

Appendix D: Water License Monitoring Data

Appendix D.1. 2AM-DOH1335

SUMMARY OF MONTHLY MONITORING REPORTING [SEE PART I ITEM 12]

ST-1 Doris Sedimentation Pond

The Doris Sedimentation Pond was built and became operational in 2011. In 2024, during the open water season, all discharges from the facility were directed to the TIA via pipeline in accordance with Part F Item 17. Each discharge was metered. Water quality samples were collected from an outlet on the discharge pump with the intake on the pump submerged approximately 0.25 m below the water surface. If the pump was not running, samples were collected from the pond itself at the pump intake location.

Water was transferred from ST-1 to the TIA beginning in May and continued until September. The final day of discharge from the Sedimentation Pond was September 21, 2024.

Volumes transferred to the TIA from ST-1 are summarized in Table D1 - 1. This includes water transferred to ST-1 from the Doris Contact Water Pond (ST-2), Doris Contact Water Pond Sump 1 (ST2-S1), Doris Contact Water Pond Sump 2 (ST2-S2), Doris Contact Water Pond Sump 3 (ST2-S3), Doris Tank Farm Sump (ST-5) and sumps from the Roberts Bay Bulk Fuel Storage Facility (ST-6a and ST-6b). Results of water quality samples collected from ST-1 are summarized in Table D1 - 2.

Table D1 - 1. Summary of Monthly Water Management Volumes for Monitoring Station ST-1, 2024

Month	Monthly Volume (m ³)	Cumulative Volume (m ³)*
May	11,458	11,458
June	35,015	46,473
July	42,741	89,214
August	28,765	117,978
September	13,129	131,107
Total Volume		131,107

** Values rounded to nearest whole cubic metre.*

Volumes presented includes water from transferred from ST-2, ST2-S1, ST2-S2, ST2-S3, ST- 5, ST-6a and ST-6b

ST-2 Doris Contact Water Pond

The Doris Contact Water Pond was built and became operational in 2011. In 2024, it was active between May and September. Samples from ST-2 were manually collected from a depth of 0.25 m below the water surface. All water from the Doris Contact Water Pond was directed to the Sedimentation Pond. Results of the 2024 water quality samples are presented in Table D1 - 3.

ST-3 Doris Non-Hazardous Landfill Sump

This station remains inactive as the Doris Non-Hazardous Landfill Sump has not been constructed.

ST-4 Landfarm

Water quality samples were collected on May 30, 2024 from each of the cells at the Landfarm (ST-4). Although water sampling was conducted, no transfer of water from this facility occurred in 2024. Water quality results are presented in Table D1 - 4

Table D1 - 2. Water Quality Monitoring Program Results for ST-1, May to September 2024

Sample ID		ST-1	ST-1	ST-1	ST-1^	ST-1	ST-1
ALS ID		EO2403849-001	EO2404905-001	EO2406155-001	EO2406226-001	EO2407629-001	EO2408142-001
Date Sampled		5/21/2024	6/18/2024	7/22/2024	7/22/2024	9/1/2024	9/15/2024
Parameter	Units						
pH	pH	7.82	8.11	8.15	7.92	8.22	8.16
Total Suspended Solids	mg/L	17.2	18.8	22.0	9.6	7.9	13.7
Chloride (Cl)	mg/L	193	329	382	389	726	962
Cyanide, Total	mg/L	<0.0050	0.0222	0.0268	0.0301	0.0072	0.0165
Ammonia, Total (as N)	mg/L	0.996	0.823	1.11	1.17	3.46	4.06
Nitrate (as N)	mg/L	5.35	5.80	10.8	11.0	21.9	30.0
Nitrite (as N)	mg/L	0.0769	0.0626	0.168	0.161	0.236	0.408
Sulfate (SO4)	mg/L	67.9	133	160	162	185	244
Aluminum (Al)-Total	mg/L	0.912	0.317	0.158	0.0862	0.0573	0.223
Antimony (Sb)-Total	mg/L	0.00034	0.00178	0.00202	0.00206	0.00292	0.00249
Arsenic (As)-Total	mg/L	0.0514	0.146	0.144	0.144	0.167	0.106
Barium (Ba)-Total	mg/L	0.0144	0.0307	0.0303	0.0306	0.0499	0.0500
Beryllium (Be)-Total	mg/L	0.000021	<0.000020	<0.000020	<0.000020	<0.000040	<0.000040
Boron (B)-Total	mg/L	0.085	0.240	0.238	0.243	0.307	0.305
Cadmium (Cd)-Total	mg/L	0.0000305	0.0000211	0.0000383	0.0000407	0.0000768	0.0000798
Calcium (Ca)-Total	mg/L	73.4	98.0	126	126	210	267
Chromium (Cr)-Total	mg/L	0.00427	0.00701	0.00061	0.00055	<0.00100	<0.00100
Cobalt (Co)-Total	mg/L	0.00393	0.00353	0.00290	0.00272	0.00485	0.00873
Copper (Cu)-Total	mg/L	0.00859	0.00691	0.00680	0.0143	0.00467	0.0145
Iron (Fe)-Total	mg/L	1.50	0.724	0.230	0.077	0.121	0.683
Lead (Pb)-Total	mg/L	0.000482	0.000188	0.000109	0.000171	0.000103	0.000544
Lithium (Li)-Total	mg/L	0.0074	0.0109	0.0120	0.0124	0.0189	0.0164
Magnesium (Mg)-Total	mg/L	15.7	30.2	36.2	36.8	57.7	65.9
Manganese (Mn)-Total	mg/L	0.198	0.122	0.162	0.159	0.434	0.566
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00186	0.00779	0.00818	0.00815	0.00919	0.00841
Nickel (Ni)-Total	mg/L	0.0150	0.0500	0.0362	0.0372	0.0535	0.0414

Sample ID		ST-1	ST-1	ST-1	ST-1^	ST-1	ST-1
ALS ID		EO2403849-001	EO2404905-001	EO2406155-001	EO2406226-001	EO2407629-001	EO2408142-001
Date Sampled		5/21/2024	6/18/2024	7/22/2024	7/22/2024	9/1/2024	9/15/2024
Parameter	Units						
Potassium (K)-Total	mg/L	5.19	11.9	13.1	13.0	18.7	21.6
Selenium (Se)-Total	mg/L	0.000668	0.00140	0.00168	0.00175	0.00206	0.00204
Silver (Ag)-Total	mg/L	0.000055	0.000048	0.000029	0.000031	<0.000020	0.000024
Sodium (Na)-Total	mg/L	66.7	149	168	174	290	355
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	0.000012	0.000012	<0.000020	<0.000020
Tin (Sn)-Total	mg/L	<0.00010	<0.00010	0.00020	<0.00010	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.0371	0.00916	0.00255	0.00131	0.00075	0.00630
Uranium (U)-Total	mg/L	0.000455	0.00152	0.00153	0.00154	0.00232	0.00219
Vanadium (V)-Total	mg/L	0.00380	0.00232	0.00161	0.00125	0.00114	0.00217
Zinc (Zn)-Total	mg/L	0.0067	0.0313	0.0214	0.0207	0.0575	0.0510
Alkalinity, Total (as CaCO3)	mg/L	54.8	107	107	106	123	123
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent

^ Indicates duplicate samples

Table D1 - 3. Water Quality Monitoring Program Results for ST-2, May to September 2024

