



Appendix G3

Additional Water Quality Modelling Mine Water Management Plan,
Beaver Dam Gold Mine - February 12, 2021
Completed for the Updated 2021 Beaver Dam Mine EIS



The predicted Hardness was determined at the five (5) Site assessment points North Pond (EOM), East Pond (EOM), Pit (PC), Killag River – Near Field Mixing Zone (EOM and PC) and Killag River – Far Field Mixing Zone (PC). Predicted hardness values were calculated by determining the Hardness source term for each source contributing surface water to the assessment point along with the volume of water provided by each source. The Hardness source terms for the Site stockpiles were provided by Lorax Environmental (pers. comm., 2020a). Hardness source terms for groundwater, non-contact water and the Killag River were calculated based off background water quality monitoring performed on Site between October 2014 and December 2019. An expected Hardness was calculated at each assessment point for the respective scenario. A summary of the predicted Hardness values is shown below in [Table 2-1](#):

Table 2-1: Predicted Water Hardness

Location	EOM - Base Case (mg CaCO ₃ /L)	EOM - Upper Case (mg CaCO ₃ /L)	PC - Base Case (mg CaCO ₃ /L)	PC - Upper Case (mg CaCO ₃ /L)
North Pond	303.2	264.9	--	--
East Pond	14.8	9.3	--	--
Pit	--	--	244.6	223.4
Killag River - Near Field	15.5	14.0	12.2	11.4
Killag River - Far Field	15.3	13.8	12.2	11.4

3. Chloride Assessment

Similar to Hardness, the Chloride concentration in water can help predict the toxicity limit for certain constituents of concern, such as Nitrite. The predicted Chloride concentration was calculated at the North Pond (EOM), East Pond (EOM), Pit (PC), Killag River – Near Field Mixing Zone (EOM and PC) and Killag River – Far Field Mixing Zone (EOM and PC) assessment points in order to determine the Nitrite regulatory limit. The Chloride assessment was performed with a similar methodology to the Hardness assessment. The predicted Chloride concentration at the four (4) Site assessment points was determined by assessing the Chloride source term and volume of water contributed at each assessment point.

The Chloride source terms for the Site stockpiles were based on monitoring data from the Touquoy mine site (pers. comm., 2020b). Monitoring data from the Touquoy mine site showed Chloride concentrations in the range of 8-20 mg/L in waste rock piles and 6-10 mg/L for the low grade ore stockpiles. The worst case scenario for the waste rock and low grade ore stockpiles, 20 and 10 mg/L respectively, were assumed for this assessment. The background surface water and groundwater Chloride concentrations were assumed to be 3.8 mg/L based on background water quality sampling performed on Site between October 2014 and December 2019. A summary of the predicted Chloride values is shown below in [Table 3-1](#):



Table 3-1: Predicted Chloride Concentrations

Location	EOM - Base Case (mg/L)	EOM - Upper Case (mg/L)	PC - Base Case (mg/L)	PC - Upper Case (mg/L)
North Pond	16.0	16.0	--	--
East Pond	3.8	3.8	--	--
Pit	--	--	15.1	15.1
Killag River - Near Field	4.3	4.3	4.2	4.2
Killag River - Far Field	4.3	4.3	4.2	4.2

Table 3-1 demonstrates the Chloride concentrations are expected to increase from 3.8 mg/L to 4.3 mg/L and 4.2 mg/L during EOM and PC scenarios respectively.

4. Updated Nitrate, Nitrite and Ammonia Modelling

The PC source terms for Nitrate, Nitrite and Ammonia previously provided by Lorax were revised in email communication with Patrick Mueller (January 15th, 2021). The previous source terms under PC conditions were found to be excessively conservative and the source terms for the NAG, PAG and Low Grade Ore (LGO) stockpiles were adjusted accordingly to allow for a more accurate water quality prediction. The updated source terms for each stockpile under Base Case (BC) and Upper Case (UC) conditions are shown in Table 4-1:

Table 4-1: Updated Nitrate, Nitrite and Ammonia Source Terms (pers. comm. Patrick Mueller, January 15, 2021)

BC EOM Source Terms	NAG Stockpile	LGO Stockpile	PAG Stockpile	Pit Walls
Nitrate (mg-N/L)	25.7	4.1	10.4	5.4
Nitrite (mg-N/L)	0.22	0.036	0.089	0.19
Ammonia (mg-N/L)	0.41	0.066	0.16	2.4
UC EOM Source Terms	NAG Stockpile	LGO Stockpile	PAG Stockpile	Pit Walls
Nitrate (mg-N/L)	46.1	7.4	18.6	15.4
Nitrite (mg-N/L)	0.40	0.064	0.16	1.6
Ammonia (mg-N/L)	0.73	0.12	0.30	8.7

The updated source terms were input into the Predictive Water Quality model with the results shown below in Table 4-2, Table 4-3, Table 4-4, Table 4-5, Table 4-6, Table 4-7, Table 4-8 and Table 4-9. Results for the East Pond were not included as the source term updated did not effect the East Pond water quality results.



Table 4-2: Constituent Concentrations in the Northern Settling Pond - EOM Conditions Upper Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	21,657	22,101	17,423	23,550	22,394	21,708	20,846	21,098	20,869	19,845	20,818	22,258
Nitrite	468	460	532	464	464	471	479	477	485	498	491	470
Ammonia	1,958	1,899	2,474	1,871	1,912	1,973	2,051	2,031	2,081	2,193	2,118	1,948

Table 4-3: Constituent Concentrations in the Northern Settling Pond - EOM Conditions Base Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	11,466	11,739	8,886	12,566	11,899	11,489	10,974	11,124	10,975	10,357	10,933	11,808
Nitrite	126	127	113	133	128	126	123	124	124	121	124	128
Ammonia	624	611	743	610	615	629	646	641	654	679	663	624

Table 4-4: Constituent Concentrations at Killag River - North Pond - Near Field - EOM Conditions Upper Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	1096	1127	666	1301	1595	2519	3353	3703	3226	1324	1034	1266
Nitrite	27.19	27.01	23.41	29.35	36.30	56.86	76.53 ^b	84.58 ^b	76.14 ^b	36.06	27.80	30.21
Ammonia	120.4	118.3	113.3	125.8	155.9	242.8	336.7	362.2	329.8	163.7	126.0	132.0

Notes:

^a denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

Table 4-5: Constituent Concentrations at Killag River - North Pond - Near Field - EOM Conditions Base Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	603	621	363	716	870	1356	1789	1977	1721	714	566	694
Nitrite	11.14	11.25	9.14	12.12	13.81	19.01	23.90	25.78	23.25	12.70	10.93	12.04
Ammonia	58.2	57.8	54.6	60.5	69.6	96.2	124.2	132.3	121.9	70.5	59.4	62.0



Table 4-6: Constituent Concentrations at Killag River - East Pond - Near Field - EOM Conditions Upper Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	1087	1117	660	1290	1580	2490	3307	3650	3182	1311	1025	1254
Nitrite	26.98	26.81	23.24	29.12	35.99	56.23	75.51 ^b	83.40 ^b	75.13 ^b	35.73	27.58	29.97
Ammonia	119.5	117.5	112.5	124.9	154.6	240.2	332.3	357.2	325.5	162.3	125.1	131.0

Notes:

^a denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

Table 4-7: Constituent Concentrations at Killag River - East Pond - Near Field - EOM Conditions Base Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	598	616	361	710	862	1341	1765	1949	1697	707	561	688
Nitrite	11.08	11.18	9.09	12.05	13.71	18.82	23.60	25.44	22.96	12.60	10.87	11.96
Ammonia	57.9	57.5	54.3	60.2	69.1	95.3	122.7	130.6	120.4	70.0	59.1	61.6

Table 4-8: Constituent Concentrations at Killag River - Far Field - EOM Conditions Upper Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	1075	1105	653	1276	1563	2464	3274	3614	3150	1296	1014	1241
Nitrite	26.73	26.56	23.03	28.85	35.64	55.69	76.32 ^b	82.62 ^b	74.42 ^b	35.39	27.33	29.69
Ammonia	118.5	116.5	111.5	123.8	153.2	237.9	329.2	353.9	322.5	160.8	124.0	129.9

Notes:

^a denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

Table 4-9: Constituent Concentrations at Killag River - Far Field - EOM Conditions Base Case

Constituent	January	February	March	April	May	June	July	August	September	October	November	December
Nitrate	592	609	357	702	853	1327	1748	1930	1680	700	555	681
Nitrite	11.01	11.12	9.05	11.97	13.61	18.68	23.42	25.24	22.78	12.52	10.81	11.89
Ammonia	57.6	57.2	54.0	59.8	68.7	94.6	121.8	129.6	119.5	69.6	58.8	61.2



5. PAG Stockpile Infiltration Rate Assessment

One of the main sources of constituent loading to the Killag River under PC conditions is due to infiltration and seepage from the PAG stockpile. In order to reduce loading to the Killag River under PC conditions a semi-permeable cap is to be designed and placed over the PAG stockpile, reducing the amount of precipitation which will infiltrate into the stockpile. Several infiltration scenarios were developed and input into the existing groundwater model and predictive water quality model in order to determine the predicted downstream water quality and required infiltration criteria for the semi-permeable cap.

The infiltration scenarios ranged from 1% to 15% of total precipitation infiltrating into the PAG pile. The seepage from the PAG pile into the surface water ditches was then assumed to be 10% of the total infiltration. This seepage-to-infiltration ratio is a conservative estimate of the direct impact of seepage on surface water quality based on the groundwater model (GHD, 2021b). The remaining 90% of infiltration is assumed to infiltrate through the base of the PAG pile, into the local groundwater.

For each infiltration scenario the seepage rates for the PAG stockpile and the resulting groundwater recharge loading rates were input into the water quality model to predict the resulting downstream water quality in PC conditions. The results of the infiltration scenarios from 1% infiltration to 15% infiltration are shown in [Attachment A](#). The results presented in [Attachment A](#) will vary from the final results presented in the Predictive Water Quality Assessment (GHD, 2021a) due to changes in the modelling methodology. The results presented in [Attachment A](#) can be used to determine how sensitive the predictive water quality model is to changes in infiltration rates into the PAG stockpile rather than final predicted water quality results.

A recent study on the performance of a high-density polyethylene (HDPE) cover system for a waste rock stock pile in Nova Scotia demonstrated an HDPE liner can see infiltration rates of approximately 3% through the liner over a 5 year span (Power et al., 2017). Given the results of this study it can be assumed that an infiltration rate of approximately 3% through the liner is reasonable, if a similar material is used. To determine the impacts an HDPE liner would have on the downstream water quality, scenarios of 2% and 3% infiltration rates into the PAG stockpile were input into the predictive water quality model. A summary of the 2% and 3% infiltration rate results are shown in [Table 5-1](#) and [Table 5-2](#) respectively. The constituents of concern with predicted exceedances are Cobalt and Zinc for both Upper Case and Base Case scenarios.

Table 5-1: 2% Infiltration Rate Results Summary

Scenario		Cobalt			Zinc		
		Regulatory Limit (µg/L)	Exceedance Months	Peak Exceedance	Regulatory Limit (µg/L)	Exceedance Months	Peak Exceedance
Upper Case	Near Field	0.78	July, August	0.85	7.00	July, August	7.39
	Far Field		July, August	0.84		July, August	7.35
Base Case	Near Field		--	--		--	--
	Far Field		--	--		--	--



Table 5-2: 3% Infiltration Rate Results Summary

Scenario		Cobalt			Zinc		
		Regulatory Limit (µg/L)	Exceedance Months	Peak Exceedance	Regulatory Limit (µg/L)	Exceedance Months	Peak Exceedance
Upper Case	Near Field	0.78	July, August	0.85	7.00	July, August	7.39
	Far Field		July, August	0.84		July, August	7.35
Base Case	Near Field		--	--		--	--
	Far Field		--	--		--	--

6. Conclusions

The results presented in the memorandum include results from the Hardness and Chloride assessments, updated Nitrate, Nitrite and Ammonia source terms and the PAG Stockpile Infiltration Rate assessment. The results from the Hardness and Chloride assessments presented above provide a high-level estimate of predicted values in the Site discharge and Killag River. These values can be used to determine appropriate regulatory guidelines for Zinc and Nitrite.

The updated Predictive Water Quality model results from adjusted Nitrate, Nitrite and Ammonia source terms demonstrate a decrease in constituents of concern concentrations under EOM conditions. The decrease in concentrations of Nitrite was not significant enough to prevent predicted exceedances during the months of July, August and September. Nitrate and Ammonia continued to have no predicted exceedances.

The results from the PAG Stockpile Infiltration Rate assessment demonstrate that a HDPE cover system with an assumed 2% or 3% infiltration rate result in no predicted exceedances under the Base Case scenario with exceedances in Cobalt and Zinc under the Upper Case scenario.

