1.13	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.3	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
19.5	West Pit	7.0	35	3.0E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000521	0.00063	4.1E-04	0.0000	0.8	1.7	0.09	0.0008	1.12	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.4	0.06	0.0003	3.9E-04	0.00008	0.0013	0.0029
19.75	West Pit	7.0	35	3.0E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000522	0.00063	4.1E-04	0.0000	0.8	1.7	0.09	0.0008	1.11	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
20	West Pit	7.0	35	3.0E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000522	0.00063	4.1E-04	0.0000	0.8	1.7	0.09	0.0008	1.11	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
20.25	West Pit	7.0	35	3.0E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000522	0.00063	4.1E-04	0.0000	0.8	1.7	0.09	0.0008	1.11	0.0008	0.02	4.4E-05	0.001	5.6E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
20.5	West Pit	7.0	35	3.0E-04	0.13	0.001	0.0008	9.1E-04	0.008	0.015	12.6	2.3E-05	3.7	0.00021	0.000522	0.00063	4.1E-04	0.0000	0.8	1.6	0.09	0.0008	1.11	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
20.75	West Pit	6.9	35	3.0E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.6	2.3E-05	3.7	0.00021	0.000523	0.00063	4.1E-04	0.0000	0.8	1.6	0.09	0.0007	1.10	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
21	West Pit	6.9	35	3.0E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000523	0.00063	4.1E-04	0.0000	0.8	1.6	0.09	0.0007	1.10	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
21.25	West Pit	6.9	35	3.0E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000523	0.00063	4.1E-04	0.0000	0.8	1.6	0.09	0.0007	1.10	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
21.5	West Pit	6.9	35	3.1E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000523	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.09	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
21.75	West Pit	6.9	35	3.1E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000524	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.09	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
22	West Pit	6.9	34	3.1E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000524	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.09	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
22.25	West Pit	6.9	34	3.1E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000524	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.09	0.0008	0.02	4.3E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
22.5	West Pit	6.9	34	3.1E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000525	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.08	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
22.75	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000525	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.08	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
23	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000525	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.07	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
23.25	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000525	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.07	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
23.5	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000526	0.00063	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.07	0.0008	0.02	4.2E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
23.75	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000526	0.00064	4.2E-04	0.0000	0.8	1.6	0.09	0.0007	1.06	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
24	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000526	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.06	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
24.25	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.014	12.5	2.3E-05	3.7	0.00021	0.000526	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.06	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
24.5	West Pit	6.9	34	3.2E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000527	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.06	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
24.75	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000527	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.05	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
25	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000527	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.05	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
25.25	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000527	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.05	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
25.5	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000527	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.05	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
25.75	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000528	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.05	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
26	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000528	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.04	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
26.25	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.2E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000528	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.04	0.0008	0.02	4.1E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
26.5	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.5	2.3E-05	3.7	0.00021	0.000528	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0007	1.04	0.0008	0.02	4.0E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
26.75	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000529	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0006	1.04	0.0008	0.02	4.0E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
27	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000529	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0006	1.04	0.0008	0.02	4.0E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
27.25	West Pit	6.9	34	3.3E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000529	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0006	1.04	0.0008	0.02	4.0E-05	0.001	5.7E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
27.5	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000529	0.00064	4.3E-04	0.0000	0.8	1.6	0.09	0.0006	1.03	0.0008	0.02	4.0E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
27.75	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.03	0.0008	0.02	4.0E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.9E-04	0.00007	0.0013	0.0029
28	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.03	0.0008	0.02	4.0E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
28.25	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.03	0.0008	0.02	4.0E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
28.5	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.7	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.03	0.0008	0.02	4.0E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
28.75	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.02	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
29	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.02	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
29.25	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000530	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.02	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
29.5	West Pit	6.9	34	3.4E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000531	0.00064	4.4E-04	0.0000	0.8	1.6	0.09	0.0006	1.02	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
29.75	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000531	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.02	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
30	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000531	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
30.25	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.013	12.4	2.3E-05	3.8	0.00021	0.000531	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 (underlined)	Parameter concentrations is greater than MISA Regulation

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
30.5	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000531	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
30.75	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
31	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
31.25	West Pit	6.9	34	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
31.5	West Pit	6.9	33	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.01	0.0008	0.02	3.9E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0029
31.75	West Pit	6.9	33	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.06	0.0003	3.8E-04	0.00007	0.0013	0.0030
32	West Pit	6.9	33	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
32.25	West Pit	6.9	33	3.5E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00021	0.000532	0.00064	4.4E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
32.5	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000532	0.00064	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
32.75	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00064	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
33	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00064	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
33.25	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.3E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00064	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	1.00	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
33.5	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00064	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
33.75	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
34	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
34.25	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000533	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
34.5	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
34.75	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.99	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
35	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
35.25	West Pit	6.9	33	3.6E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.8E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
35.5	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.008	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000534	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
35.75	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
36	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
36.25	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
36.5	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0006	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
36.75	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.4	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0005	0.98	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
37	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
37.25	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
37.5	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000535	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
37.75	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.5E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
38	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
38.25	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.012	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
38.5	West Pit	6.9	33	3.7E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
38.75	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.97	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
39	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
39.25	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.7E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
39.5	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
39.75	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
40	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
40.25	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000536	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
40.5	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.8E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
40.75	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
41	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
41.25	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.96	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
41.5	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
41.75	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
42	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
42.25	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
42.5	West Pit	6.9	33	3.8E-04	0.13	0.001	0.0008	9.4E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000537	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
42.75	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
43	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
43.25	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
43.5	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.95	0.0008	0.02	3.6E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
43.75	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
44	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
44.25	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
44.5	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
44.75	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
45	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
45.25	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000538	0.00065	4.6E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
45.5	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
45.75	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
46	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
46.25	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.94	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
46.5	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
46.75	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
47	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
47.25	West Pit	6.9	33	3.9E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
47.5	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000539	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
47.75	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
48	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
48.25	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
48.5	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
48.75	West Pit	6.9	33	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
49	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
49.25	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
49.5	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00065	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.93	0.0008	0.02	3.5E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
49.75	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.011	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.5	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
50	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
50.25	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
50.5	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
50.75	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
51	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
51.25	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000540	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
51.5	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
51.75	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
52	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
52.25	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
52.5	West Pit	6.9	32	4.0E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
52.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.92	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
53	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
53.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030