Sample ID		ST-2	ST-2	ST-2	ST-2^	ST-2
ALS ID		EO2403849-002	EO2404905-002	EO2406155-002	EO2406226-002	EO2408142-002
Date Sampled		5/21/2024	6/17/2024	7/22/2024	7/22/2024	9/15/2024
Parameter	Units					
pH	pH	7.81	8.00	8.09	7.78	7.78
Total Suspended Solids	mg/L	3.8	26.2	21.0	9.4	18.7
Chloride (Cl)	mg/L	183	365	398	398	1390
Cyanide, Total	mg/L	0.0070	0.344	0.182	0.180	0.0844
Ammonia, Total (as N)	mg/L	0.754	0.738	0.615	0.584	7.97
Nitrate (as N)	mg/L	5.30	10.3	11.8	11.8	51.0
Nitrite (as N)	mg/L	0.100	0.166	0.269	0.236	1.30
Sulfate (SO4)	mg/L	76.8	225	256	256	408
Aluminum (Al)-Total	mg/L	0.332	0.265	0.300	0.0203	0.0256
Antimony (Sb)-Total	mg/L	0.00013	0.00041	0.00045	0.00047	<0.00050
Arsenic (As)-Total	mg/L	0.00092	0.00271	0.00198	0.00129	0.00125
Barium (Ba)-Total	mg/L	0.0120	0.0196	0.0214	0.0207	0.0565
Beryllium (Be)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000100
Boron (B)-Total	mg/L	0.089	0.286	0.291	0.298	0.406
Cadmium (Cd)-Total	mg/L	0.0000228	0.0000463	0.0000503	0.0000384	0.000149
Calcium (Ca)-Total	mg/L	82.4	195	186	178	487
Chromium (Cr)-Total	mg/L	0.00090	0.00642	0.00157	<0.00050	<0.00250
Cobalt (Co)-Total	mg/L	0.00278	0.00351	0.00381	0.00352	0.0397
Copper (Cu)-Total	mg/L	0.00608	0.0138	0.0202	0.0170	0.00713
Iron (Fe)-Total	mg/L	0.435	1.16	0.893	0.133	0.174
Lead (Pb)-Total	mg/L	0.000250	0.000639	0.000259	0.000112	<0.000250
Lithium (Li)-Total	mg/L	0.0082	0.0217	0.0211	0.0217	0.0324
Magnesium (Mg)-Total	mg/L	14.6	32.4	37.9	38.5	83.5
Manganese (Mn)-Total	mg/L	0.210	0.266	0.291	0.261	0.864
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00151	0.00531	0.00818	0.00879	0.00603
Nickel (Ni)-Total	mg/L	0.00149	0.00585	0.00360	0.00331	0.00500

Sample ID		ST-2	ST-2	ST-2	ST-2^	ST-2
ALS ID		EO2403849-002	EO2404905-002	EO2406155-002	EO2406226-002	EO2408142-002
Date Sampled		5/21/2024	6/17/2024	7/22/2024	7/22/2024	9/15/2024
Parameter	Units					
Potassium (K)-Total	mg/L	4.98	12.6	13.0	13.4	28.7
Selenium (Se)-Total	mg/L	0.000649	0.00220	0.00259	0.00259	0.00343
Silver (Ag)-Total	mg/L	0.000055	0.000297	0.000161	0.000122	0.000052
Sodium (Na)-Total	mg/L	60.1	94.3	160	160	436
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000050
Tin (Sn)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050
Titanium (Ti)-Total	mg/L	0.0161	0.00998	0.0113	0.00051	<0.00150
Uranium (U)-Total	mg/L	0.000458	0.000855	0.00114	0.00116	0.00241
Vanadium (V)-Total	mg/L	0.00132	0.00283	0.00319	0.00099	<0.00250
Zinc (Zn)-Total	mg/L	<0.0030	0.0050	0.0045	<0.0030	<0.0150
Alkalinity, Total (as CaCO ₃)	mg/L	54.5	98.5	107	107	117
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent

Note:

Effluent quality limits listed under Part F Item 18(a) are not applicable as water accumulating in this facility is transferred to the Doris Sedimentation Pond.

^Indicates duplicate samples

Table D1 - 4. Water Quality Monitoring Program Results for ST-4, May 2024

Sample ID		ST-4 North Cell	ST-4 Centre Cell	ST-4 South Cell	Part F Item 18(b)	
ALS ID		YL2400535-001	YL2400535-002	YL2400535-003	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/30/2024	5/30/2024	5/30/2024		
Parameter	Units					
pH	pH	8.16	8.19	8.20	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	50.0	100.0
Benzene	mg/L	<0.00050	<0.00050	<0.00050	0.37	0.37
Toluene	mg/L	<0.00050	<0.00050	<0.00050	0.002	0.002
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	0.09	0.09
Oil and Grease	mg/L	<5.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	No Visible Sheen	No Visible Sheen
Lead (Pb)-Total	mg/L	<0.000050	<0.000050	0.000164	0.2	0.4
Ammonia, Total (as N)	mg/L	0.0050	0.0052	0.0082		

^Indicates duplicate samples

ST-5 Doris Plant Site Fuel Storage and Containment

Water from the Doris tank farm (ST-5) was sampled on May 14, 2024, prior to dewatering events. Results met the criteria for discharge per Part F Item 18(b) of the water license. Results of this sampling are presented in Table D1 - 5.

In 2024, a total of 671 m³ of water was transferred to the Sedimentation Pond (ST-1) and a total of 28 m³ of water was trucked directly to the Tailings Impoundment Area (TIA).

ST-6a Roberts Bay Bulk Fuel Storage Facility

Water from the Roberts Bay 5ML tank farm (ST-6a) was sampled on May 14, 2024, prior to discharge. Results from the May sample met discharge criteria, as outlined in Part F Item 18(b). Results of this sampling are presented in Table D1- 6.

Notification of discharge from this facility was provided to the Inspector. In 2024, a total of 533 m³ of water was discharged to the tundra (location 13W 432973 7563440) and 498 m³ of water was trucked directly to the TIA.

ST-6b Roberts Bay Bulk Fuel Storage Facility

Water from the Roberts Bay four 5 ML tank farm (ST-6b) was sampled on May 14, 2024, prior to discharge. Results from the May sample met discharge criteria, as outlined in Part F Item 18(b) of the license. Notification of discharge from this facility was provided to the Inspector and results of this monitoring are presented in Table D1 - 7. In 2024, a total of 1,202 m³ of water was discharged from this facility to the tundra (location 13W 432878 7563130), a total of 78 m³ of water was discharged to the Sedimentation Pond (ST-1) and 366 m³ was trucked directly to the TIA.

Table D1 - 5. Water Quality Monitoring Program Results for ST5, May 2024

Sample ID		ST-5	ST-5^	Part F Item 18 (b)	
ALS ID		EO2403613-001	EO2403613-002	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/14/2024	5/14/2024		
Parameter	Units				
pH	pH	8.14	7.83	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	8.2	9.4	50.0	100.0
Benzene	mg/L	<0.00050	<0.00050	0.37	0.37
Toluene	mg/L	<0.00050	<0.00050	0.002	0.002
Ethylbenzene	mg/L	<0.00050	<0.00050	0.09	0.09
Oil and Grease	mg/L	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	No Visible Sheen	No Visible Sheen
Lead (Pb)-Total	mg/L	0.000314	0.00031	0.2	0.4

^Indicates duplicate sample

Table D1 - 6. Water Quality Monitoring Program Results for ST6A, May 2024

Sample ID		ST-6a	ST-6a^	Part F Item 18 (b)	
ALS ID		EO2403617-001	EO2403617-002	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/14/2024	5/14/2024		
Parameter	Units				
pH	pH	7.96	7.96	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	<3.0	<3.0	50.0	100.0
Benzene	mg/L	<0.00050	<0.00050	0.37	0.37
Toluene	mg/L	<0.00050	<0.00050	0.002	0.002
Ethylbenzene	mg/L	<0.00050	<0.00050	0.09	0.09
Oil and Grease	mg/L	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	No Visible Sheen	No Visible Sheen
Lead (Pb)-Total	mg/L	0.000050	0.000051	0.2	0.4

^Indicates duplicate sample

Table D1 - 7. Water Quality Monitoring Program Results for ST6b, May 2024

Sample ID		ST-6b	ST-6b^	Part F Item 18 (b)	
ALS ID		EO2403619-001	EO2403619-002	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/14/2024	5/14/2024		
Parameter	Units				
pH	pH	7.80	7.93	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	5.4	5.8	50.0	100.0
Benzene	mg/L	<0.00050	<0.00050	0.37	0.37
Toluene	mg/L	<0.00050	<0.00050	0.002	0.002
Ethylbenzene	mg/L	<0.00050	<0.00050	0.09	0.09
Oil and Grease	mg/L	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	No Visible Sheen	No Visible Sheen
Lead (Pb)-Total	mg/L	0.000092	0.000080	0.2	0.4

^Indicates duplicate sample

ST-7 and ST-7a/MMS-4b Freshwater Usage from Doris and Windy Lakes

Table D1 - 8 provides the volumes of water usage at the Doris and Madrid project areas as required under Part E Item 1 of water license 2AM-DOH1335. The water extraction pump for Doris operations is located off the northwest shoreline of Doris Lake and the sampling station ST-7 is located within the Doris Lake pumphouse. In 2024, water from Doris Lake was not used for domestic consumption; all water for domestic consumption was obtained from Windy Lake at ST-7a (also referred to as MMS-4b in this license and equivalent to location HOP-1 of the Regional Exploration License 2BE-HOP2232). Water for dust suppression in 2024 was obtained from Doris Lake. Water for the 2024 winter track was sourced from Patch Lake. Table D1 - 8 summarizes the freshwater volumes used from the approved lake sources.