7. References

- GHD, 2021a, Beaver Dam Mine Site – Predictive Water Quality Assessment. Beaver Dam Mine Project, Marinette, Nova Scotia
- GHD, 2021b, Hydrogeologic Modelling Report, Beaver Dame Mine Project, Marinette, Nova Scotia
- Lorax Environmental, 2020a. Email communication with Timo Kirchner on January 8, 2020
- Lorax Environmental, 2020b. Email communication with Timo Kirchner on January 21, 2020
- Lorax Environmental, 2021. Email communication with Patrick Mueller on January 15, 2021
- Power et al., 2017, Five-year performance monitoring of a high-density polyethylene (HDPE) cover system at a reclaimed mine waste rock pile in the Sydney Coalfield (Nova Scotia, Canada), Environmental Science Pollution Research. 24:26744-26762

Attachment A

1. Predictive Water Quality Analysis – Infiltration Rate Sensitivity Analysis Results

The results presented in the following tables represent preliminary results to determine the potential effect of different infiltration rates on downstream water quality. The results presented below may vary from the final results presented in the Predictive Water Quality Assessment Report (GHD 2021a) due to changes in the water quality modelling methodology. The results presented below should be used for comparison purposes to determine the impact of adjusting the PAG stockpile infiltration rate on the downstream predicted water quality.

Table 1-1 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 1% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.46	247.03	247.83	247.24	243.05	238.57	227.39	221.60	231.14	243.65	246.59	246.96
As	1.75	1.72	1.69	1.71	1.76	1.75	1.77	1.79	1.76	1.71	1.71	1.72
Cd	0.020	0.020	0.019	0.019	0.020	0.020	0.021	0.022	0.021	0.020	0.019	0.020
Co	0.39	0.37	0.33	0.33	0.40	0.44	0.54	0.59	0.50	0.37	0.35	0.36
Cu	0.99	0.98	0.98	0.98	0.99	0.97	0.96	0.95	0.96	0.98	0.98	0.98
Fe	505.70	506.79	508.33	507.19	498.81	489.66	467.01	455.26	474.60	499.89	505.87	506.65
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.41	48.06	47.73	47.90	48.31	47.68	47.02	46.67	47.22	47.66	47.93	48.11
Mo	1.71	1.46	1.22	1.37	2.00	2.08	2.80	3.17	2.55	1.58	1.45	1.51
Ni	2.13	1.88	1.43	1.51	2.31	2.75	4.02	4.62	3.53	1.98	1.68	1.76
Pb	0.35	0.35	0.34	0.34	0.35	0.35	0.37	0.37	0.36	0.34	0.34	0.34
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.50	0.51	0.51	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.10	0.17	0.19	0.28	0.33	0.25	0.13	0.11	0.11
Zn	4.47	4.36	4.11	4.12	4.47	4.71	5.28	5.54	5.05	4.35	4.21	4.26
Nitrate	200.48	183.23	115.52	108.30	194.34	285.99	471.34	553.25	395.87	186.02	136.64	145.71
Nitrite	8.34	7.95	6.40	6.23	8.15	10.20	14.30	16.11	12.62	7.97	6.87	7.09
Ammonia	50.65	48.53	40.04	39.06	49.52	60.66	82.96	92.73	73.80	48.53	42.58	43.77
Notes:												
^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines												
^c denotes an exceedance of the Site Specific Guidelines												

Table 1-2 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 1% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.58	247.15	247.93	247.35	243.21	238.78	227.73	221.99	231.44	243.80	246.71	247.07
As	1.75	1.72	1.69	1.71	1.76	1.75	1.78	1.79	1.77	1.71	1.71	1.72
Cd	0.021	0.021	0.020	0.020	0.021	0.022	0.024	0.025	0.023	0.020	0.020	0.020
Co	0.45	0.42	0.35	0.36	0.46	0.53	0.71	0.79	0.64	0.43	0.38	0.39
Cu	1.00	0.99	0.98	0.98	0.99	0.98	0.97	0.97	0.98	0.98	0.98	0.99
Fe	508.71	509.51	509.78	508.48	501.74	494.44	475.46	465.33	481.56	502.73	507.71	508.64
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.49	48.13	47.77	47.94	48.39	47.81	47.25	46.94	47.41	47.74	47.98	48.17
Mo	1.70	1.46	1.22	1.37	1.98	2.07	2.78	3.15	2.53	1.58	1.44	1.50
Ni	2.81	2.50	1.74	1.77	2.95	3.82	5.95	6.93	5.11	2.61	2.07	2.19
Pb	0.37	0.36	0.34	0.34	0.36	0.38	0.42	0.43	0.40	0.36	0.35	0.35
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.51	0.51	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.10	0.18	0.19	0.29	0.33	0.25	0.13	0.11	0.12
Zn	4.96	4.81	4.33	4.31	4.94	5.48	6.67	7.20 ^b	6.19	4.80	4.50	4.57
Nitrate	199.44	182.31	115.07	107.89	193.35	284.46	468.87	550.46	393.77	185.10	136.04	145.04
Nitrite	8.32	7.93	6.40	6.22	8.13	10.16	14.25	16.05	12.58	7.95	6.86	7.07
Ammonia	50.53	48.42	39.99	39.02	49.41	60.49	82.69	92.42	73.56	48.43	42.52	43.70

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-3 Constituent Concentrations – Near Field – PC Conditions – Base Case – 1% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.45	247.03	247.82	247.24	243.04	238.55	227.36	221.56	231.11	243.63	246.58	246.95
As	1.73	1.71	1.68	1.70	1.74	1.72	1.74	1.74	1.73	1.70	1.70	1.71
Cd	0.020	0.019	0.019	0.019	0.020	0.020	0.020	0.020	0.020	0.019	0.019	0.019
Co	0.37	0.35	0.32	0.32	0.38	0.40	0.48	0.52	0.45	0.35	0.33	0.34
Cu	0.98	0.97	0.97	0.97	0.97	0.95	0.92	0.91	0.93	0.96	0.97	0.97
Fe	505.41	506.59	508.22	507.03	498.42	489.21	466.26	454.36	473.95	499.64	505.68	506.44
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.32	48.00	47.70	47.85	48.18	47.54	46.79	46.38	47.02	47.58	47.87	48.05
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.64	2.98	2.41	1.53	1.41	1.46
Ni	1.72	1.57	1.27	1.31	1.82	2.11	2.93	3.31	2.62	1.62	1.43	1.48
Pb	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.45	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.46	0.47	0.48	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.13	0.10	0.08	0.09	0.16	0.17	0.26	0.30	0.23	0.12	0.10	0.11
Zn	4.27	4.20	4.03	4.03	4.25	4.39	4.74	4.89	4.59	4.17	4.09	4.12
Nitrate	134.09	123.61	85.73	82.49	131.87	181.74	285.01	330.82	243.10	125.46	98.19	103.43
Nitrite	6.80	6.57	5.71	5.63	6.70	7.78	9.98	10.94	9.07	6.56	5.98	6.11
Ammonia	42.21	40.94	36.25	35.78	41.57	47.40	59.27	64.45	54.37	40.83	37.69	38.39

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-4 Constituent Concentrations – Far Field – PC Conditions – Base Case – 1% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.31	247.96	248.82	248.24	244.33	240.55	230.70	225.55	234.03	245.11	247.64	247.89
As	1.74	1.71	1.69	1.70	1.75	1.74	1.76	1.78	1.75	1.71	1.71	1.72
Cd	0.020	0.020	0.019	0.019	0.020	0.021	0.022	0.023	0.022	0.020	0.020	0.020
Co	0.41	0.39	0.34	0.34	0.42	0.48	0.62	0.69	0.57	0.40	0.36	0.37
Cu	0.98	0.98	0.98	0.98	0.97	0.96	0.94	0.93	0.95	0.97	0.98	0.98
Fe	507.93	509.18	510.61	509.38	501.79	494.50	475.26	465.13	481.69	503.36	508.29	508.84
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.53	48.23	47.91	48.06	48.48	48.02	47.62	47.39	47.73	47.92	48.10	48.26
Mo	1.64	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	2.20	2.00	1.49	1.50	2.28	2.88	4.32	4.98	3.74	2.06	1.71	1.79
Pb	0.34	0.34	0.34	0.33	0.34	0.35	0.36	0.36	0.35	0.34	0.34	0.34
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.13	0.11	0.08	0.09	0.16	0.18	0.27	0.31	0.23	0.12	0.10	0.11
Zn	4.63	4.53	4.20	4.18	4.60	4.99	5.81	6.18	5.47	4.52	4.31	4.37
Nitrate	133.87	123.48	85.78	82.54	131.88	182.19	287.27	334.49	244.59	125.60	98.20	103.38
Nitrite	6.81	6.58	5.73	5.65	6.72	7.82	10.08	11.09	9.15	6.59	6.00	6.12
Ammonia	42.26	41.02	36.36	35.89	41.71	47.66	59.89	65.31	54.85	41.00	37.80	38.48

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-5 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 2% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.47	247.05	247.84	247.26	243.07	238.60	227.44	221.66	231.18	243.67	246.60	246.97
As	1.75	1.72	1.69	1.71	1.76	1.75	1.78	1.80	1.77	1.71	1.71	1.72
Cd	0.021	0.021	0.020	0.020	0.021	0.022	0.024	0.025	0.023	0.020	0.020	0.020
Co	0.45	0.42	0.35	0.36	0.46	0.53	0.71	0.79	0.64	0.43	0.38	0.40
Cu	0.99	0.99	0.98	0.98	0.99	0.98	0.97	0.97	0.97	0.98	0.98	0.99
Fe	506.17	507.14	508.52	507.44	499.43	490.41	468.28	456.79	475.68	500.32	506.18	506.99
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.48	48.12	47.76	47.93	48.38	47.80	47.22	46.91	47.38	47.73	47.97	48.16
Mo	1.71	1.46	1.22	1.37	2.00	2.08	2.80	3.17	2.55	1.59	1.45	1.51
Ni	2.81	2.47	1.72	1.79	2.99	3.81	5.91	6.88	5.09	2.59	2.08	2.20
Pb	0.37	0.36	0.34	0.34	0.36	0.38	0.42	0.43	0.40	0.36	0.35	0.35
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.51	0.51	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.10	0.18	0.19	0.29	0.34	0.25	0.13	0.11	0.12
Zn	4.95	4.78	4.32	4.32	4.96	5.47	6.63	7.15 ^b	6.16	4.79	4.50	4.58
Nitrate	201.18	183.86	115.84	108.57	195.00	287.10	473.35	555.66	397.51	186.66	137.05	146.15
Nitrite	8.36	7.97	6.41	6.24	8.17	10.22	14.35	16.16	12.66	7.98	6.88	7.10
Ammonia	50.74	48.61	40.08	39.10	49.60	60.80	83.22	93.04	74.01	48.61	42.64	43.83

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-6 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 2% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.60	247.16	247.94	247.37	243.23	238.81	227.78	222.05	231.48	243.82	246.72	247.08
As	1.75	1.72	1.69	1.71	1.77	1.75	1.79	1.80	1.77	1.72	1.71	1.72
Cd	0.022	0.021	0.020	0.020	0.022	0.023	0.027	0.028	0.025	0.021	0.021	0.021
Co	0.51	0.47	0.38	0.38	0.52	0.62	0.87 ^b	0.99 ^b	0.78	0.48	0.42	0.43
Cu	1.00	0.99	0.98	0.98	1.00	0.99	0.99	0.98	0.99	0.98	0.99	0.99
Fe	509.23	509.90	509.99	508.75	502.40	495.26	476.85	467.01	482.74	503.19	508.05	509.01
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.56	48.20	47.81	47.97	48.46	47.92	47.45	47.17	47.57	47.81	48.02	48.21
Mo	1.70	1.46	1.22	1.37	1.99	2.07	2.78	3.15	2.53	1.58	1.44	1.50
Ni	3.50	3.09	2.03	2.05	3.63	4.90	7.85	9.20	6.68	3.22	2.48	2.64
Pb	0.39	0.38	0.35	0.35	0.38	0.41	0.47	0.49	0.44	0.38	0.36	0.36
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.51	0.51	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.10	0.18	0.20	0.29	0.34	0.26	0.13	0.11	0.12
Zn	5.45	5.23	4.54	4.51	5.43	6.25	8.04 ^b	8.83 ^b	7.31 ^b	5.25	4.79	4.89
Nitrate	200.14	182.95	115.39	108.16	194.02	285.57	470.89	552.88	395.42	185.75	136.45	145.49
Nitrite	8.34	7.95	6.40	6.23	8.14	10.19	14.30	16.10	12.61	7.96	6.87	7.08
Ammonia	50.62	48.51	40.04	39.06	49.50	60.63	82.95	92.74	73.78	48.52	42.58	43.76