0.01	Parameter concentrations is greater than PWQO guideline
0.01	Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01	Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
53.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0005	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
53.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
54	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
54.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
54.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
54.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.3	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.7E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
55	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.7E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
55.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000541	0.00066	4.7E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
55.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
55.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.09	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
56	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
56.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
56.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
56.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
57	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
57.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.91	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
57.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
57.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
58	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
58.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.4E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
58.5	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.5E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
58.75	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
59	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
59.25	West Pit	6.9	32	4.1E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
59.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000542	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
59.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
60	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
60.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
60.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
60.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
61	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
61.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
61.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
61.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
62	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
62.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.90	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
62.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
62.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
63	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
63.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
63.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
63.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
64	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
64.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
64.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
64.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
65	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
65.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000543	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
65.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
65.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
66	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
66.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
66.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
66.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
67	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
67.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
67.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
67.75	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
68	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
68.25	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
68.5	West Pit	6.9	32	4.2E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.89	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
68.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
69	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
69.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
69.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
69.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.8E-04	0.00007	0.0013	0.0030
70	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
70.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.3E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
70.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
70.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
71	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
71.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	5.9E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
71.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
71.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
72	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	mg/L as CaCO3	mg/L as N	mg/L as N	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L-P	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
72.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.8E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
72.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000544	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
72.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
73	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
73.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
73.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.010	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
73.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
74	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
74.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
74.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
74.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
75.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
75.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
75.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
76	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
76.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
76.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
76.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.88	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
77	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
77.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
77.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
77.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
78	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
78.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
78.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
78.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
79	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
79.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
79.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
79.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
80	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
80.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
80.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
80.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
81	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
81.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
81.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
81.75	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
82	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
82.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
82.5	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
82.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
83	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
83.25	West Pit	6.9	32	4.3E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
83.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000545	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
83.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
84	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
84.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
84.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
84.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
85	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
85.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
85.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
85.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
86	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
86.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
86.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
86.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
87	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
87.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
87.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
87.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
88	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
88.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
88.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
88.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
89	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
89.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
89.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
89.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
90	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
90.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.87	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
90.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
90.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
91	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
91.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
91.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
91.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
92	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
92.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
92.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
92.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030

TABLE 4
Post-Closure Open Pit Flooding Water Quality Model Results
Stratified - No Diversion from the TMF

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
		s.u.	*mg/L as CaCO3*	*mg/L as N*	*mg/L as N*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L-P*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
PWQO		6.5 to 8.5	-	13	-	0.075	0.02	0.005	0.2	-	-	0.0001	-	0.0009	0.001	0.001	0.3	0.0002	-	-	-	0.04	-	0.025		0.001	0.1	0.0001				0.006		0.005	0.02
CCME Aquatic Life		6.5 to 9.0	-	13	-	0.1	-	0.005	-	-	-	Hardness	-	-	0.001	0.002	0.3	-	-	-	-	-	-	0.025		0.001	0.001	0.0001							0.03
MISA		6 to 9.5	-	-	-	-	-	1	-	-	-	Dependent	-	-	-	0.6	-	-	-	-	-	-	-	1		0.4									1
93	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
93.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
93.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
93.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
94	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
94.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
94.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
94.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
95	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
95.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
95.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
95.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation

YEAR	PIT	pH	Alkalinity	Nitrate	Ammonia	Aluminum	Antimony	Arsenic	Boron	Barium	Calcium	Cadmium	Chloride	Cobalt	Chromium	Copper	Iron	Mercury	Potassium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Phosphorus	Lead	Selenium	Silver	Sulfate	Strontium	Tin	Vanadium	Thallium	Uranium	Zinc
96	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
96.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
96.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
96.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000547	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
97	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
97.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
97.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
97.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000547	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
98	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
98.25	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
98.5	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
98.75	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000547	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030
99	West Pit	6.9	32	4.4E-04	0.13	0.001	0.0008	9.6E-04	0.007	0.009	12.2	*2.3E-05*	3.8	0.00022	0.000546	0.00066	4.9E-04	0.0000	0.8	1.4	0.08	0.0004	0.86	0.0008	0.02	3.2E-05	0.001	6.0E-05	1.4	0.05	0.0003	3.7E-04	0.00007	0.0013	0.0030

0.01 Parameter concentrations is greater than PWQO guideline
0.01 Parameter concentrations is greater than CCME Guideline for the Protection of Aquatic Life
0.01 Parameter concentrations is greater than MISA Regulation