Results of sampling at ST-7 at Doris Lake are provided in Table D1 - 9 and Table D1 - 10. Table D1 - 11 and Table D1 - 12 provide the results of water quality sampling for monitoring station ST-7a/MMS-4b (HOP-1) at Windy Lake in compliance with the requirements set out in Schedule I of water license 2AM-DOH1335.

ST-8 Discharge from Sewage Treatment Plant Bio-membrane

The Sewage Treatment Plant (STP) at Doris Camp is made up of two sewage treatment plant modules. Each plant has the capacity to treat wastewater for up to 180 person. Both units were utilized throughout 2024 to treat all domestic wastewater generated by the site.

Treated effluent samples were collected from the combined effluent holding tank of these two modules (ST-8) in 2024 to test the quality of the effluent to be discharged to the tundra, in accordance with Part F, Item 5(b) of the License. In-plant sampling facilitates year-round compliance evaluation of plant performance.

All effluent quality samples collected in 2024 were in compliance with the discharge criteria. All effluent quality monitoring results for ST-8 are provided in Table D1 - 13 and Table D1 - 14.

Treated effluent volumes released from ST-8 are metered daily and summary volumes reported in the monthly monitoring reports. In 2024 all treated effluent from ST-8 was discharged to the tundra west of the facility laydown areas (13W 432933 7559057) as approved by the Inspector. The monthly volumes of effluent discharged are presented in Table D1 - 15.

The sludge produced at the sewage treatment plant is sent to the TIA for disposal. The volume of sludge produced in 2024 is presented in Table D1 - 16.

ST-9 Runoff from Sewage Treatment Plant Discharge

In consultation with the Inspector during the 2009 inspection tour, the ST-9 sampling location was established (13W 430807 7559282). This point is east of Glenn Lake and down slope from the ST-8 tundra discharge location. Sampling was conducted at ST-9 in June and August in 2024 in accordance with Schedule I of 2AM-DOH1335. The station is frozen during the remainder of the year. There are no water quality criteria specified in the license for this monitoring station. Table D1 - 17 provides results of the 2024 seasonal monitoring.

Table D1 - 8. Doris North Water Usage in 2024

Month	Windy Lake (ST-7a)				Doris Lake (ST-7)				Patch Lake	Total Usage
	Domestic Water*	Industrial Usage**	Winter track	Dust Suppression	Domestic Water*	Industrial Usage**	Dust Suppression	Winter Track	Winter Track	
January	583	44	0	0	0	0	0	0	29,100	29,726
February	568	41	0	0	0	0.25	0	0	7,806	8,416
March	634	70	0	0	0	0	0	0	120	824
April	740	66	0	0	0	0	0	0	0	806
May	862	63	0	0	0	0	0	0	0	925
June	945	82	0	32	0	0	543	0	0	1,602
July	956	35	0	1	0	0	918	0	0	1,910
August	1,010	39	0	0	0	0	510	0	0	1,559
September	1,070	16	0	0	0	0	238	0	0	1,324
October	1,022	40	0	0	0	0	0	0	0	1,061
November	964	167	0	0	0	0	0	0	0	1,131
December	884	166	0	0	0	0	0	0	0	1,050
Annual Total	10,237	828	0	33	0	0	2,209	0	37,026	50,332
Annual Allowance	43,800		60,000			1,930,000			60,000	2,033,800

Note:

All values rounded to nearest whole cubic metre.

* As permitted by water licenses 2BE-HOP2232 and 2AM-DOH1335 Part E Item 1 and Part I Item 5(a)(b).

** Includes industrial uses such as underground drilling, core processing, milling, concrete batching, etc.

Table D1 - 9. Water Sampling Monitoring Program Results for ST-7, January to May 2024

Sample ID		ST-7	ST-7	ST-7	ST-7	ST-7
ALS ID		YL2400070-001	YL2400105-001	EO2401827-001	EO2402582-001	YL2400356-001
Date Sampled		1/24/2024	2/7/2024	3/12/2024	4/9/2024	5/2/2024
Parameter	Units					
pH	pH	7.8	7.51	7.29	7.30	8.15
Total Suspended Solids	mg/L	9.9	28.7	6.6	7.4	4.0
Chloride (Cl)	mg/L	57.8	55.1	60.0	61.6	61.6
Cyanide, Free	mg/L	<0.0100	<0.0100	<0.0050	<0.0050	<0.0050
Cyanide, Total	mg/L	<0.0100	<0.0100	<0.0050	<0.0050	<0.0050
Ammonia, Total (as N)	mg/L	0.0146	0.14	<0.0050	<0.0050	<0.0050
Nitrate (as N)	mg/L	<0.0050	0.284	<0.0050	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.0010	0.0012	<0.0010	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	0.0041	<0.0010
Phosphorus (P)-Total	mg/L	0.0276	0.0351	0.0329	0.0340	0.0419
Aluminum (Al)-Total	mg/L	0.038	0.0143	0.0186	0.0120	0.0076
Arsenic (As)-Total	mg/L	0.00043	0.00052	0.00035	0.00031	0.00029
Cadmium (Cd)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	8.44	8.82	9.46	9.27	9.80
Chromium (Cr)-Total	mg/L	0.00269	0.00421	0.00088	<0.00050	<0.00050
Copper (Cu)-Total	mg/L	0.00426	0.0133	0.00281	0.00336	0.00244
Iron (Fe)-Total	mg/L	9.16	13.6	0.425	0.230	0.203
Lead (Pb)-Total	mg/L	0.000148	0.000176	0.000059	0.000086	0.000188
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000362	0.000564	0.000210	0.000264	0.000254
Nickel (Ni)-Total	mg/L	0.00152	0.00456	0.00097	0.00074	0.00088
Selenium (Se)-Total	mg/L	0.000056	<0.000050	0.000068	<0.000050	<0.000050
Silver (Ag)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Zinc (Zn)-Total	mg/L	0.0083	0.0238	0.0045	<0.0030	0.0060
Oil and Grease	mg/L	<0.5	<0.00020	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent

Sample ID		ST-7	ST-7	ST-7	ST-7	ST-7
ALS ID		YL2400070-001	YL2400105-001	EO2401827-001	EO2402582-001	YL2400356-001
Date Sampled		1/24/2024	2/7/2024	3/12/2024	4/9/2024	5/2/2024
Parameter	Units					
Chlorophyll-a	ug		<5.0			

^ Indicates duplicate sample.