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-7 Constituent Concentrations – Near Field – PC Conditions – Base Case – 2% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.47	247.05	247.84	247.26	243.07	238.59	227.44	221.65	231.18	243.67	246.60	246.97
As	1.73	1.71	1.68	1.70	1.74	1.73	1.74	1.75	1.74	1.70	1.70	1.71
Cd	0.020	0.020	0.019	0.019	0.020	0.021	0.022	0.023	0.022	0.020	0.020	0.020
Co	0.41	0.39	0.34	0.34	0.42	0.48	0.61	0.67	0.56	0.40	0.36	0.37
Cu	0.98	0.98	0.97	0.97	0.97	0.96	0.93	0.91	0.94	0.96	0.97	0.98
Fe	505.57	506.72	508.31	507.13	498.63	489.48	466.71	454.90	474.33	499.80	505.80	506.56
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.38	48.06	47.73	47.88	48.25	47.65	46.98	46.61	47.17	47.65	47.91	48.09
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.64	2.98	2.41	1.53	1.41	1.46
Ni	2.19	1.97	1.47	1.51	2.29	2.85	4.23	4.86	3.69	2.04	1.70	1.78
Pb	0.34	0.34	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.34	0.34	0.34
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.45	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.46	0.47	0.48	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.13	0.11	0.08	0.09	0.16	0.18	0.26	0.31	0.23	0.12	0.10	0.11
Zn	4.62	4.50	4.18	4.17	4.60	4.94	5.71	6.05	5.39	4.49	4.30	4.35
Nitrate	134.45	123.94	85.90	82.63	132.22	182.33	286.07	332.10	243.97	125.79	98.40	103.66
Nitrite	6.81	6.58	5.72	5.63	6.71	7.79	10.00	10.97	9.09	6.57	5.99	6.11
Ammonia	42.25	40.99	36.27	35.80	41.62	47.47	59.40	64.61	54.48	40.87	37.72	38.42

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-8 Constituent Concentrations – Far Field – PC Conditions – Base Case – 2% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.31	247.96	248.82	248.24	244.34	240.56	230.72	225.58	234.05	245.12	247.64	247.89
As	1.74	1.72	1.69	1.71	1.75	1.74	1.77	1.78	1.76	1.71	1.71	1.72
Cd	0.021	0.021	0.020	0.020	0.021	0.022	0.024	0.026	0.023	0.021	0.020	0.020
Co	0.46	0.43	0.36	0.36	0.47	0.55	0.75	0.84	0.67	0.44	0.39	0.40
Cu	0.98	0.98	0.98	0.98	0.98	0.97	0.95	0.94	0.95	0.97	0.98	0.98
Fe	508.07	509.29	510.66	509.45	501.97	494.72	475.64	465.58	482.01	503.49	508.37	508.94
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.60	48.28	47.94	48.09	48.55	48.12	47.80	47.61	47.88	47.98	48.14	48.30
Mo	1.64	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	2.67	2.41	1.69	1.70	2.75	3.62	5.64	6.57	4.83	2.49	1.98	2.09
Pb	0.35	0.35	0.34	0.34	0.35	0.36	0.38	0.39	0.37	0.35	0.34	0.34
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.09	0.17	0.18	0.27	0.32	0.24	0.12	0.10	0.11
Zn	4.99	4.84	4.36	4.33	4.96	5.54	6.81	7.37 ^b	6.29	4.84	4.52	4.60
Nitrate	134.22	123.80	85.94	82.68	132.22	182.75	288.29	335.71	245.42	125.92	98.41	103.61
Nitrite	6.82	6.59	5.73	5.65	6.73	7.83	10.10	11.12	9.17	6.59	6.00	6.12
Ammonia	42.30	41.06	36.38	35.91	41.75	47.72	60.01	65.45	54.95	41.03	37.83	38.51

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-9 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 3% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	242.76	243.01	243.62	242.34	239.82	232.25	223.68	220.94	223.70	238.55	241.77	241.44
As	1.60	1.60	1.57	1.61	1.62	1.64	1.66	1.67	1.64	1.59	1.59	1.60
Cd	0.020	0.021	0.020	0.020	0.021	0.023	0.025	0.026	0.025	0.021	0.020	0.021
Co	0.42	0.43	0.37	0.41	0.49	0.64	0.80 ^b	0.85 ^b	0.75	0.46	0.40	0.43
Cu	0.84	0.84	0.83	0.84	0.84	0.84	0.84	0.84	0.83	0.83	0.83	0.83
Fe	487.96	488.46	489.55	487.05	482.21	467.50	450.80	445.42	450.66	479.62	485.90	485.30
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	46.66	46.74	46.34	46.70	46.65	46.35	45.81	45.70	45.56	46.11	46.35	46.54
Mo	1.50	1.52	1.26	1.57	1.75	2.25	2.72	2.90	2.60	1.59	1.44	1.56
Ni	2.68	2.73	2.11	2.58	3.42	5.25	7.16	7.70	6.58	3.15	2.44	2.76
Pb	0.36	0.36	0.35	0.35	0.37	0.41	0.44	0.45	0.43	0.36	0.35	0.36
Sb	0.48	0.48	0.48	0.48	0.48	0.46	0.45	0.44	0.45	0.47	0.48	0.48
Se	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.48	0.47	0.46	0.46	0.46
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.12	0.12	0.09	0.13	0.15	0.22	0.28	0.31	0.27	0.13	0.11	0.13
Zn	4.42	4.45	4.07	4.32	4.84	5.94	7.09 ^b	7.39 ^b	6.70	4.68	4.25	4.44
Nitrate	149	152	114	139	197	319	449	483	408	182	133	153
Nitrite	7.53	7.60	6.72	7.28	8.56	11.26	14.12	14.86	13.18	8.21	7.13	7.58
Ammonia	42.2	42.6	37.8	40.9	47.9	62.7	78.3	82.4	73.2	46.0	40.0	42.5

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-10 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 3% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	242.89	243.13	243.73	242.47	239.97	232.49	224.00	221.29	224.02	238.72	241.90	241.58
As	1.60	1.60	1.57	1.61	1.62	1.64	1.66	1.67	1.64	1.59	1.59	1.60
Cd	0.020	0.021	0.020	0.020	0.021	0.023	0.025	0.026	0.025	0.021	0.020	0.020
Co	0.42	0.43	0.37	0.41	0.48	0.64	0.80 ^b	0.84 ^b	0.75	0.46	0.40	0.43
Cu	0.84	0.84	0.83	0.84	0.84	0.84	0.84	0.84	0.83	0.83	0.83	0.84
Fe	488.20	488.71	489.78	487.30	482.52	467.96	451.42	446.09	451.29	479.96	486.17	485.58
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	46.67	46.75	46.35	46.71	46.66	46.36	45.83	45.72	45.58	46.13	46.36	46.56
Mo	1.49	1.51	1.26	1.57	1.74	2.24	2.70	2.88	2.59	1.59	1.43	1.56
Ni	2.66	2.71	2.09	2.57	3.39	5.20	7.10	7.63	6.52	3.13	2.42	2.74
Pb	0.36	0.36	0.35	0.35	0.37	0.41	0.44	0.45	0.43	0.36	0.35	0.36
Sb	0.48	0.48	0.48	0.48	0.48	0.46	0.45	0.44	0.45	0.47	0.48	0.48
Se	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.48	0.47	0.46	0.46	0.46
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.12	0.12	0.09	0.12	0.15	0.22	0.28	0.31	0.27	0.13	0.11	0.13
Zn	4.41	4.44	4.07	4.31	4.83	5.91	7.05 ^b	7.35 ^b	6.66	4.67	4.24	4.43
Nitrate	148	151	113	138	195	316	445	479	404	181	132	152
Nitrite	7.50	7.57	6.71	7.26	8.53	11.19	14.03	14.76	13.10	8.18	7.11	7.56
Ammonia	42.1	42.5	37.7	40.7	47.7	62.3	77.8	81.8	72.7	45.8	39.9	42.4

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-11 Constituent Concentrations – Near Field – PC Conditions – Base Case – 3% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	242.76	243.01	243.62	242.34	239.81	232.25	223.68	220.94	223.69	238.55	241.77	241.44
As	1.59	1.59	1.57	1.59	1.60	1.62	1.62	1.63	1.61	1.58	1.58	1.59
Cd	0.020	0.020	0.019	0.020	0.020	0.022	0.023	0.024	0.023	0.020	0.020	0.020
Co	0.39	0.40	0.35	0.39	0.44	0.56	0.69	0.72	0.65	0.42	0.38	0.40
Cu	0.82	0.82	0.82	0.82	0.82	0.81	0.79	0.78	0.79	0.81	0.82	0.82
Fe	487.62	488.12	489.33	486.75	481.72	466.60	449.47	443.98	449.47	479.18	485.61	484.96
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	46.59	46.67	46.30	46.62	46.54	46.17	45.57	45.43	45.33	46.03	46.29	46.47
Mo	1.45	1.47	1.24	1.52	1.69	2.14	2.57	2.74	2.46	1.54	1.40	1.51
Ni	2.15	2.18	1.77	2.08	2.64	3.86	5.14	5.49	4.74	2.46	1.98	2.20
Pb	0.34	0.34	0.33	0.34	0.34	0.35	0.36	0.36	0.35	0.34	0.33	0.34
Sb	0.48	0.48	0.48	0.48	0.47	0.46	0.44	0.44	0.44	0.47	0.48	0.48
Se	0.45	0.45	0.45	0.45	0.45	0.44	0.43	0.43	0.43	0.44	0.45	0.45
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.11	0.11	0.08	0.12	0.14	0.20	0.26	0.28	0.25	0.12	0.10	0.12
Zn	4.12	4.14	3.88	4.05	4.41	5.15	5.94	6.14	5.66	4.29	3.99	4.13
Nitrate	104	106	84	99	131	199	272	291	249	122	95	106
Nitrite	6.48	6.53	6.03	6.35	7.04	8.48	10.00	10.40	9.48	6.82	6.25	6.51
Ammonia	36.5	36.7	34.0	35.8	39.6	47.4	55.7	57.9	52.9	38.3	35.2	36.6

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-12 Constituent Concentrations – Far Field – PC Conditions – Base Case – 3% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	243.43	243.66	244.27	243.03	240.72	233.75	225.80	223.21	225.77	239.54	242.49	242.18
As	1.59	1.60	1.57	1.60	1.61	1.63	1.64	1.64	1.62	1.58	1.58	1.59
Cd	0.020	0.020	0.019	0.020	0.021	0.022	0.023	0.024	0.023	0.020	0.020	0.020
Co	0.39	0.40	0.35	0.39	0.44	0.56	0.69	0.72	0.65	0.42	0.38	0.40
Cu	0.83	0.83	0.82	0.83	0.82	0.81	0.80	0.79	0.79	0.82	0.82	0.82
Fe	488.96	489.42	490.63	488.13	483.53	469.60	453.73	448.55	453.64	481.17	487.06	486.45
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	46.70	46.78	46.42	46.74	46.70	46.44	45.96	45.85	45.71	46.20	46.41	46.60
Mo	1.45	1.47	1.24	1.52	1.68	2.14	2.57	2.74	2.47	1.54	1.40	1.51
Ni	2.14	2.17	1.76	2.07	2.63	3.85	5.14	5.50	4.74	2.45	1.98	2.19
Pb	0.34	0.34	0.33	0.34	0.34	0.35	0.36	0.37	0.36	0.34	0.33	0.34
Sb	0.48	0.48	0.48	0.48	0.48	0.46	0.45	0.44	0.45	0.47	0.48	0.48
Se	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.43	0.43	0.45	0.45	0.45
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.11	0.11	0.08	0.12	0.14	0.20	0.26	0.28	0.25	0.12	0.10	0.12
Zn	4.12	4.14	3.89	4.05	4.41	5.16	5.96	6.17	5.68	4.30	4.00	4.13
Nitrate	104	106	84	99	130	199	271	291	249	122	95	106
Nitrite	6.48	6.53	6.04	6.36	7.05	8.50	10.03	10.43	9.51	6.83	6.26	6.51
Ammonia	36.5	36.7	34.1	35.8	39.6	47.5	55.9	58.1	53.0	38.4	35.3	36.6

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-13 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 5% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.52	247.09	247.88	247.29	243.12	238.68	227.59	221.83	231.31	243.73	246.64	247.01
As	1.75	1.73	1.69	1.71	1.77	1.76	1.80	1.82	1.79	1.72	1.72	1.73
Cd	0.024	0.023	0.021	0.021	0.024	0.026	0.032	0.034	0.029	0.023	0.022	0.022
Co	0.62	0.57	0.43	0.43	0.64	0.80	1.19 ^b	1.36 ^b	1.03 ^b	0.58	0.49	0.51
Cu	1.01	1.00	0.99	0.99	1.00	1.00	1.01	1.01	1.01	0.99	0.99	1.00
Fe	508.16	508.69	509.33	508.42	501.83	493.55	473.67	463.25	480.22	502.11	507.44	508.38
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.69	48.30	47.85	48.02	48.59	48.12	47.80	47.60	47.86	47.92	48.09	48.30
Mo	1.71	1.46	1.22	1.37	2.00	2.08	2.80	3.17	2.55	1.59	1.45	1.51
Ni	4.80	4.20	2.59	2.60	4.99	6.94	11.45	13.50	9.66	4.40	3.25	3.50
Pb	0.42	0.41	0.37	0.37	0.42	0.46	0.56	0.61	0.52	0.41	0.38	0.39
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.52	0.52	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.08	0.10	0.19	0.21	0.31	0.37	0.27	0.14	0.11	0.12
Zn	6.38	6.02	4.94	4.90	6.40	7.71 ^b	10.60 ^b	11.89 ^b	9.43 ^b	6.08	5.34	5.50
Nitrate	203.22	185.70	116.76	109.37	196.93	290.34	479.21	562.70	402.30	188.54	138.24	147.46
Nitrite	8.41	8.01	6.43	6.25	8.21	10.30	14.49	16.32	12.77	8.03	6.91	7.13
Ammonia	51.01	48.85	40.20	39.21	49.86	61.23	83.99	93.97	74.64	48.86	42.79	44.00

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-14 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 5% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.64	247.21	247.98	247.40	243.28	238.90	227.93	222.23	231.61	243.88	246.76	247.12
As	1.76	1.73	1.69	1.71	1.77	1.77	1.81	1.83	1.79	1.72	1.72	1.73
Cd	0.025	0.024	0.021	0.021	0.025	0.028	0.034	0.037	0.032	0.024	0.022	0.023
Co	0.69	0.63	0.46	0.45	0.70	0.90 ^b	1.37 ^b	1.58 ^b	1.18 ^b	0.64	0.52	0.55
Cu	1.01	1.00	0.99	0.99	1.01	1.01	1.02	1.03	1.02	1.00	0.99	1.00
Fe	511.51	511.71	510.93	509.84	505.06	498.85	483.07	474.47	487.96	505.25	509.47	510.58
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.77	48.38	47.90	48.06	48.67	48.26	48.04	47.89	48.06	48.00	48.15	48.35
Mo	1.70	1.46	1.22	1.37	1.99	2.07	2.78	3.15	2.53	1.58	1.44	1.50
Ni	5.55	4.88	2.92	2.89	5.69	8.11	13.56	16.02	11.39	5.08	3.68	3.97
Pb	0.44	0.43	0.38	0.37	0.44	0.50	0.62	0.68	0.57	0.43	0.39	0.40
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.52	0.52	0.51	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.09	0.10	0.19	0.21	0.32	0.38	0.28	0.14	0.12	0.12
Zn	6.92	6.51	5.18	5.11	6.90	8.55 ^b	12.12 ^b	13.71 ^b	10.68 ^b	6.58	5.65	5.85
Nitrate	202.25	184.84	116.34	108.99	196.01	288.92	476.94	560.15	400.36	187.68	137.68	146.83
Nitrite	8.39	7.99	6.43	6.25	8.19	10.27	14.44	16.27	12.73	8.01	6.90	7.12
Ammonia	50.90	48.75	40.16	39.17	49.76	61.07	83.75	93.69	74.43	48.77	42.74	43.93

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-15 Constituent Concentrations – Near Field – PC Conditions – Base Case – 5% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.51	247.09	247.88	247.29	243.12	238.68	227.58	221.82	231.30	243.72	246.64	247.00
As	1.74	1.71	1.69	1.70	1.75	1.74	1.76	1.77	1.75	1.71	1.71	1.72
Cd	0.022	0.022	0.020	0.020	0.022	0.024	0.028	0.030	0.026	0.022	0.021	0.021
Co	0.55	0.51	0.40	0.40	0.56	0.69	0.99 ^b	1.12 ^b	0.87	0.52	0.44	0.46
Cu	0.98	0.98	0.98	0.98	0.97	0.96	0.94	0.93	0.95	0.97	0.98	0.98
Fe	506.15	507.18	508.57	507.43	499.33	490.42	468.33	456.84	475.70	500.35	506.18	506.98
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.58	48.23	47.82	47.96	48.45	47.96	47.52	47.27	47.63	47.83	48.03	48.22
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.64	2.98	2.42	1.53	1.41	1.46
Ni	3.56	3.16	2.07	2.07	3.67	4.99	8.03	9.41	6.82	3.28	2.51	2.67
Pb	0.37	0.36	0.34	0.34	0.36	0.38	0.42	0.43	0.40	0.36	0.35	0.35
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.45	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.46	0.47	0.48	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.11	0.08	0.10	0.17	0.19	0.29	0.33	0.25	0.13	0.11	0.12
Zn	5.64	5.39	4.62	4.59	5.63	6.55	8.56 ^b	9.45 ^b	7.74 ^b	5.42	4.90	5.02
Nitrate	135.50	124.88	86.37	83.04	133.21	183.99	289.08	335.73	246.43	126.76	99.01	104.33
Nitrite	6.83	6.60	5.73	5.64	6.73	7.83	10.07	11.06	9.15	6.59	6.00	6.13
Ammonia	42.38	41.10	36.33	35.85	41.74	47.68	59.77	65.05	54.78	40.99	37.80	38.50

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-16 Constituent Concentrations – Far Field – PC Conditions – Base Case – 5% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.34	247.98	248.83	248.25	244.36	240.60	230.79	225.66	234.10	245.14	247.65	247.91
As	1.75	1.72	1.69	1.71	1.76	1.75	1.79	1.80	1.77	1.72	1.71	1.72
Cd	0.023	0.023	0.021	0.021	0.023	0.025	0.030	0.033	0.028	0.023	0.021	0.022
Co	0.60	0.56	0.42	0.42	0.61	0.77	1.15 ^b	1.32 ^b	1.00 ^b	0.57	0.47	0.49
Cu	0.99	0.99	0.98	0.98	0.98	0.98	0.96	0.95	0.97	0.98	0.98	0.98
Fe	508.69	509.78	510.91	509.74	502.70	495.70	477.34	467.63	483.44	504.04	508.76	509.37
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.80	48.45	48.03	48.17	48.74	48.43	48.36	48.28	48.33	48.16	48.25	48.43
Mo	1.64	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	4.08	3.63	2.30	2.27	4.16	5.84	9.60	11.32	8.10	3.77	2.81	3.01
Pb	0.38	0.37	0.35	0.35	0.37	0.40	0.45	0.47	0.43	0.37	0.36	0.36
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.14	0.12	0.08	0.10	0.18	0.20	0.30	0.35	0.26	0.13	0.11	0.12
Zn	6.05	5.76	4.82	4.76	6.02	7.21 ^b	9.77 ^b	10.93 ^b	8.73 ^b	5.80	5.14	5.28
Nitrate	135.30	124.77	86.42	83.10	133.23	184.45	291.34	339.36	247.91	126.91	99.03	104.29
Nitrite	6.84	6.61	5.74	5.66	6.75	7.87	10.17	11.20	9.23	6.62	6.02	6.14
Ammonia	42.43	41.17	36.44	35.96	41.87	47.93	60.37	65.89	55.25	41.15	37.90	38.59

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-17 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 7% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.54	247.12	247.90	247.31	243.15	238.74	227.69	221.95	231.39	243.77	246.67	247.03
As	1.76	1.73	1.70	1.71	1.78	1.77	1.81	1.83	1.80	1.72	1.72	1.73
Cd	0.025	0.024	0.021	0.021	0.025	0.029	0.036	0.040	0.033	0.025	0.023	0.023
Co	0.73	0.66	0.48	0.47	0.75	0.97 ^b	1.49 ^b	1.73 ^b	1.29 ^b	0.68	0.55	0.58
Cu	1.02	1.01	0.99	0.99	1.01	1.02	1.03	1.04	1.02	1.00	1.00	1.00
Fe	509.87	510.07	510.04	509.22	503.78	496.24	478.33	468.84	484.12	503.65	508.50	509.55
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.82	48.42	47.91	48.08	48.73	48.33	48.17	48.04	48.17	48.04	48.17	48.38
Mo	1.71	1.46	1.22	1.37	2.00	2.08	2.80	3.17	2.55	1.59	1.45	1.51
Ni	6.08	5.31	3.14	3.13	6.28	8.94	14.99	17.73	12.58	5.55	4.00	4.33
Pb	0.45	0.44	0.38	0.38	0.45	0.52	0.66	0.72	0.60	0.44	0.40	0.41
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.52	0.52	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.19	0.22	0.33	0.39	0.29	0.14	0.12	0.13
Zn	7.29 ^b	6.81	5.33	5.28	7.32 ^b	9.14 ^b	13.13 ^b	14.92 ^b	11.53 ^b	6.91	5.88	6.10
Nitrate	204.53	186.87	117.35	109.88	198.16	292.40	482.95	567.19	405.35	189.73	139.00	148.29
Nitrite	8.44	8.04	6.45	6.27	8.24	10.35	14.57	16.43	12.84	8.05	6.93	7.15
Ammonia	51.18	49.00	40.28	39.28	50.02	61.50	84.48	94.56	75.04	49.02	42.89	44.11

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-18 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 7% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.67	247.24	248.01	247.42	243.32	238.96	228.03	222.35	231.69	243.92	246.79	247.15
As	1.76	1.73	1.70	1.71	1.78	1.77	1.82	1.84	1.80	1.73	1.72	1.73
Cd	0.027	0.025	0.022	0.022	0.027	0.031	0.040	0.044	0.036	0.026	0.023	0.024
Co	0.80	0.73	0.51	0.50	0.81	1.09 ^b	1.70 ^b	1.97 ^b	1.45 ^b	0.75	0.59	0.62
Cu	1.02	1.01	0.99	0.99	1.02	1.02	1.05	1.06	1.04	1.00	1.00	1.01
Fe	513.62	513.46	511.82	510.80	507.39	502.18	488.89	481.43	492.81	507.16	510.76	512.01
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.91	48.50	47.96	48.12	48.81	48.48	48.44	48.36	48.39	48.13	48.23	48.45
Mo	1.70	1.46	1.22	1.37	1.99	2.07	2.79	3.15	2.54	1.58	1.44	1.50
Ni	6.92	6.06	3.52	3.45	7.06	10.26	17.36	20.57	14.52	6.32	4.49	4.86
Pb	0.48	0.46	0.39	0.39	0.47	0.55	0.72	0.80	0.65	0.46	0.41	0.42
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.52	0.53	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.19	0.22	0.34	0.40	0.30	0.14	0.12	0.13
Zn	7.90 ^b	7.36 ^b	5.61	5.51	7.88 ^b	10.09 ^b	14.84 ^b	16.97 ^b	12.92 ^b	7.46 ^b	6.23	6.48
Nitrate	203.66	186.11	116.97	109.54	197.34	291.15	480.97	564.99	403.65	188.98	138.50	147.73
Nitrite	8.42	8.02	6.44	6.26	8.22	10.32	14.53	16.38	12.80	8.04	6.92	7.14
Ammonia	51.08	48.92	40.25	39.24	49.93	61.37	84.27	94.33	74.86	48.94	42.84	44.05

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-19 Constituent Concentrations – Near Field – PC Conditions – Base Case – 7% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.54	247.12	247.90	247.31	243.15	238.73	227.67	221.93	231.38	243.76	246.67	247.03
As	1.74	1.72	1.69	1.70	1.75	1.74	1.77	1.78	1.76	1.71	1.71	1.72
Cd	0.024	0.023	0.021	0.021	0.024	0.026	0.032	0.034	0.029	0.023	0.022	0.022
Co	0.64	0.58	0.44	0.43	0.65	0.83	1.23 ^b	1.41 ^b	1.07 ^b	0.60	0.49	0.52
Cu	0.99	0.98	0.98	0.98	0.98	0.97	0.95	0.94	0.96	0.97	0.98	0.98
Fe	506.64	507.59	508.79	507.68	499.90	491.21	469.70	458.49	476.86	500.82	506.50	507.32
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.70	48.34	47.87	48.02	48.58	48.16	47.87	47.69	47.92	47.94	48.10	48.30
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.98	2.42	1.53	1.41	1.46
Ni	4.43	3.92	2.45	2.43	4.55	6.37	10.46	12.32	8.83	4.07	3.02	3.24
Pb	0.38	0.37	0.35	0.35	0.38	0.40	0.46	0.48	0.43	0.37	0.36	0.36
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.45	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.47	0.48	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.08	0.10	0.18	0.20	0.30	0.35	0.26	0.13	0.11	0.12
Zn	6.30	5.96	4.91	4.86	6.29	7.58 ^b	10.38 ^b	11.63 ^b	9.25 ^b	6.01	5.29	5.45
Nitrate	136.16	125.48	86.67	83.31	133.84	185.05	291.01	338.04	248.00	127.37	99.40	104.76
Nitrite	6.85	6.61	5.74	5.65	6.75	7.85	10.12	11.11	9.19	6.61	6.01	6.14
Ammonia	42.46	41.17	36.37	35.89	41.82	47.81	60.00	65.33	54.97	41.07	37.85	38.56