Table D1 - 10. Water Sampling Monitoring Program Results for ST-7, June to December 2024

Sample ID		ST-7	ST-7	ST-7	ST-7	ST-7	ST-7	ST-7
ALS ID		YL2400612-001	YL2400950-001	YL2401257-001	YL2401550-001	EO2409564-001	EO2410505-001	EO2411401-001
Date Sampled		6/5/2024	7/17/2024	8/21/2024	9/18/2024	10/22/2024	11/19/2024	12/24/2024
Parameter	Units							
pH	pH	7.62	7.76	7.60	7.78	7.61	7.03	7.28
Total Suspended Solids	mg/L	143	<3.0	12.0	19.5	11.3	18.2	38.7
Chloride (Cl)	mg/L	70.1	61.6	49.4	50.8	59.6	53.7	53.7
Cyanide, Free	mg/L	<0.0100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total	mg/L	<0.0100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ammonia, Total (as N)	mg/L	0.335	0.0600	0.0183	0.0113	0.0063	0.223	0.0315
Nitrate (as N)	mg/L	0.0227	0.241	<0.0050	<0.0050	<0.100	0.216	0.0060
Nitrite (as N)	mg/L	0.0035	<0.0010	<0.0010	<0.0010	<0.0200	0.0011	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.0214	0.0357	0.055	0.063	0.0385	0.0120	0.071
Aluminum (Al)-Total	mg/L	0.0293	0.0194	0.287	0.679	0.164	0.0247	1.44
Arsenic (As)-Total	mg/L	0.00155	0.00023	0.00034	0.00039	0.00034	0.00037	0.00059
Cadmium (Cd)-Total	mg/L	0.0000065	<0.0000050	<0.0000050	0.0000056	<0.0000100	<0.0000050	0.0000086
Calcium (Ca)-Total	mg/L	9.89	8.77	7.53	8.36	8.08	8.92	9.17
Chromium (Cr)-Total	mg/L	0.0152	<0.00050	0.00064	0.00134	<0.00100	0.00090	0.00312
Copper (Cu)-Total	mg/L	0.104	0.00233	0.00288	0.00241	0.00198	0.00489	0.00390
Iron (Fe)-Total	mg/L	48.5	0.505	3.04	1.08	0.313	10.6	1.74
Lead (Pb)-Total	mg/L	0.000324	<0.000050	0.000343	0.000278	0.000186	0.000081	0.000609

Sample ID		ST-7	ST-7	ST-7	ST-7	ST-7	ST-7	ST-7
ALS ID		YL2400612-001	YL2400950-001	YL2401257-001	YL2401550-001	EO2409564-001	EO2410505-001	EO2411401-001
Date Sampled		6/5/2024	7/17/2024	8/21/2024	9/18/2024	10/22/2024	11/19/2024	12/24/2024
Parameter	Units							
Mercury (Hg)-Total	mg/L	<0.0000100	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00109	0.000221	0.000225	0.000295	0.000275	0.000323	0.000365
Nickel (Ni)-Total	mg/L	0.0100	0.00088	0.00117	0.00152	<0.00100	0.00181	0.00263
Selenium (Se)-Total	mg/L	0.000060	<0.000050	<0.000050	<0.000050	<0.000100	0.000053	0.000067
Silver (Ag)-Total	mg/L	0.000021	<0.000010	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	<0.000010	0.000016
Zinc (Zn)-Total	mg/L	0.0275	<0.0030	0.0082	0.0051	<0.0060	0.0232	0.0070
Oil and Grease	mg/L	<5.0	<5.0	<5.0	8.6	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent	Absent
Chlorophyll-a	ug					1.37		

^ Indicates duplicate sample.

Table D1 - 11. Water Sampling Monitoring Program Results for ST-7a/MMS-4b (HOP-1), January to June 2024

Sample ID		ST-7a	ST-7a	ST-7a	ST-7a	ST-7a	ST-7a
ALS ID		YL2400038-001	YL2400106-001	YL2400184-001	EO2402584-001	YL2400357-001	YL2400611-001
Date Sampled		1/10/2024	2/7/2024	3/6/2024	4/9/2024	5/1/2024	6/5/2024
Parameter	Units						
pH	pH	7.69	7.89	8.04	7.78	8.07	8.02
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Chloride (Cl)	mg/L		111		115	116	114
Cyanide, Free	mg/L	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total	mg/L	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0050
Ammonia, Total (as N)	mg/L	0.0082	0.0165	0.0208	0.0108	<0.0050	<0.0050
Nitrate (as N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	0.0025	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.0038	<0.0050	0.0028	0.0060	0.0033	0.0030
Aluminum (Al)-Total	mg/L	0.0064	0.0058	0.0045	0.0059	0.0050	0.0136
Arsenic (As)-Total	mg/L	0.00026	0.00025	0.00030	0.00028	0.00029	0.00025
Cadmium (Cd)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	15	14.2	14.8	14.8	15.8	14.8
Chromium (Cr)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total	mg/L	0.00108	0.00204	0.00120	0.00164	0.00129	0.00116
Iron (Fe)-Total	mg/L	0.027	0.060	0.017	0.049	0.062	0.022
Lead (Pb)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000776	0.000807	0.000752	0.000710	0.000781	0.000750
Nickel (Ni)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium (Se)-Total	mg/L	<0.00050	<0.000050	<0.000050	0.000051	<0.000050	<0.000050
Silver (Ag)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Zinc (Zn)-Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Sample ID		ST-7a	ST-7a	ST-7a	ST-7a	ST-7a	ST-7a
ALS ID		YL2400038-001	YL2400106-001	YL2400184-001	EO2402584-001	YL2400357-001	YL2400611-001
Date Sampled		1/10/2024	2/7/2024	3/6/2024	4/9/2024	5/1/2024	6/5/2024
Parameter	Units						
Biochemical Oxygen Demand (BOD ₅)	mg/L	3	2	3.0	<2.0	<2.0	<2.0
Fecal Coliforms	MPN/100 mL	<0.1	<0.1	<1.0	<1	<1	<1
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent

^ Indicates duplicate sample

Table D1 - 12. Water Sampling Monitoring Program Results for ST-7a/MMS-4b (HOP-1), July to December 2024

Sample ID		ST-7a	ST-7a	ST-7a	ST-7a	ST-7a	ST-7a
ALS ID		YL2400947-001	YL2401259-001	YL2401549-001	EO2409565-001	EO2410504-001	EO2411010-001
Date Sampled		7/17/2024	8/21/2024	9/18/2024	10/22/2024	11/19/2024	12/10/2024
Parameter	Units						
pH	pH	8.00	7.91	7.95	7.91	7.93	7.81
Total Suspended Solids	mg/L	4.4^	11.0^	<3.0	13.9^	3.8	4.00
Chloride (Cl)	mg/L	97.1	97.3	98.2	102.00	103	105.00
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ammonia, Total (as N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0121
Nitrate (as N)	mg/L	<0.0050	0.0377	<0.0050	0.0354	<0.0050	<0.0050
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	0.02	<0.0010	0.0010
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.0013
Phosphorus (P)-Total	mg/L	0.0056	0.0225	0.0033	0.02	0.0068	0.0063
Aluminum (Al)-Total	mg/L	0.0972	0.462	0.0386	0.36	0.240	0.176
Arsenic (As)-Total	mg/L	0.00026	0.00043	0.00024	0.00032	0.00029	0.00028
Cadmium (Cd)-Total	mg/L	<0.0000050	0.0000071	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	12.4	13.6	13.8	12.9	14.3	17.1
Chromium (Cr)-Total	mg/L	0.00054	0.00140	<0.00050	0.00095	0.00055	0.00057
Copper (Cu)-Total	mg/L	0.00107	0.00368	0.00085	0.00152	0.00136	0.00135
Iron (Fe)-Total	mg/L	0.111	0.699	0.035	0.35	0.216	0.14
Lead (Pb)-Total	mg/L	<0.000050	0.000260	<0.000050	0.000154	0.000080	0.000053
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000668	0.000661	0.000646	0.00	0.000693	0.000787
Nickel (Ni)-Total	mg/L	<0.00050	0.00118	<0.00050	0.00067	<0.00050	<0.00050
Selenium (Se)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Silver (Ag)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Zinc (Zn)-Total	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Sample ID		ST-7a	ST-7a	ST-7a	ST-7a	ST-7a	ST-7a
ALS ID		YL2400947-001	YL2401259-001	YL2401549-001	EO2409565-001	EO2410504-001	EO2411010-001
Date Sampled		7/17/2024	8/21/2024	9/18/2024	10/22/2024	11/19/2024	12/10/2024
Parameter	Units						
Biochemical Oxygen Demand (BOD ₅)	mg/L	<2.0	<2.0	2.0	<2.0	<2.0	<2.0
Fecal Coliforms	MPN/100mL	113*	13.0*	<1.0	<1.0	<1	<1
Oil and Grease	mg/L	<5.0	<5.0	<5.0	15.1**	<5.0	<5.0
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent

Note:

[^] Windy conditions resulted in elevated TSS results

* Sample collected directly from lake with large amount of water fowl in the area.