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-20 Constituent Concentrations – Far Field – PC Conditions – Base Case – 7% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.35	248.00	248.84	248.26	244.38	240.62	230.83	225.71	234.13	245.15	247.66	247.91
As	1.75	1.73	1.70	1.71	1.76	1.76	1.80	1.82	1.78	1.72	1.72	1.73
Cd	0.025	0.024	0.021	0.021	0.025	0.028	0.034	0.038	0.032	0.024	0.022	0.023
Co	0.70	0.64	0.46	0.46	0.70	0.92 ^b	1.41 ^b	1.63 ^b	1.21 ^b	0.65	0.53	0.55
Cu	0.99	0.99	0.98	0.98	0.99	0.98	0.97	0.97	0.97	0.98	0.98	0.99
Fe	509.28	510.26	511.15	510.00	503.34	496.62	478.95	469.56	484.77	504.56	509.11	509.76
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.93	48.57	48.08	48.22	48.88	48.64	48.72	48.72	48.64	48.28	48.33	48.51
Mo	1.64	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	5.02	4.45	2.71	2.66	5.11	7.32	12.24	14.48	10.27	4.62	3.37	3.62
Pb	0.39	0.38	0.36	0.35	0.39	0.42	0.49	0.52	0.46	0.38	0.37	0.37
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.08	0.10	0.18	0.20	0.31	0.37	0.27	0.14	0.11	0.12
Zn	6.75	6.37	5.12	5.05	6.73	8.32 ^b	11.75 ^b	13.30 ^b	10.36 ^b	6.44	5.56	5.74
Nitrate	136.01	125.41	86.74	83.38	133.91	185.58	293.37	341.79	249.58	127.56	99.45	104.75
Nitrite	6.86	6.62	5.75	5.66	6.77	7.89	10.22	11.25	9.26	6.63	6.02	6.15
Ammonia	42.52	41.25	36.47	35.99	41.95	48.06	60.61	66.18	55.44	41.23	37.95	38.64

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-21 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 8% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.56	247.14	247.91	247.33	243.17	238.77	227.74	222.01	231.43	243.78	246.68	247.04
As	1.76	1.73	1.70	1.71	1.78	1.77	1.82	1.84	1.80	1.73	1.72	1.73
Cd	0.026	0.025	0.022	0.022	0.026	0.030	0.039	0.043	0.035	0.025	0.023	0.024
Co	0.78	0.71	0.50	0.50	0.80	1.06 ^b	1.64 ^b	1.90 ^b	1.41 ^b	0.73	0.58	0.61
Cu	1.02	1.01	0.99	0.99	1.02	1.02	1.04	1.05	1.03	1.00	1.00	1.00
Fe	510.81	510.84	510.43	509.65	504.84	497.72	480.90	471.92	486.27	504.50	509.08	510.19
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.88	48.47	47.94	48.10	48.79	48.43	48.35	48.26	48.32	48.10	48.21	48.43
Mo	1.71	1.46	1.22	1.37	2.00	2.08	2.80	3.17	2.55	1.59	1.45	1.51
Ni	6.70	5.84	3.41	3.38	6.90	9.91	16.70	19.78	13.99	6.11	4.37	4.73
Pb	0.47	0.45	0.39	0.39	0.47	0.54	0.70	0.77	0.64	0.45	0.41	0.42
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.49	0.50	0.51	0.51	0.52	0.53	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.20	0.22	0.34	0.40	0.29	0.14	0.12	0.13
Zn	7.74 ^b	7.20 ^b	5.53	5.46	7.76 ^b	9.83 ^b	14.36 ^b	16.39 ^b	12.54 ^b	7.31 ^b	6.14	6.39
Nitrate	205.15	187.43	117.63	110.13	198.76	293.40	484.75	569.36	406.82	190.31	139.36	148.69
Nitrite	8.45	8.05	6.45	6.27	8.25	10.37	14.61	16.48	12.87	8.07	6.94	7.16
Ammonia	51.26	49.08	40.32	39.31	50.10	61.63	84.72	94.84	75.23	49.10	42.94	44.16

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-22 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 8% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.68	247.25	248.02	247.43	243.34	238.99	228.08	222.41	231.73	243.94	246.80	247.16
As	1.76	1.73	1.70	1.71	1.78	1.78	1.83	1.85	1.81	1.73	1.72	1.73
Cd	0.028	0.026	0.022	0.022	0.027	0.032	0.042	0.047	0.038	0.026	0.024	0.024
Co	0.86	0.78	0.53	0.53	0.87 ^b	1.18 ^b	1.86 ^b	2.17 ^b	1.59 ^b	0.80	0.63	0.66
Cu	1.03	1.02	0.99	1.00	1.02	1.03	1.06	1.07	1.05	1.01	1.00	1.01
Fe	514.84	514.48	512.34	511.34	508.71	504.10	492.25	485.46	495.61	508.27	511.51	512.82
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.98	48.57	48.00	48.15	48.89	48.60	48.64	48.60	48.55	48.20	48.28	48.49
Mo	1.70	1.46	1.22	1.37	1.99	2.07	2.79	3.15	2.54	1.58	1.44	1.50
Ni	7.60	6.66	3.81	3.73	7.74	11.33	19.26	22.84	16.09	6.94	4.89	5.30
Pb	0.49	0.47	0.40	0.40	0.49	0.58	0.77	0.86	0.69	0.47	0.43	0.44
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.50	0.50	0.52	0.51	0.52	0.53	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.20	0.23	0.35	0.41	0.30	0.15	0.12	0.13
Zn	8.39 ^b	7.78 ^b	5.82	5.71	8.37 ^b	10.86 ^b	16.20 ^b	18.59 ^b	14.04 ^b	7.90 ^b	6.51	6.80
Nitrate	204.36	186.74	117.29	109.81	198.00	292.26	482.99	567.41	405.30	189.62	138.90	148.18
Nitrite	8.43	8.04	6.45	6.27	8.24	10.35	14.58	16.44	12.84	8.05	6.93	7.15
Ammonia	51.17	49.00	40.29	39.28	50.02	61.51	84.54	94.64	75.08	49.03	42.90	44.11

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-23 Constituent Concentrations – Near Field – PC Conditions – Base Case – 8% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.55	247.13	247.91	247.32	243.16	238.76	227.72	221.99	231.41	243.78	246.68	247.04
As	1.74	1.72	1.69	1.70	1.76	1.75	1.78	1.79	1.76	1.71	1.71	1.72
Cd	0.024	0.023	0.021	0.021	0.024	0.027	0.033	0.036	0.031	0.024	0.022	0.022
Co	0.68	0.62	0.45	0.45	0.69	0.89 ^b	1.35 ^b	1.55 ^b	1.16 ^b	0.64	0.52	0.54
Cu	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.96	0.97	0.98	0.98
Fe	506.91	507.81	508.91	507.81	500.21	491.65	470.46	459.39	477.49	501.07	506.68	507.51
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.76	48.39	47.90	48.04	48.64	48.25	48.04	47.89	48.06	48.00	48.14	48.34
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.98	2.42	1.53	1.41	1.47
Ni	4.86	4.29	2.63	2.60	4.98	7.03	11.64	13.72	9.80	4.46	3.27	3.52
Pb	0.39	0.38	0.35	0.35	0.39	0.41	0.48	0.50	0.45	0.38	0.36	0.37
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.45	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.08	0.10	0.18	0.20	0.31	0.36	0.27	0.13	0.11	0.12
Zn	6.62	6.24	5.05	4.99	6.61	8.08 ^b	11.26 ^b	12.68 ^b	9.97 ^b	6.30	5.47	5.65
Nitrate	136.48	125.77	86.82	83.43	134.14	185.56	291.94	339.15	248.76	127.67	99.59	104.97
Nitrite	6.86	6.62	5.74	5.65	6.75	7.87	10.14	11.14	9.20	6.61	6.01	6.14
Ammonia	42.50	41.21	36.39	35.90	41.85	47.87	60.12	65.47	55.07	41.10	37.87	38.58

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-24 Constituent Concentrations – Far Field – PC Conditions – Base Case – 8% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.36	248.00	248.84	248.26	244.39	240.63	230.85	225.73	234.15	245.16	247.67	247.92
As	1.75	1.73	1.70	1.71	1.77	1.76	1.81	1.83	1.79	1.72	1.72	1.73
Cd	0.025	0.024	0.022	0.021	0.025	0.029	0.036	0.040	0.033	0.025	0.023	0.023
Co	0.74	0.68	0.48	0.48	0.75	1.00 ^b	1.54 ^b	1.79 ^b	1.32 ^b	0.70	0.56	0.58
Cu	0.99	0.99	0.98	0.98	0.99	0.98	0.98	0.97	0.98	0.98	0.98	0.99
Fe	509.61	510.54	511.29	510.14	503.70	497.15	479.88	470.68	485.55	504.86	509.31	509.98
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.99	48.63	48.11	48.25	48.94	48.74	48.91	48.94	48.79	48.34	48.37	48.56
Mo	1.64	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	5.49	4.86	2.92	2.85	5.58	8.06	13.56	16.06	11.36	5.05	3.64	3.92
Pb	0.40	0.39	0.36	0.36	0.40	0.43	0.51	0.55	0.48	0.39	0.37	0.38
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.48	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.09	0.10	0.18	0.21	0.32	0.38	0.28	0.14	0.11	0.12
Zn	7.10 ^b	6.68	5.27	5.19	7.08 ^b	8.87 ^b	12.74 ^b	14.48 ^b	11.17 ^b	6.76	5.77	5.97
Nitrate	136.37	125.73	86.90	83.52	134.25	186.14	294.38	343.00	250.41	127.89	99.66	104.98
Nitrite	6.87	6.63	5.75	5.67	6.77	7.91	10.24	11.28	9.28	6.64	6.03	6.15
Ammonia	42.56	41.29	36.49	36.01	41.99	48.13	60.74	66.32	55.54	41.27	37.98	38.67

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-25 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 9% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.58	247.16	247.93	247.34	243.20	238.81	227.81	222.10	231.49	243.81	246.70	247.06
As	1.77	1.74	1.70	1.72	1.79	1.79	1.84	1.87	1.82	1.73	1.73	1.74
Cd	0.028	0.026	0.022	0.022	0.028	0.032	0.043	0.047	0.039	0.027	0.024	0.025
Co	0.88 ^b	0.79	0.54	0.53	0.89 ^b	1.21 ^b	1.90 ^b	2.22 ^b	1.63 ^b	0.82	0.64	0.67
Cu	1.03	1.02	0.99	1.00	1.02	1.04	1.07	1.08	1.05	1.01	1.00	1.01
Fe	513.60	513.27	511.65	510.81	507.64	502.11	488.68	481.22	492.69	507.04	510.73	512.00
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.06	48.63	48.02	48.17	48.96	48.71	48.85	48.85	48.72	48.26	48.32	48.54
Mo	1.74	1.50	1.24	1.39	2.03	2.14	2.90	3.29	2.64	1.62	1.47	1.53
Ni	7.79	6.81	3.89	3.82	7.97	11.63	19.76	23.43	16.51	7.10	5.01	5.43
Pb	0.50	0.48	0.40	0.40	0.50	0.59	0.78	0.87	0.70	0.48	0.43	0.44
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.51	0.50	0.50	0.52	0.52	0.53	0.53	0.52	0.50	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.23	0.36	0.43	0.32	0.15	0.12	0.13
Zn	8.51 ^b	7.88 ^b	5.87	5.77	8.52 ^b	11.05 ^b	16.52 ^b	18.97 ^b	14.32 ^b	8.01 ^b	6.59	6.88
Nitrate	228.79	208.66	128.24	119.31	221.00	330.53	551.16	648.66	461.26	211.87	153.05	163.74
Nitrite	9.00	8.54	6.70	6.48	8.77	11.23	16.15	18.31	14.13	8.56	7.25	7.50
Ammonia	54.25	51.77	41.67	40.47	52.92	66.34	93.14	104.89	82.13	51.83	44.68	46.07

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-26 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 9% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.69	247.26	248.03	247.44	243.35	239.01	228.12	222.46	231.77	243.96	246.81	247.17
As	1.77	1.74	1.70	1.72	1.79	1.78	1.84	1.87	1.82	1.73	1.73	1.74
Cd	0.028	0.026	0.022	0.022	0.028	0.032	0.043	0.047	0.038	0.027	0.024	0.024
Co	0.87 ^b	0.79	0.54	0.53	0.89 ^b	1.20 ^b	1.89 ^b	2.20 ^b	1.61 ^b	0.81	0.63	0.67
Cu	1.03	1.02	0.99	1.00	1.02	1.03	1.07	1.08	1.05	1.01	1.00	1.01
Fe	513.73	513.41	511.82	510.98	507.84	502.37	489.08	481.69	493.05	507.25	510.90	512.16
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.05	48.63	48.03	48.18	48.96	48.71	48.85	48.85	48.73	48.27	48.32	48.54
Mo	1.74	1.49	1.23	1.38	2.02	2.13	2.88	3.27	2.62	1.61	1.46	1.53
Ni	7.71	6.74	3.85	3.79	7.89	11.50	19.55	23.19	16.34	7.03	4.96	5.38
Pb	0.50	0.47	0.40	0.40	0.50	0.59	0.78	0.87	0.70	0.48	0.43	0.44
Sb	0.48	0.49	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.51	0.51	0.50	0.50	0.52	0.52	0.53	0.53	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.23	0.36	0.42	0.31	0.15	0.12	0.13
Zn	8.46 ^b	7.83 ^b	5.84	5.75	8.47 ^b	10.97 ^b	16.38 ^b	18.81 ^b	14.20 ^b	7.96 ^b	6.56	6.85
Nitrate	226.63	206.74	127.28	118.47	218.96	327.26	545.63	642.23	456.63	209.94	151.80	162.36
Nitrite	8.95	8.50	6.68	6.47	8.72	11.15	16.02	18.17	14.03	8.52	7.22	7.47
Ammonia	53.99	51.53	41.55	40.38	52.67	65.94	92.47	104.12	81.58	51.60	44.53	45.90

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-27 Constituent Concentrations – Near Field – PC Conditions – Base Case – 9% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.56	247.14	247.94	247.35	243.19	238.79	227.78	222.06	231.47	243.81	246.70	247.06
As	1.75	1.72	1.70	1.71	1.76	1.76	1.79	1.81	1.78	1.72	1.72	1.73
Cd	0.024	0.024	0.022	0.022	0.025	0.028	0.036	0.039	0.033	0.025	0.023	0.023
Co	0.66	0.63	0.54	0.55	0.76	0.98 ^b	1.50 ^b	1.75 ^b	1.31 ^b	0.73	0.60	0.59
Cu	0.99	0.99	0.98	0.98	0.98	0.98	0.97	0.96	0.97	0.98	0.98	0.99
Fe	507.70	508.50	509.27	508.15	501.01	492.90	472.67	462.03	479.31	501.80	507.15	508.03
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.80	48.46	48.05	48.20	48.79	48.48	48.43	48.37	48.41	48.19	48.28	48.45
Mo	1.68	1.45	1.21	1.35	1.94	2.04	2.74	3.10	2.49	1.57	1.43	1.49
Ni	4.71	4.40	3.51	3.58	5.64	7.95	13.16	15.72	11.28	5.45	4.06	4.03
Pb	0.39	0.38	0.37	0.37	0.40	0.43	0.50	0.54	0.48	0.40	0.38	0.38
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.09	0.11	0.19	0.21	0.33	0.39	0.29	0.14	0.12	0.13
Zn	6.50	6.31	5.70	5.72	7.10 ^b	8.75 ^b	12.39 ^b	14.16 ^b	11.07 ^b	7.04 ^b	6.06	6.03
Nitrate	148.71	136.97	93.10	89.04	146.30	205.73	327.93	382.28	278.44	139.77	107.40	113.25
Nitrite	7.14	6.88	5.88	5.78	7.03	8.33	10.97	12.13	9.89	6.89	6.19	6.33
Ammonia	44.04	42.62	37.18	36.61	43.38	50.41	64.65	70.90	58.81	42.63	38.85	39.63

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-28 Constituent Concentrations – Far Field – PC Conditions – Base Case – 9% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.35	248.00	248.85	248.27	244.39	240.63	230.85	225.74	234.16	245.17	247.68	247.92
As	1.75	1.73	1.70	1.71	1.77	1.77	1.81	1.84	1.80	1.73	1.72	1.73
Cd	0.024	0.024	0.022	0.022	0.025	0.029	0.036	0.039	0.033	0.025	0.023	0.023
Co	0.66	0.63	0.54	0.55	0.75	0.98 ^b	1.50 ^b	1.76 ^b	1.31 ^b	0.73	0.60	0.59
Cu	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.97	0.98	0.98	0.99	0.99
Fe	509.30	510.24	511.14	510.04	503.45	496.65	478.97	469.60	484.82	504.57	509.14	509.79
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.94	48.61	48.22	48.37	49.00	48.81	49.02	49.10	48.91	48.44	48.46	48.61
Mo	1.68	1.45	1.21	1.35	1.94	2.04	2.75	3.12	2.50	1.57	1.43	1.48
Ni	4.67	4.37	3.49	3.56	5.61	7.92	13.19	15.80	11.28	5.42	4.04	4.00
Pb	0.39	0.38	0.37	0.37	0.40	0.43	0.51	0.54	0.48	0.40	0.38	0.38
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.45	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.48	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.09	0.11	0.19	0.21	0.33	0.39	0.29	0.14	0.12	0.13
Zn	6.48	6.31	5.70	5.72	7.10 ^b	8.76 ^b	12.44 ^b	14.26 ^b	11.10 ^b	7.03 ^b	6.06	6.02
Nitrate	147.92	136.32	92.87	88.86	145.77	205.31	328.78	384.35	278.74	139.39	107.07	112.83
Nitrite	7.13	6.88	5.89	5.79	7.04	8.35	11.03	12.23	9.93	6.90	6.20	6.34
Ammonia	44.02	42.63	37.24	36.68	43.44	50.55	65.08	71.54	59.12	42.72	38.91	39.66

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-29 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 10% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.58	247.16	247.94	247.35	243.21	238.82	227.83	222.12	231.51	243.82	246.71	247.07
As	1.77	1.73	1.70	1.71	1.78	1.78	1.83	1.86	1.81	1.73	1.72	1.74
Cd	0.028	0.027	0.023	0.022	0.028	0.033	0.043	0.048	0.039	0.027	0.024	0.025
Co	0.89 ^b	0.80	0.54	0.54	0.91 ^b	1.22 ^b	1.93 ^b	2.25 ^b	1.64 ^b	0.82	0.64	0.68
Cu	1.03	1.02	0.99	1.00	1.03	1.03	1.07	1.08	1.05	1.01	1.00	1.01
Fe	512.86	512.53	511.29	510.59	507.12	500.95	486.54	478.67	490.97	506.35	510.33	511.57
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.00	48.58	48.00	48.16	48.92	48.63	48.70	48.67	48.61	48.21	48.29	48.51
Mo	1.71	1.46	1.22	1.37	2.00	2.09	2.80	3.18	2.55	1.59	1.45	1.51
Ni	7.89	6.88	3.92	3.88	8.11	11.79	20.03	23.76	16.74	7.19	5.07	5.51
Pb	0.50	0.48	0.40	0.40	0.50	0.59	0.79	0.88	0.71	0.48	0.43	0.44
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.50	0.50	0.50	0.52	0.51	0.52	0.53	0.52	0.50	0.50	0.50
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.13	0.09	0.11	0.20	0.23	0.35	0.41	0.31	0.15	0.12	0.13
Zn	8.59 ^b	7.94 ^b	5.90	5.81	8.63 ^b	11.18 ^b	16.74 ^b	19.24 ^b	14.50 ^b	8.08 ^b	6.64	6.94
Nitrate	206.37	188.53	118.18	110.60	199.90	295.33	488.25	573.56	409.68	191.43	140.07	149.46
Nitrite	8.48	8.08	6.47	6.28	8.28	10.41	14.70	16.58	12.94	8.09	6.95	7.17
Ammonia	51.42	49.22	40.39	39.37	50.25	61.88	85.18	95.39	75.61	49.24	43.04	44.26

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-30 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 10% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.71	247.28	248.04	247.46	243.37	239.05	228.18	222.53	231.82	243.98	246.83	247.19
As	1.77	1.74	1.70	1.72	1.79	1.78	1.84	1.87	1.82	1.73	1.73	1.74
Cd	0.029	0.028	0.023	0.023	0.029	0.035	0.047	0.053	0.042	0.028	0.025	0.026
Co	0.98 ^b	0.88 ^b	0.59	0.58	0.99 ^b	1.37 ^b	2.19 ^b	2.56 ^b	1.86 ^b	0.91 ^b	0.70	0.74
Cu	1.04	1.02	1.00	1.00	1.03	1.05	1.09	1.10	1.07	1.02	1.01	1.01
Fe	517.60	516.81	513.52	512.55	511.66	508.46	499.90	494.61	501.96	510.77	513.18	514.66
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.12	48.69	48.06	48.21	49.03	48.82	49.03	49.07	48.88	48.33	48.36	48.59
Mo	1.70	1.46	1.22	1.37	1.99	2.07	2.79	3.16	2.54	1.58	1.44	1.50
Ni	8.97	7.85	4.41	4.29	9.12	13.48	23.07	27.40 ^b	19.23	8.17	5.70	6.19
Pb	0.53	0.50	0.42	0.41	0.53	0.64	0.87	0.98	0.78	0.51	0.45	0.46
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.51	0.50	0.50	0.52	0.52	0.53	0.53	0.52	0.50	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.24	0.36	0.43	0.32	0.15	0.12	0.13
Zn	9.37 ^b	8.63 ^b	6.24	6.11	9.35 ^b	12.39 ^b	18.93 ^b	21.85 ^b	16.29 ^b	8.79 ^b	7.09 ^b	7.44 ^b
Nitrate	205.77	188.00	117.93	110.36	199.33	294.50	487.03	572.27	408.60	190.92	139.72	149.08
Nitrite	8.47	8.07	6.46	6.28	8.27	10.40	14.67	16.55	12.92	8.08	6.95	7.17
Ammonia	51.36	49.17	40.37	39.35	50.20	61.80	85.07	95.28	75.51	49.20	43.01	44.23

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-31 Constituent Concentrations – Near Field – PC Conditions – Base Case – 10% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.58	247.16	247.93	247.34	243.20	238.81	227.81	222.09	231.49	243.81	246.70	247.06
As	1.75	1.72	1.69	1.70	1.76	1.75	1.79	1.80	1.77	1.72	1.71	1.72
Cd	0.026	0.025	0.022	0.021	0.026	0.029	0.037	0.040	0.034	0.025	0.023	0.023
Co	0.76	0.69	0.49	0.49	0.77	1.02 ^b	1.57 ^b	1.82 ^b	1.35 ^b	0.71	0.57	0.60
Cu	0.99	0.99	0.98	0.98	0.98	0.98	0.97	0.96	0.97	0.98	0.98	0.98
Fe	507.50	508.30	509.18	508.10	500.87	492.60	472.11	461.36	478.87	501.62	507.05	507.92
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	48.88	48.49	47.95	48.09	48.76	48.44	48.37	48.28	48.33	48.11	48.21	48.42
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.99	2.42	1.54	1.41	1.47
Ni	5.68	5.00	2.98	2.94	5.81	8.32	13.92	16.45	11.68	5.20	3.76	4.05
Pb	0.40	0.39	0.36	0.36	0.40	0.44	0.52	0.55	0.48	0.39	0.37	0.38
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.15	0.12	0.09	0.10	0.19	0.21	0.32	0.38	0.28	0.14	0.12	0.12
Zn	7.23 ^b	6.77	5.31	5.25	7.23 ^b	9.04 ^b	12.97 ^b	14.73 ^b	11.39 ^b	6.86	5.84	6.05
Nitrate	137.11	126.33	87.10	83.68	134.73	186.56	293.73	341.32	250.22	128.24	99.95	105.37
Nitrite	6.87	6.63	5.75	5.66	6.77	7.89	10.18	11.18	9.24	6.63	6.02	6.15
Ammonia	42.57	41.28	36.42	35.93	41.93	47.99	60.34	65.74	55.25	41.17	37.91	38.63

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-32 Constituent Concentrations – Far Field – PC Conditions – Base Case – 10% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.37	248.02	248.85	248.27	244.40	240.65	230.89	225.78	234.19	245.17	247.68	247.93
As	1.76	1.73	1.70	1.71	1.77	1.77	1.82	1.84	1.80	1.73	1.72	1.73
Cd	0.027	0.026	0.022	0.022	0.027	0.031	0.040	0.045	0.037	0.026	0.023	0.024
Co	0.84	0.76	0.52	0.52	0.84	1.14 ^b	1.80 ^b	2.10 ^b	1.54 ^b	0.78	0.61	0.65
Cu	1.00	0.99	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Fe	510.38	511.18	511.61	510.47	504.51	498.35	482.00	473.22	487.30	505.55	509.77	510.48
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.13	48.74	48.17	48.30	49.07	48.95	49.28	49.38	49.09	48.46	48.45	48.64
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.66	3.01	2.43	1.54	1.41	1.46
Ni	6.44	5.68	3.33	3.24	6.53	9.55	16.20	19.23	13.53	5.90	4.20	4.54
Pb	0.42	0.41	0.37	0.36	0.41	0.46	0.56	0.60	0.52	0.41	0.38	0.39
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.45	0.46	0.48	0.48	0.49
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.48	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.10	0.19	0.22	0.34	0.40	0.29	0.14	0.12	0.13
Zn	7.81 ^b	7.29 ^b	5.58	5.48	7.79 ^b	9.99 ^b	14.72 ^b	16.86 ^b	12.80 ^b	7.40 ^b	6.18	6.43
Nitrate	137.09	126.38	87.22	83.79	134.92	187.27	296.42	345.44	252.07	128.54	100.07	105.43
Nitrite	6.88	6.65	5.76	5.67	6.79	7.93	10.29	11.33	9.32	6.65	6.04	6.16
Ammonia	42.65	41.37	36.53	36.04	42.07	48.26	60.98	66.61	55.74	41.35	38.03	38.73