** Suspected sample cross contamination

Table D1 - 13. Water Sampling Monitoring Program Results for ST-8, January to May 2024

Sample ID		ST-8	ST-8	ST-8^	ST-8	ST-8^	ST-8	ST-8^	ST-8	Part F Item 5(b)	
ALS ID		YL240003 9-001	YL24001 07-001	YL24001 07-002	YL24001 83-001	YL24001 83-002	EO24025 96-001	EO24025 96-002	YL24003 59-001	Max Average Concentr ation (mg/L)	Max Concentr ation of Any Grab Sample (mg/L)
Date Sampled		1/10/24	2/7/24	2/7/24	3/6/24	3/6/24	4/9/24	4/9/24	5/1/24		
Parameter	Units										
pH	pH	7.67	7.87	7.83	8.05	8	7.44	7.59	8.01	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	8.6	8.2	<3.0	100	100
Biochemical Oxygen Demand (BOD ₅)	mg/L	3	2	2	3	2	<2.0	<2.0	<2.0	80	160
Fecal Coliforms	CFU/100 mL	<1.0	<1.0	<1.0	1	1	<10	<10	<1	10,000	10,000
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	No Visible Sheen	No Visible Sheen

^ Indicates duplicate sample

Bold indicates exceedance of part F Item 5(b) maximum *average* concentration

Table D1 - 14. Water Sampling Monitoring Program Results for ST-8, June to December 2024

Sample ID		ST-8	ST-8	ST-8	ST-8	ST-8	ST-8	ST-8	Part F Item 5(b)	
ALS ID		YL24006 16-001	YL240094 9-001	YL240125 5-001	YL240154 7-001	EO240956 6-001	EO241050 6-001	EO241100 8-001	Max Average Concentrat ion (mg/L)	Max Concentrat ion of Any Grab Sample (mg/L)
Date Sampled		6/6/24	7/17/24	8/21/24	9/19/24	10/22/24	11/18/24	12/10/24		
Parameter	Units									
pH	pH	8.15	8.37	7.96	7.94	7.86	7.69	7.47	6.0-9.5	6.0-9.5
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	4.1	5.0	7.2	100	100
Biochemical Oxygen Demand (BOD ₅)	mg/L	2.0	4	6.0	7.0	<2.0	3.7	<2.0	80	160
Fecal Coliforms	CFU/100 mL	13.0	<1.0	<1.0	<1.0	<10	<10	<10	10,000	10,000
Oil and Grease	mg/L	5.8	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	Absent	Absent	Absent	Absent	Absent	No Visible Sheen	No Visible Sheen

^ Indicates duplicate sample

Bold indicates exceedance of part F Item 5(b) maximum *average* concentration

Table D1 - 15. Treated Effluent Released from the Doris Sewage Treatment Plant (ST-8), 2024

Month	Monthly Volume (m³)	Cumulative Volume (m³)
January	455	455
February	501	956
March	501	1,457
April	603	2,060
May	732	2,792
June	816	3,608
July	747	4,355
August	873	5,228
September	873	6,101
October	873	6,974
November	802	7,776
December	617	8,393
Total Volume of Treated Effluent Released 2024 (m³)		8,393

Values rounded to nearest whole cubic metre.

Table D1 - 16. Volume of Sludge Removed from the Doris Sewage Treatment Plant, 2024

Month	Monthly Volume (m³)	Cumulative Volume (m³)
January	7.2	7.2
February	18.6	25.8
March	17.3	43.1
April	16.0	59.1
May	22.5	81.6
June	22.4	104.0
July	28.0	132.0
August	26.7	158.7
September	15.6	174.3
October	17.0	191.3
November	17.8	209.1
December	12.9	222.0
Total Volume of Sludge Produced in 2024 (m³)		222.0

All sewage sludge reported to the TIA for disposal

Table D1 - 17. Water Quality Monitoring Program Results for ST-9, June to August 2024

Sample ID		ST-9	ST-9
Lab ID		EO2405173-001	YL2401255-002
Date Sampled		6/25/2024	8/21/2024
Parameter	Units		
pH	pH units	7.69	7.85
Total Suspended Solids	mg/L	45.4	66.6
Biochemical Oxygen Demand (BOD5)	mg/L	2.9	<2.0
Fecal Coliform	mpn/100ml	<1	2.0
Oil and Grease	mg/L	<5.0	<5.0
Oil And Grease (Visible Sheen)	none	Absent	Absent

ST-11 Reagent and Cyanide Storage Containment Area Sump

This facility was constructed and first used in 2017. The storage area is a lined berm area divided into two cells to allow separation of different chemical products. Each cell has a water collection sump to facilitate water management (ST-11a and ST-11b). The ST-11b station was decommissioned in 2020 and the ST-11a was decommissioned in 2022.

Hydrology Monitoring – Doris Lake Water Level and Ice Thickness (ST-12) and Doris Creek Flow (TL-2)

Lake level monitoring in Doris Lake (ST-12) and stream flow monitoring in Doris Creek (TL-2) was conducted in 2024 as outlined in Schedule I of the license. Stations were visited throughout the open water season to perform water level surveys and manual discharge measurements.

Doris Lake Station (ST-12)

Doris Lake-2 monitoring station collected data from January 1st through to December 31st, 2024, as summarized in Table D1 - 18, and continues to collect data. In September of 2017, the Doris Lake monitoring location was moved to the north to facilitate the installation of two, year-round pressure transducers and to avoid potential interactions with mine construction. The new location was named Doris Lake-2 (13W 433547 7558601) and consists of two Solinst Leveloggers installed at depths of approximately 7 metres to monitor lake level year-round. The Leveloggers are coupled with a Solinst Barologger, located at Doris Camp, to compensate for changes in atmospheric pressure. The Leveloggers and Barologger record a pressure reading every 15 minutes. Agnico personnel were unable to perform under ice water level surveys during the 2024 monitoring year due to damaged equipment, and logistical issues surrounding the replacement of the damaged equipment. Three water level surveys were performed between June 24 and September 22, 2024 to confirm the proper functioning of the pressure transducer.

Doris Creek Flow (TL-2)

The Doris Creek stream flow monitoring station TL-2 (13W 434059 7559504) was reactivated on June 15, 2024 after being deactivated during the winter. The station uses an Onset MX-2001 vented pressure transducer, recording water level readings every 15 minutes. The station operated during the open water season until September 14, 2024, when the station was deactivated for winter. During the 2024 open water season, Agnico Eagle personnel made a combined five visits to the station. Water level (stage) measured by the pressure transducer every 15 minutes was converted to discharge using a stage-discharge curve, also known as a rating curve. The rating curve at TL-2 is well established, with small changes from year to year due to aggradation and scour of the channel. Minor adjustments to the rating curve were made for 2024. Flow during periods that were not observed during the 2024 open water season was estimated using a linear regression between Doris Lake water level and monitored flow at TL-2, and exponential growth/decay curves from May 20 to July 15 and September 14 to November 20. It is estimated that there is no flow in Doris Creek prior to May 20 or after November 20. Discharge at the TL-2 hydrometric monitoring station is reported as mean daily discharge in cubic meters per second (m³/s). Table D1 - 18 and Table D1 - 19 provides the results of this monitoring.