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-33 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 13% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.62	247.20	247.97	247.38	243.26	238.91	227.97	222.29	231.63	243.88	246.75	247.10
As	1.77	1.74	1.70	1.72	1.79	1.79	1.85	1.88	1.83	1.74	1.73	1.74
Cd	0.030	0.029	0.024	0.023	0.030	0.036	0.050	0.056	0.044	0.029	0.025	0.026
Co	1.04 ^b	0.93 ^b	0.61	0.60	1.06 ^b	1.46 ^b	2.35 ^b	2.75 ^b	1.99 ^b	0.96 ^b	0.73	0.78
Cu	1.04	1.03	1.00	1.00	1.04	1.05	1.10	1.12	1.08	1.02	1.01	1.02
Fe	516.39	515.47	512.80	512.17	510.97	506.52	496.28	490.34	499.08	509.56	512.49	513.95
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.19	48.74	48.08	48.23	49.10	48.92	49.21	49.28	49.03	48.38	48.40	48.63
Mo	1.71	1.47	1.22	1.37	2.00	2.09	2.81	3.18	2.56	1.59	1.45	1.51
Ni	9.64	8.38	4.68	4.60	9.88	14.52	24.86	29.54 ^b	20.73	8.77	6.10	6.64
Pb	0.55	0.52	0.42	0.42	0.55	0.67	0.92	1.04 ^b	0.82	0.52	0.46	0.47
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.51	0.50	0.50	0.52	0.52	0.53	0.54	0.52	0.50	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.21	0.24	0.37	0.44	0.33	0.16	0.13	0.14
Zn	9.84 ^b	9.01 ^b	6.43	6.33	9.89 ^b	13.13 ^b	20.20 ^b	23.38 ^b	17.36 ^b	9.21 ^b	7.38 ^b	7.76 ^b
Nitrate	208.13	190.11	118.97	111.29	201.57	298.13	493.32	579.66	413.82	193.05	141.09	150.59
Nitrite	8.52	8.11	6.49	6.30	8.32	10.48	14.81	16.72	13.04	8.13	6.98	7.20
Ammonia	51.65	49.43	40.50	39.46	50.47	62.25	85.84	96.19	76.15	49.46	43.17	44.41

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-34 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 13% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.75	247.33	248.08	247.49	243.42	239.13	228.34	222.72	231.95	244.04	246.87	247.22
As	1.78	1.74	1.70	1.72	1.79	1.80	1.86	1.89	1.84	1.74	1.73	1.74
Cd	0.032	0.030	0.024	0.024	0.032	0.039	0.055	0.062	0.049	0.031	0.027	0.027
Co	1.16 ^b	1.04 ^b	0.66	0.65	1.17 ^b	1.65 ^b	2.69 ^b	3.16 ^b	2.27 ^b	1.07 ^b	0.80	0.86
Cu	1.05	1.04	1.00	1.00	1.05	1.07	1.13	1.15	1.10	1.03	1.02	1.02
Fe	522.46	520.94	515.62	514.64	516.75	516.11	513.37	510.74	513.12	515.18	516.09	517.88
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.33	48.88	48.16	48.30	49.24	49.16	49.63	49.79	49.38	48.53	48.49	48.73
Mo	1.70	1.46	1.22	1.37	1.99	2.08	2.79	3.16	2.54	1.58	1.44	1.50
Ni	11.03	9.64	5.30	5.14	11.18	16.72	28.82 ^b	34.27 ^b	23.97	10.04	6.91	7.53
Pb	0.59	0.55	0.44	0.43	0.58	0.72	1.03 ^b	1.16 ^b	0.90	0.56	0.48	0.50
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.52	0.51	0.50	0.50	0.52	0.52	0.53	0.54	0.53	0.51	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.18	0.14	0.10	0.11	0.21	0.25	0.39	0.46	0.34	0.16	0.13	0.14
Zn	10.84 ^b	9.92 ^b	6.89	6.72	10.83 ^b	14.71 ^b	23.04 ^b	26.77 ^b	19.68 ^b	10.13 ^b	7.96 ^b	8.39 ^b
Nitrate	207.89	189.91	118.88	111.19	201.34	297.87	493.12	579.59	413.58	192.87	140.96	150.43
Nitrite	8.52	8.11	6.48	6.30	8.31	10.47	14.81	16.72	13.03	8.13	6.97	7.20
Ammonia	51.63	49.42	40.50	39.46	50.46	62.25	85.87	96.24	76.16	49.45	43.17	44.41

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-35 Constituent Concentrations – Near Field – PC Conditions – Base Case – 13% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.61	247.19	247.97	247.38	243.24	238.89	227.94	222.25	231.61	243.87	246.74	247.10
As	1.75	1.73	1.69	1.71	1.77	1.76	1.80	1.82	1.78	1.72	1.72	1.73
Cd	0.027	0.026	0.022	0.022	0.027	0.032	0.042	0.046	0.038	0.026	0.024	0.024
Co	0.88 ^b	0.79	0.54	0.53	0.89 ^b	1.21 ^b	1.90 ^b	2.22 ^b	1.62 ^b	0.82	0.64	0.67
Cu	1.00	0.99	0.98	0.98	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.99
Fe	508.51	509.15	509.64	508.57	501.98	494.21	474.94	464.75	481.23	502.57	507.69	508.61
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.05	48.64	48.03	48.17	48.93	48.71	48.85	48.86	48.72	48.26	48.31	48.53
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.99	2.42	1.54	1.41	1.47
Ni	6.88	6.03	3.50	3.44	7.02	10.19	17.24	20.42	14.42	6.28	4.46	4.83
Pb	0.42	0.41	0.37	0.37	0.42	0.47	0.57	0.62	0.53	0.41	0.38	0.39
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.19	0.22	0.34	0.40	0.30	0.15	0.12	0.13
Zn	8.13 ^b	7.54 ^b	5.70	5.62	8.14 ^b	10.45 ^b	15.46 ^b	17.70 ^b	13.44 ^b	7.67 ^b	6.37	6.64
Nitrate	138.01	127.14	87.51	84.03	135.59	187.99	296.34	344.46	252.35	129.08	100.48	105.94
Nitrite	6.89	6.65	5.75	5.67	6.79	7.92	10.24	11.26	9.29	6.65	6.03	6.16
Ammonia	42.68	41.38	36.48	35.98	42.03	48.17	60.66	66.12	55.51	41.28	37.98	38.70

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-36 Constituent Concentrations – Far Field – PC Conditions – Base Case – 13% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.40	248.04	248.86	248.28	244.43	240.69	230.96	225.86	234.24	245.19	247.69	247.94
As	1.76	1.74	1.70	1.71	1.78	1.78	1.83	1.86	1.81	1.73	1.72	1.73
Cd	0.029	0.028	0.023	0.023	0.029	0.034	0.046	0.052	0.042	0.028	0.025	0.025
Co	0.98 ^b	0.88 ^b	0.58	0.57	0.99 ^b	1.36 ^b	2.20 ^b	2.58 ^b	1.86 ^b	0.91 ^b	0.69	0.74
Cu	1.00	1.00	0.99	0.99	1.00	1.00	1.00	1.01	1.00	0.99	0.99	0.99
Fe	511.72	512.32	512.18	511.04	505.92	500.46	485.74	477.71	490.39	506.76	510.57	511.37
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.32	48.91	48.26	48.38	49.27	49.26	49.83	50.05	49.55	48.63	48.56	48.77
Mo	1.65	1.42	1.20	1.34	1.91	2.00	2.67	3.01	2.43	1.54	1.41	1.47
Ni	7.86	6.91	3.94	3.82	7.95	11.78	20.19	24.01	16.81	7.19	5.04	5.46
Pb	0.44	0.43	0.38	0.37	0.44	0.50	0.63	0.68	0.57	0.43	0.39	0.40
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.45	0.46	0.48	0.48	0.49
Se	0.50	0.49	0.49	0.49	0.49	0.49	0.48	0.48	0.49	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.23	0.36	0.42	0.31	0.15	0.12	0.13
Zn	8.87 ^b	8.21 ^b	6.04	5.92	8.85 ^b	11.66 ^b	17.70 ^b	20.43 ^b	15.26 ^b	8.37 ^b	6.81	7.12 ^b
Nitrate	138.17	127.35	87.71	84.21	135.94	188.97	299.48	349.11	254.58	129.53	100.70	106.12
Nitrite	6.91	6.67	5.77	5.68	6.81	7.97	10.35	11.42	9.38	6.68	6.05	6.18
Ammonia	42.78	41.48	36.59	36.09	42.19	48.47	61.34	67.05	56.04	41.46	38.10	38.81

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-37 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 14% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.64	247.22	247.99	247.39	243.27	238.93	228.02	222.35	231.67	243.90	246.76	247.12
As	1.77	1.74	1.70	1.72	1.79	1.79	1.85	1.88	1.83	1.74	1.73	1.74
Cd	0.031	0.029	0.024	0.024	0.031	0.038	0.052	0.058	0.046	0.030	0.026	0.027
Co	1.09 ^b	0.97 ^b	0.63	0.62	1.11 ^b	1.53 ^b	2.48 ^b	2.91 ^b	2.10 ^b	1.01 ^b	0.76	0.81
Cu	1.04	1.03	1.00	1.00	1.04	1.06	1.11	1.13	1.09	1.02	1.01	1.02
Fe	517.71	516.58	513.36	512.75	512.38	508.59	499.92	494.70	502.11	510.75	513.29	514.83
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.25	48.79	48.11	48.26	49.16	49.01	49.38	49.48	49.17	48.44	48.43	48.67
Mo	1.71	1.47	1.22	1.37	2.00	2.09	2.81	3.18	2.56	1.59	1.45	1.51
Ni	10.22	8.88	4.93	4.84	10.46	15.43	26.47 ^b	31.46 ^b	22.06	9.29	6.44	7.02
Pb	0.56	0.53	0.43	0.42	0.56	0.69	0.96	1.09 ^b	0.85	0.54	0.47	0.48
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.51	0.51	0.50	0.50	0.52	0.52	0.53	0.54	0.53	0.50	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.18	0.14	0.10	0.11	0.21	0.25	0.38	0.45	0.33	0.16	0.13	0.14
Zn	10.26 ^b	9.37 ^b	6.61	6.50	10.31 ^b	13.78 ^b	21.35 ^b	24.75 ^b	18.31 ^b	9.59 ^b	7.62 ^b	8.03 ^b
Nitrate	208.71	190.64	119.24	111.52	202.12	299.06	495.01	581.69	415.20	193.59	141.44	150.96
Nitrite	8.53	8.13	6.49	6.30	8.33	10.50	14.85	16.76	13.07	8.14	6.98	7.21
Ammonia	51.72	49.50	40.53	39.49	50.54	62.37	86.07	96.46	76.33	49.53	43.22	44.46

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-38 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 14% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.77	247.34	248.09	247.50	243.44	239.16	228.39	222.78	231.99	244.06	246.88	247.24
As	1.78	1.75	1.70	1.72	1.80	1.80	1.87	1.90	1.84	1.74	1.73	1.74
Cd	0.033	0.031	0.025	0.025	0.033	0.041	0.058	0.065	0.051	0.031	0.027	0.028
Co	1.22 ^b	1.09 ^b	0.69	0.67	1.23 ^b	1.74 ^b	2.85 ^b	3.36 ^b	2.41 ^b	1.13 ^b	0.84	0.89 ^b
Cu	1.05	1.04	1.01	1.01	1.05	1.07	1.14	1.16	1.11	1.03	1.02	1.03
Fe	524.24	522.46	516.39	515.40	518.59	518.90	518.31	516.65	517.20	516.80	517.16	519.05
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.41	48.94	48.19	48.33	49.32	49.27	49.84	50.03	49.54	48.59	48.53	48.77
Mo	1.70	1.46	1.22	1.37	1.99	2.08	2.79	3.16	2.54	1.58	1.44	1.51
Ni	11.73	10.24	5.61	5.42	11.88	17.80	30.75 ^b	36.58 ^b	25.56 ^b	10.67	7.32	7.98
Pb	0.60	0.57	0.45	0.44	0.60	0.75	1.08 ^b	1.22 ^b	0.95	0.57	0.49	0.51
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.52	0.51	0.50	0.50	0.52	0.52	0.54	0.54	0.53	0.51	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.18	0.15	0.10	0.11	0.22	0.25	0.40	0.47	0.35	0.16	0.13	0.14
Zn	11.34 ^b	10.35 ^b	7.10 ^b	6.92	11.33 ^b	15.49 ^b	24.42 ^b	28.42 ^b	20.82 ^b	10.58 ^b	8.25 ^b	8.72 ^b
Nitrate	208.60	190.55	119.20	111.47	202.01	299.00	495.17	582.05	415.25	193.52	141.37	150.89
Nitrite	8.53	8.13	6.49	6.30	8.33	10.50	14.86	16.78	13.07	8.14	6.98	7.21
Ammonia	51.73	49.50	40.54	39.50	50.55	62.39	86.13	96.56	76.38	49.54	43.22	44.47

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-39 Constituent Concentrations – Near Field – PC Conditions – Base Case – 14% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.63	247.21	247.98	247.39	243.26	238.91	227.99	222.31	231.65	243.89	246.75	247.11
As	1.76	1.73	1.70	1.71	1.77	1.76	1.81	1.83	1.79	1.72	1.72	1.73
Cd	0.028	0.027	0.023	0.022	0.028	0.033	0.043	0.048	0.039	0.027	0.024	0.025
Co	0.92 ^b	0.83	0.56	0.55	0.93 ^b	1.27 ^b	2.01 ^b	2.35 ^b	1.71 ^b	0.85	0.66	0.70
Cu	1.00	0.99	0.98	0.98	0.99	0.99	0.99	0.98	0.98	0.98	0.99	0.99
Fe	508.88	509.47	509.81	508.75	502.39	494.82	475.99	466.01	482.10	502.92	507.92	508.87
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.11	48.69	48.05	48.19	48.99	48.80	49.01	49.05	48.86	48.32	48.35	48.57
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.99	2.42	1.54	1.41	1.47
Ni	7.27	6.37	3.67	3.60	7.42	10.82	18.34	21.74	15.33	6.64	4.70	5.09
Pb	0.43	0.42	0.37	0.37	0.43	0.48	0.59	0.64	0.55	0.42	0.39	0.39
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.16	0.13	0.09	0.11	0.20	0.23	0.35	0.41	0.30	0.15	0.12	0.13
Zn	8.43 ^b	7.80 ^b	5.83	5.74	8.44 ^b	10.91 ^b	16.29 ^b	18.69 ^b	14.12 ^b	7.93 ^b	6.54	6.83
Nitrate	138.31	127.41	87.65	84.15	135.87	188.47	297.21	345.50	253.06	129.35	100.65	106.13
Nitrite	6.90	6.66	5.76	5.67	6.79	7.93	10.26	11.28	9.30	6.65	6.04	6.17
Ammonia	42.72	41.41	36.49	35.99	42.07	48.23	60.77	66.25	55.60	41.31	38.00	38.73

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-40 Constituent Concentrations – Far Field – PC Conditions – Base Case – 14% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.40	248.04	248.86	248.28	244.43	240.70	230.98	225.88	234.26	245.20	247.69	247.95
As	1.76	1.74	1.70	1.72	1.78	1.78	1.84	1.87	1.82	1.74	1.73	1.74
Cd	0.030	0.028	0.023	0.023	0.030	0.036	0.048	0.054	0.043	0.028	0.025	0.026
Co	1.02 ^b	0.92 ^b	0.61	0.59	1.03 ^b	1.44 ^b	2.33 ^b	2.74 ^b	1.97 ^b	0.95 ^b	0.72	0.77
Cu	1.01	1.00	0.99	0.99	1.00	1.00	1.01	1.01	1.00	0.99	0.99	0.99
Fe	512.21	512.74	512.39	511.25	506.43	501.23	487.11	479.35	491.53	507.20	510.86	511.69
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.39	48.97	48.28	48.41	49.34	49.37	50.02	50.27	49.70	48.69	48.60	48.81
Mo	1.65	1.42	1.20	1.34	1.91	2.00	2.67	3.01	2.43	1.54	1.41	1.47
Ni	8.33	7.33	4.15	4.01	8.43	12.53	21.52	25.61 ^b	17.91	7.62	5.32	5.77
Pb	0.45	0.43	0.38	0.38	0.45	0.51	0.65	0.71	0.59	0.43	0.40	0.41
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.45	0.46	0.48	0.48	0.49
Se	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.49	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.24	0.37	0.43	0.32	0.15	0.12	0.13
Zn	9.23 ^b	8.52 ^b	6.20	6.06	9.21 ^b	12.22 ^b	18.70 ^b	21.63 ^b	16.08 ^b	8.69 ^b	7.02 ^b	7.35 ^b
Nitrate	138.53	127.67	87.87	84.36	136.28	189.55	300.51	350.34	255.42	129.86	100.91	106.35
Nitrite	6.91	6.68	5.78	5.69	6.82	7.98	10.38	11.44	9.39	6.68	6.06	6.19
Ammonia	42.82	41.52	36.61	36.11	42.23	48.54	61.47	67.20	56.14	41.50	38.13	38.83

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-41 Constituent Concentrations – Near Field – PC Conditions – Upper Case – 15% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.65	247.23	248.00	247.40	243.29	238.96	228.07	222.40	231.71	243.92	246.77	247.13
As	1.78	1.74	1.70	1.72	1.79	1.80	1.86	1.89	1.83	1.74	1.73	1.74
Cd	0.032	0.030	0.024	0.024	0.032	0.039	0.054	0.061	0.048	0.030	0.026	0.027
Co	1.14 ^b	1.02 ^b	0.65	0.64	1.16 ^b	1.61 ^b	2.62 ^b	3.08 ^b	2.22 ^b	1.05 ^b	0.79	0.84
Cu	1.05	1.03	1.00	1.00	1.04	1.06	1.12	1.14	1.10	1.03	1.01	1.02
Fe	519.09	517.74	513.95	513.35	513.85	510.77	503.74	499.26	505.27	512.00	514.12	515.75
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.31	48.84	48.13	48.29	49.23	49.11	49.55	49.69	49.31	48.49	48.47	48.71
Mo	1.71	1.47	1.22	1.37	2.00	2.09	2.81	3.18	2.56	1.59	1.45	1.51
Ni	10.80	9.38	5.18	5.08	11.05	16.34	28.09 ^b	33.40 ^b	23.40	9.82	6.79	7.40
Pb	0.58	0.55	0.44	0.43	0.58	0.71	1.01 ^b	1.14 ^b	0.89	0.55	0.48	0.49
Sb	0.48	0.48	0.49	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.52	0.51	0.50	0.50	0.52	0.52	0.53	0.54	0.53	0.51	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.18	0.14	0.10	0.11	0.21	0.25	0.39	0.46	0.34	0.16	0.13	0.14
Zn	10.67 ^b	9.73 ^b	6.79	6.67	10.74 ^b	14.44 ^b	22.51 ^b	26.14 ^b	19.27 ^b	9.96 ^b	7.87 ^b	8.30 ^b
Nitrate	209.30	191.17	119.51	111.75	202.68	300.00	496.71	583.74	416.58	194.13	141.78	151.34
Nitrite	8.55	8.14	6.50	6.31	8.34	10.52	14.89	16.81	13.10	8.16	6.99	7.22
Ammonia	51.80	49.57	40.57	39.52	50.61	62.50	86.29	96.73	76.52	49.60	43.26	44.51

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-42 Constituent Concentrations – Far Field – PC Conditions – Upper Case – 15% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.78	247.36	248.10	247.52	243.46	239.19	228.44	222.84	232.03	244.08	246.90	247.25
As	1.78	1.75	1.71	1.72	1.80	1.80	1.88	1.91	1.85	1.75	1.73	1.75
Cd	0.034	0.032	0.025	0.025	0.034	0.042	0.060	0.069	0.053	0.032	0.028	0.029
Co	1.28 ^b	1.14 ^b	0.71	0.70	1.29 ^b	1.83 ^b	3.02 ^b	3.56 ^b	2.54 ^b	1.18 ^b	0.87 ^b	0.93 ^b
Cu	1.06	1.04	1.01	1.01	1.05	1.08	1.15	1.18	1.12	1.04	1.02	1.03
Fe	526.07 ^b	524.02	517.18	516.18	520.48	521.78	523.39	522.73	521.41	518.46	518.25	520.25
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.48	49.00	48.22	48.36	49.39	49.39	50.04	50.27	49.71	48.66	48.58	48.82
Mo	1.70	1.46	1.22	1.37	1.99	2.08	2.79	3.16	2.54	1.58	1.44	1.51
Ni	12.42	10.84	5.91	5.70	12.57	18.89	32.68 ^b	38.89 ^b	27.15 ^b	11.30	7.72	8.43
Pb	0.62	0.58	0.46	0.45	0.62	0.78	1.13 ^b	1.28 ^b	0.99	0.59	0.50	0.52
Sb	0.49	0.49	0.49	0.49	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.49
Se	0.52	0.51	0.50	0.50	0.52	0.52	0.54	0.55	0.53	0.51	0.50	0.51
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.19	0.15	0.10	0.12	0.22	0.26	0.41	0.48	0.35	0.17	0.13	0.14
Zn	11.84 ^b	10.78 ^b	7.32 ^b	7.12 ^b	11.83 ^b	16.27 ^b	25.80 ^b	30.08 ^b	21.96 ^b	11.03 ^b	8.54 ^b	9.04 ^b
Nitrate	209.31	191.20	119.53	111.75	202.68	300.13	497.22	584.51	416.92	194.18	141.79	151.34
Nitrite	8.55	8.14	6.50	6.31	8.35	10.53	14.91	16.83	13.11	8.16	6.99	7.22
Ammonia	51.82	49.59	40.58	39.54	50.64	62.54	86.40	96.88	76.60	49.63	43.28	44.52

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-43 Constituent Concentrations – Near Field – PC Conditions – Base Case – 15% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	246.64	247.22	247.99	247.40	243.28	238.94	228.03	222.36	231.68	243.90	246.76	247.12
As	1.76	1.73	1.70	1.71	1.77	1.77	1.81	1.83	1.79	1.72	1.72	1.73
Cd	0.029	0.027	0.023	0.023	0.029	0.034	0.045	0.050	0.041	0.027	0.024	0.025
Co	0.96 ^b	0.86	0.57	0.57	0.97 ^b	1.33 ^b	2.12 ^b	2.48 ^b	1.81 ^b	0.89 ^b	0.68	0.73
Cu	1.00	1.00	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Fe	509.28	509.81	509.98	508.93	502.81	495.44	477.09	467.33	483.02	503.28	508.17	509.13
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.16	48.74	48.08	48.22	49.05	48.89	49.17	49.24	48.99	48.37	48.38	48.61
Mo	1.65	1.42	1.20	1.34	1.91	1.99	2.65	2.99	2.42	1.54	1.41	1.47
Ni	7.67	6.72	3.84	3.76	7.83	11.45	19.46	23.07	16.25	7.00	4.93	5.35
Pb	0.44	0.42	0.37	0.37	0.43	0.49	0.61	0.66	0.56	0.42	0.39	0.40
Sb	0.48	0.48	0.48	0.48	0.48	0.47	0.45	0.44	0.46	0.48	0.48	0.48
Se	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.47	0.48	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.13	0.09	0.11	0.20	0.23	0.36	0.42	0.31	0.15	0.12	0.13
Zn	8.73 ^b	8.06 ^b	5.96	5.86	8.75 ^b	11.38 ^b	17.12 ^b	19.69 ^b	14.81 ^b	8.21 ^b	6.72	7.03 ^b
Nitrate	138.61	127.68	87.78	84.27	136.16	188.96	298.09	346.56	253.78	129.63	100.83	106.33
Nitrite	6.91	6.66	5.76	5.67	6.80	7.94	10.28	11.30	9.32	6.66	6.04	6.17
Ammonia	42.76	41.44	36.51	36.01	42.10	48.29	60.87	66.38	55.68	41.35	38.02	38.75

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines

Table 1-44 Constituent Concentrations – Far Field – PC Conditions – Base Case – 15% Infiltration

Constituent	Average Monthly Concentration (µg/L)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ag	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Al	247.41	248.05	248.86	248.28	244.44	240.71	231.00	225.91	234.27	245.21	247.70	247.95
As	1.77	1.74	1.70	1.72	1.78	1.79	1.85	1.87	1.82	1.74	1.73	1.74
Cd	0.030	0.029	0.024	0.023	0.030	0.037	0.051	0.057	0.045	0.029	0.025	0.026
Co	1.07 ^b	0.96 ^b	0.63	0.61	1.08 ^b	1.51 ^b	2.46 ^b	2.90 ^b	2.08 ^b	0.99 ^b	0.75	0.80
Cu	1.01	1.00	0.99	0.99	1.00	1.00	1.02	1.02	1.01	0.99	0.99	1.00
Fe	512.72	513.17	512.60	511.46	506.95	502.03	488.52	481.05	492.69	507.66	511.16	512.02
Hg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mn	49.46	49.03	48.31	48.44	49.40	49.47	50.21	50.50	49.86	48.76	48.64	48.86
Mo	1.65	1.42	1.20	1.34	1.91	2.00	2.67	3.01	2.43	1.54	1.41	1.47
Ni	8.81	7.74	4.36	4.21	8.91	13.28	22.86	27.22 ^b	19.01	8.06	5.60	6.08
Pb	0.46	0.44	0.38	0.38	0.45	0.52	0.67	0.74	0.61	0.44	0.40	0.41
Sb	0.48	0.49	0.49	0.49	0.48	0.47	0.45	0.45	0.46	0.48	0.48	0.49
Se	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.49	0.49	0.49	0.49
Tl	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
U	0.17	0.14	0.09	0.11	0.20	0.24	0.38	0.44	0.33	0.16	0.13	0.14
Zn	9.59 ^b	8.83 ^b	6.35	6.21	9.57 ^b	12.78 ^b	19.71 ^b	22.84 ^b	16.91 ^b	9.01 ^b	7.23 ^b	7.58 ^b
Nitrate	138.89	128.00	88.04	84.50	136.62	190.12	301.54	351.57	256.26	130.19	101.12	106.58
Nitrite	6.92	6.68	5.78	5.69	6.83	8.00	10.40	11.47	9.41	6.69	6.06	6.19
Ammonia	42.86	41.56	36.63	36.12	42.27	48.60	61.59	67.35	56.24	41.54	38.15	38.86

Notes:

^b denotes an exceedance of the CCME Freshwater Aquatic Life Guidelines

^c denotes an exceedance of the Site Specific Guidelines