Table D1 - 18. Summary of Doris Lake Mean Daily Water Levels, in Metres above Sea Level (masl), 2024

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	21.757	21.771	21.776	21.771	21.755	22.266	21.986	21.816	21.722	21.883	21.834	21.768
2	21.759	21.772	21.781	21.768	21.754	22.261	21.978	21.812	21.721	21.889	21.822	21.761
3	21.763	21.784	21.778	21.771	21.753	22.253	21.964	21.809	21.718	21.897	21.810	21.758
4	21.757	21.793	21.783	21.775	21.751	22.243	21.956	21.804	21.719	21.911	21.801	21.750
5	21.763	21.783	21.780	21.771	21.749	22.229	21.952	21.801	21.717	21.924	21.800	21.757
6	21.761	21.786	21.777	21.768	21.748	22.216	21.950	21.798	21.715	21.933	21.797	21.758
7	21.761	21.785	21.775	21.766	21.748	22.205	21.940	21.793	21.715	21.937	21.795	21.755
8	21.755	21.781	21.774	21.763	21.750	22.191	21.931	21.789	21.714	21.937	21.795	21.752
9	21.754	21.782	21.781	21.765	21.756	22.182	21.926	21.787	21.714	21.937	21.797	21.754
10	21.754	21.787	21.776	21.769	21.763	22.175	21.934	21.786	21.707	21.935	21.797	21.760
11	21.751	21.785	21.781	21.764	21.764	22.163	21.931	21.780	21.705	21.935	21.794	21.763
12	21.751	21.778	21.790	21.762	21.759	22.151	21.923	21.778	21.708	21.932	21.795	21.761
13	21.762	21.782	21.786	21.762	21.757	22.140	21.917	21.775	21.708	21.930	21.795	21.758
14	21.758	21.784	21.776	21.762	21.758	22.130	21.910	21.770	21.707	21.921	21.796	21.761
15	21.754	21.786	21.780	21.766	21.764	22.125	21.901	21.768	21.707	21.925	21.790	21.762
16	21.755	21.786	21.788	21.770	21.767	22.116	21.897	21.763	21.707	21.932	21.785	21.762
17	21.752	21.783	21.787	21.767	21.766	22.106	21.886	21.757	21.707	21.928	21.783	21.760
18	21.755	21.789	21.792	21.764	21.768	22.098	21.878	21.753	21.706	21.923	21.778	21.761
19	21.764	21.781	21.788	21.766	21.775	22.088	21.877	21.749	21.714	21.939	21.778	21.764
20	21.770	21.785	21.783	21.769	21.785	22.085	21.870	21.747	21.723	21.973	21.783	21.767
21	21.772	21.781	21.782	21.766	21.805	22.079	21.862	21.743	21.728	21.991	21.782	21.768
22	21.775	21.789	21.785	21.763	21.837	22.070	21.854	21.740	21.730	22.000	21.781	21.777
23	21.773	21.785	21.785	21.763	21.866	22.061	21.854	21.739	21.731	22.004	21.779	21.772
24	21.775	21.787	21.776	21.764	21.897	22.051	21.847	21.739	21.733	21.994	21.776	21.785
25	21.772	21.777	21.771	21.765	21.984	22.043	21.838	21.738	21.738	21.971	21.774	21.785
26	21.772	21.778	21.773	21.762	22.097	22.033	21.833	21.736	21.747	21.947	21.773	21.781
27	21.771	21.784	21.771	21.761	22.180	22.023	21.829	21.736	21.768	21.925	21.771	21.789
28	21.775	21.780	21.779	21.761	22.220	22.013	21.829	21.733	21.802	21.904	21.768	21.787
29	21.769	21.777	21.785	21.760	22.251	22.003	21.828	21.730	21.830	21.881	21.764	21.789
30	21.769		21.785	21.758	22.265	21.995	21.823	21.726	21.863	21.867	21.767	21.797
31	21.771		21.785		22.267		21.819	21.724		21.848		21.813
Minimum	21.763	21.783	21.781	21.765	21.866	22.126	21.894	21.765	21.731	21.931	21.789	21.769
Maximum	21.775	21.793	21.792	21.775	22.267	22.266	21.986	21.816	21.863	22.004	21.834	21.813
Mean	21.751	21.771	21.771	21.758	21.748	21.995	21.819	21.724	21.705	21.848	21.764	21.750

Estimated and modelled values are italicized.

Table D1 - 19. Summary of Doris Creek (TL-2) Daily Flow Rate, in Cubic Metres per Second (m³/s), 2024

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	-	-	-	-	-	2.541	1.212	0.428	0.184	0.565	-	-
2	-	-	-	-	-	2.514	1.171	0.412	0.175	0.580	-	-
3	-	-	-	-	-	2.479	1.104	0.399	0.171	0.599	-	-
4	-	-	-	-	-	2.430	1.080	0.381	0.176	0.635	-	-
5	-	-	-	-	-	2.366	1.055	0.379	0.180	0.665	-	-
6	-	-	-	-	-	2.304	1.054	0.369	0.176	0.688	-	-
7	-	-	-	-	-	2.252	1.003	0.359	0.166	0.696	-	-
8	-	-	-	-	-	2.185	0.962	0.340	0.165	0.696	-	-
9	-	-	-	-	-	2.140	0.937	0.334	0.165	0.696	-	-
10	-	-	-	-	-	2.110	0.970	0.338	0.147	0.693	-	-
11	-	-	-	-	-	2.051	0.964	0.306	0.147	0.692	-	-
12	-	-	-	-	-	1.995	0.946	0.296	0.161	0.686	-	-
13	-	-	-	-	0.001	1.941	0.925	0.287	0.165	0.680	-	-
14	-	-	-	-	0.002	1.896	0.891	0.277	0.140	0.658	-	-
15	-	-	-	-	0.005	1.870	0.828	0.270	0.140	0.669	-	-
16	-	-	-	-	0.011	1.868	0.779	0.266	0.140	0.685	-	-
17	-	-	-	-	0.024	1.824	0.739	0.256	0.140	0.674	-	-
18	-	-	-	-	0.053	1.756	0.719	0.235	0.137	0.664	-	-
19	-	-	-	-	0.117	1.699	0.685	0.235	0.158	0.368	-	-
20	-	-	-	-	0.259	1.660	0.665	0.231	0.180	0.204	-	-
21	-	-	-	-	0.354	1.634	0.627	0.210	0.191	0.113	-	-
22	-	-	-	-	0.507	1.595	0.591	0.204	0.196	0.063	-	-
23	-	-	-	-	0.644	1.560	0.568	0.206	0.200	0.035	-	-
24	-	-	-	-	0.790	1.518	0.558	0.202	0.205	0.019	-	-
25	-	-	-	-	1.203	1.472	0.513	0.204	0.215	0.011	-	-
26	-	-	-	-	1.737	1.426	0.492	0.205	0.236	0.006	-	-
27	-	-	-	-	2.133	1.385	0.466	0.200	0.289	0.003	-	-
28	-	-	-	-	2.320	1.353	0.473	0.177	0.369	0.002	-	-
29	-	-	-	-	2.466	1.303	0.461	0.193	0.439	0.001	-	-
30	-	-	-	-	2.535	1.257	0.451	0.189	0.519	-	-	-
31	-	-	-	-	2.546	-	0.436	0.178	-	-	-	-
Minimum	0.000	0.000	0.000	0.000	0.932	1.879	0.785	0.276	0.202	0.439	0.000	0.000
Maximum	0.000	0.000	0.000	0.000	2.546	2.541	1.212	0.428	0.519	0.696	0.000	0.000
Mean	0.000	0.000	0.000	0.000	0.001	1.257	0.436	0.177	0.137	0.001	0.000	0.000

Estimated and modelled values are italicized.

TL-1 TIA Monitoring

This section presents the results of monitoring of the Tailings Impoundment Area (TIA) as per the applicable sections of Part F (Conditions Applying to Waste Deposit and Waste Management), Part I (Conditions Applying to General and Aquatic Effects Monitoring) and Schedule I of the water license.

Table D1 - 20 provides the volume of water discharged from the TIA to Roberts Bay in 2024. Water quality sampling and Acute Lethality testing was conducted as outlined in the Metal and Diamond Mining Effluent Regulations; no exceedance of the discharge criteria occurred.

Tailings deposition into the TIA remained suspended in 2024. Reclaim water was not utilized to support the mill in 2024.

Water quality samples were collected at the TIA Reclaim Pipeline monitoring station TL-1 from January to December, both from a sample port on the reclaim pump and from a sample port in the Effluent Water Treatment Plant that was commissioned in 2023. Sampling results are provided in Table D1 - 21 and Table D1 - 22.

Table D1 - 20. Volume of Water Pumped from TIA to Roberts Bay, 2024

Month	Number of Days of Discharge	Discharge Volume (m ³)	Exceedances of Discharge Criteria*
January	31	241,248	0
February	29	207,376	0
March	31	228,703	0
April	30	207,485	0
May	28	388,416	0
June	30	217,442	0
July	24	177,895	0
August	19	115,437	0
September	30	209,359	0
October	30	197,475	0
November	14	74,693	0
December	31	190,634	0
Annual Cumulative	327	2,456,163	0

* Discharge criteria as outlined in Metal and Diamond Mining Effluent Regulations.
Acute Lethality testing conducted as per Part F Item 22 and Part I Item 14.

TL-5, TL6 and TL7a/b Tailings Monitoring

Mill operations were shut down on October 5 2021, with the final closure of the mill taking place on March 13, 2022. As a result, no tailings were generated in 2024 and stations TL-5, TL-6 and TL-7 were inactive for the duration of the year.

TL-11 Underground Seepage Monitoring

Visual inspections were conducted of all safely accessible backfilled underground stopes in September and November 2024 to identify seepage (TL-11) from the stopes. Where seepage was observed, water samples were collected. Results of this sampling is provided in Table D1 - 23 and Table D1 - 24.

Table D1 - 21. Water Quality in the Tailings Impoundment Area (TL-1), January to June 2024

Sample ID		TL-1	TL-1	TL-1	TL-1	TL-1^	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	
ALS ID		EO240 0055- 001	EO240 0202- 001	EO240 0435- 001	EO240 0519- 001	EO240 0519- 002	EO240 0713- 001	EO240 0923- 001	EO240 1115- 001	EO240 1286- 001	EO240 1462- 001	EO240 1626- 001	EO240 1817- 001	EO240 2023- 001	EO240 2221- 001	EO240 2416- 001	EO240 2581- 001	EO240 2790- 001	EO240 2960- 001	EO240 3145- 001	EO240 3360- 001	EO240 3661- 001	EO240 3841- 001	EO240 4100- 001	EO240 4348- 001	EO240 4616- 001	EO240 4910- 001	EO240 5168- 001
Date Sampled		1/2/20 24	1/9/20 24	1/16/2 024	1/23/2 024	1/23/2 024	1/30/2 024	2/6/20 24	2/13/2 024	2/20/2 024	2/27/2 024	3/5/20 24	3/12/2 024	3/19/2 024	3/26/2 024	4/2/20 24	4/9/20 24	4/16/2 024	4/23/2 024	4/30/2 024	5/7/20 24	5/14/2 024	5/21/2 024	5/28/2 024	6/4/20 24	6/11/2 024	6/18/2 024	6/25/2 024
Parameter	Unit																											
pH	pH	7.84	7.85	7.55	7.6	7.54	7.42	7.47	7.54	7.77	7.49	7.47	7.46	7.43	7.49	7.42	7.33	7.30	7.44	7.31	7.65	7.69	7.69	7.75	8.11	7.75	7.68	7.75
Total Suspended Solids	mg/L	22	15.6	<2.0	<2.0	<2.0	<2.0	12	2.2	<2.0	<2.0	46.4	<2.0	<2.0	<2.0	47.8	<2.0	<2.0	<2.0	<2.0	9.8	24.4	<2.0	<2.0	22.6	<2.0	<2.0	2.5
Total Dissolved Solids	mg/L	4690	4530					4920				5110				5230					5660				5390			
Chloride (Cl)	mg/L	2260	2320					2420				2480				2550					2540				2700			
Cyanide, Free	mg/L	<0.005 0	<0.020 0					<0.005 0				<0.005 0				<0.005 0					<0.005 0				<0.005 0			
Cyanide, Total	mg/L	0.0058	<0.020 0	<0.020 0	<0.020 0	0.007	0.0063	0.0083	<0.020 0	0.009	0.0064	0.0093	<0.020 0	<0.100	<0.020 0	<0.020 0	<0.020 0	<0.020 0	0.0120	<0.100	<0.020 0	0.0136	<0.020 0	0.0146	0.0144	0.0160	0.0166	0.0107
Ammonia, Total (as N)	mg/L	0.264	0.259	0.26	0.236	0.237	0.249	0.239	0.228	0.215	0.204	0.205	0.203	0.184	0.170	0.150	0.146	0.105	0.0879	0.0605	0.0530	0.0387	0.0423	0.0416	0.0386	0.0300	0.0204	0.0201
Nitrate (as N)	mg/L	3.74	3.79					4.03				4.04				4.15					3.88				4.05			
Nitrite (as N)	mg/L	0.0916	0.127					0.0937				0.0747				0.0433					<0.010 0				0.0233			
Orthophosphate -Dissolved (as P)	mg/L	0.017	0.0179					0.0218				0.0239				0.0272					0.0200				0.0264			
Phosphorus (P)-Total	mg/L	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	0.0337	<0.250	<0.250	<0.250	0.0407	<0.250	<0.250	<0.250	0.0440	<0.250	<0.250	<0.250	<0.250	0.0413	<0.250	<0.250	<0.250	0.0433	<0.250	<0.250	<0.250
Aluminum (Al)-Total	mg/L	0.0197	0.0192	0.0171	0.0187	0.0154	0.0210	<0.015 0	0.0150	<0.015 0	<0.015 0	0.0153	0.0180	<0.015 0	0.0165	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	0.0157	<0.015 0	0.0152	0.0198	0.0224	0.0212	0.0207	0.0294
Arsenic (As)-Total	mg/L	0.0020 6	0.0020 9	0.0022 0	0.0024 2	0.0021 8	0.0023 7	0.0020 1	0.0023 2	0.0021 4	0.0023 0	0.0021 1	0.0022 0	0.0020 6	0.0022 6	0.0020 1	0.0021 0	0.0021 1	0.0022 4	0.0020 3	0.0021 5	0.0021 5	0.0021 3	0.0022 3	0.0023 1	0.0021 7	0.0020 5	0.0021 6
Cadmium (Cd)-Total	mg/L	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	0.0000 304	<0.000 0250	0.0000 306	0.0000 278	<0.000 0250	0.0000 318	0.0000 271	<0.000 0250	0.0000 336	0.0000 260	0.0000 318	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	0.0000 316	<0.000 0250	0.0000 266
Calcium (Ca)-Total	mg/L	198	196	207	212	204	201	210	204	207	207	206	205	220	196	190	208	208	211	210	217	209	216	209	227	227	270	225
Chromium (Cr)-Total	mg/L	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	0.0297	0.0081 8	<0.002 50	<0.002 50	<0.002 50	0.0081 5	<0.002 50	<0.002 50	<0.002 50	0.0030 4	<0.002 50	<0.002 50	<0.002 50	<0.002 50	0.0031 6	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	0.0052 7	<0.002 50
Copper (Cu)-Total	mg/L	0.0138	0.0137	0.0139	0.0153	0.0139	0.0168	0.0160	0.0151	0.0162	0.0146	0.0182	0.0149	0.0145	0.0158	0.0311	0.0151	0.0151	0.0153	0.0162	0.0324	0.0202	0.0163	0.0168	0.0176	0.0169	0.0186	0.0176
Iron (Fe)-Total	mg/L	0.099	0.096	0.100	0.109	0.101	0.215	0.136	0.106	0.111	0.109	0.135	0.107	0.107	0.120	0.111	0.109	0.097	0.110	0.120	0.223	0.141	0.138	0.140	0.153	0.133	0.147	0.138
Lead (Pb)-Total	mg/L	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 050	<0.000 250	<0.000 250	<0.000 250	<0.000 250	0.0003 21	<0.000 250	<0.000 250	0.0005 37	0.0005 50	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250
Magnesium (Mg)-Total	mg/L	144	150	155	160	148	160	153	163	160	164	166	155	153	161	154	170	155	162	167	171	170	169	165	181	172	161	160
Mercury (Hg)-Total	mg/L	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050
Molybdenum (Mo)-Total	mg/L	0.0053 1	0.0055 4	0.0057 0	0.0057 7	0.0054 3	0.0063 1	0.0059 2	0.0055 3	0.0051 3	0.0054 1	0.0059 5	0.0056 4	0.0054 8	0.0057 9	0.0053 6	0.0053 6	0.0053 2	0.0054 8	0.0056 5	0.0048 9	0.0056 7	0.0055 0	0.0054 8	0.0059 9	0.0064 9	0.0055 4	0.0059 7
Nickel (Ni)-Total	mg/L	0.0075 4	0.0078 7	0.0081 1	0.0083 0	0.0077 0	0.0184	0.0142	0.0083 9	0.0115	0.0078 3	0.0165	0.0079 4	0.0077 1	0.0082 6	0.0124	0.0075 9	0.0078 6	0.0079 3	0.0093 4	0.0120	0.0088 8	0.0083 7	0.0080 5	0.0092 6	0.0086 8	0.0125	0.0083 8
Potassium (K)-Total	mg/L	49.9	51.1	51.1	55.0	51.0	51.8	48.7	53.7	53.4	52.4	53.8	51.8	51.6	52.9	52.3	53.7	52.3	52.9	56.3	51.8	53.5	56.9	55.6	56.6	54.3	56.5	53.0
Selenium (Se)-Total	mg/L	0.0002 73	0.0003 55	0.0002 99	<0.000 250	0.0002 64	<0.000 250	0.0004 74	0.0003 88	0.0002 94	0.0003 15	0.0003 28	0.0002 83	0.0002 94	<0.000 250	0.0003 42	0.0002 72	<0.000 250	0.0002 58	0.0002 60	0.0003 82	0.0003 01	0.0003 51	0.0003 38	0.0003 72	0.0003 82	0.0002 72	0.0003 01
Silver (Ag)-Total	mg/L	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050
Sodium (Na)-Total	mg/L	1320	1470	1430	1530	1460	1440	1390	1530	1470	1440	1520	1480	1410	1450	1380	1530	1420	1410	1550								



Sample ID		TL-1	TL-1	TL-1	TL-1	TL-1^	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	
ALS ID		EO240 0055- 001	EO240 0202- 001	EO240 0435- 001	EO240 0519- 001	EO240 0519- 002	EO240 0713- 001	EO240 0923- 001	EO240 1115- 001	EO240 1286- 001	EO240 1462- 001	EO240 1626- 001	EO240 1817- 001	EO240 2023- 001	EO240 2221- 001	EO240 2416- 001	EO240 2581- 001	EO240 2790- 001	EO240 2960- 001	EO240 3145- 001	EO240 3360- 001	EO240 3661- 001	EO240 3841- 001	EO240 4100- 001	EO240 4348- 001	EO240 4616- 001	EO240 4910- 001	EO240 5168- 001
Date Sampled		1/2/20 24	1/9/20 24	1/16/2 024	1/23/2 024	1/23/2 024	1/30/2 024	2/6/20 24	2/13/2 024	2/20/2 024	2/27/2 024	3/5/20 24	3/12/2 024	3/19/2 024	3/26/2 024	4/2/20 24	4/9/20 24	4/16/2 024	4/23/2 024	4/30/2 024	5/7/20 24	5/14/2 024	5/21/2 024	5/28/2 024	6/4/20 24	6/11/2 024	6/18/2 024	6/25/2 024
Parameter	Unit																											
Zinc (Zn)-Total	mg/L	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0
Fecal Coliforms	MPN /100 mL	<1	<1					<1				<1				<1									<1			
Oil and Grease	mg/L	<5.0	<5.0					<5.0				<5.0				<5.0					<5.0				<5.0			
Oil And Grease (Visible Sheen)		Absent	Absent					Absent				Absent				Absent					Absent				Absent			
Benzene	mg/L	<0.000 50	<0.000 50					<0.000 50				<0.000 50				<0.000 50									<0.000 50			
Toluene	mg/L	<0.000 50	<0.000 50					<0.000 50				<0.000 50				<0.000 50									<0.000 50			
Ethylbenzene	mg/L	<0.000 50	<0.000 50					<0.000 50				<0.000 50				<0.000 50									<0.000 50			
Dissolved Oxygen	mg/L																											
Redox Potential	mV																											
Biochemical Oxygen Demand (BOD5)	mg/L		3.1																									

^ Indicates duplicate sample.



Table D1 - 22. Water Quality in the Tailings Impoundment Area (TL-1), July to December 2024

Sample ID		TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1^	TL-1	TL-1	TL-1^	TL-1	TL1^	TL-1	TL-1	TL-1	TL-1^		
ALS ID		EO240 5382- 001	EO240 5682- 001	EO240 5962- 001	EO240 6156- 001	EO240 6684- 001	EO240 6959- 001	EO240 7411- 001	EO240 7631- 001	EO240 7897- 001	EO240 8160- 001	EO240 8389- 001	EO240 8657- 001	EO240 8970- 001	EO240 9227- 001	EO240 9568- 001	EO240 9568- 002	EO240 9886- 001	EO241 0639- 001	EO241 0639- 002	EO241 0869- 001	EO241 0869- 002	EO241 1012- 001	EO241 1219- 001	EO241 1402- 001	EO241 1402- 002	
Date Sampled		7/2/202 4	7/9/202 4	7/16/20 24	7/23/20 24	8/6/202 4	8/13/20 24	8/27/20 24	9/3/202 4	9/10/20 24	9/17/20 24	9/24/20 24	10/1/20 24	10/8/20 24	10/15/2 024	10/22/2 024	10/22/2 024	10/29/2 024	11/26/2 024	11/26/2 024	12/3/20 24	12/3/20 24	12/10/2 024	12/17/2 024	12/24/2 024	12/24/2 024	
Parameter	Unit																										
pH	pH	7.84	7.87	7.88	7.84	7.69	7.69	9.05	8.67	8.39	8.37	8.25	8.12	8.08	7.98	8.03	8.03	8.06	7.75	7.75	7.49	7.49	7.77	7.49	7.56	7.56	
Total Suspended Solids	mg/L	2.8	2.1	4.8	<2.0	32.6	<2.0	<2.0	19.9	2.8	3.5	2.7	45.5	13.5	12.4	14.5	13.6	6.1	4.3	3.4	30.5	27.5	4.3	3.6	<2.0	<2.0	
Total Dissolved Solids	mg/L	5540							3760				3450								3660	3620					
Chloride (Cl)	mg/L	2540							1760				1790								1910	1920					
Cyanide, Free	mg/L	<0.005 0							<0.005 0				<0.005 0								<0.005 0	<0.005 0					
Cyanide, Total	mg/L	<0.200	<0.020 0	0.0099	0.0132	<0.020 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	<0.005 0	0.0050	0.0055	0.0060	<0.005 0	<0.005 0	
Ammonia, Total (as N)	mg/L	0.0138	0.0599	0.129	0.0696	0.0569	0.0184	0.0114	0.0167	0.0170	0.0757	0.145	0.222	0.265	0.294	0.301	0.304	0.290	0.310	0.311	0.330	0.329	0.339	0.350	0.0336	0.0243	
Nitrate (as N)	mg/L	3.71				2.35			0.983				0.560								0.664	0.638					
Nitrite (as N)	mg/L	0.0012				<0.010 0			0.0262				0.0393								0.0545	0.0506					
Orthophosphate-Dissolved (as P)	mg/L	0.0015				0.0010			0.0013				0.0070								0.0054	0.0053					
Phosphorus (P)-Total	mg/L	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	0.0467	<0.250	<0.250	<0.250	0.0698	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	0.0331	0.0306	<0.250	<0.250	<0.250	<0.250
Aluminum (Al)-Total	mg/L	<0.030 0	0.0277	0.0273	0.0168	0.0405	0.0252	<0.015 0	<0.015 0	0.0202	0.0690	0.0483	0.320	0.312	0.425	0.338	0.447	0.295	0.239	0.222	0.233	0.206	0.208	0.204	0.0815	0.0983	
Arsenic (As)-Total	mg/L	0.0022 7	0.0021 2	0.0021 2	0.0020 4	0.0023 0	0.0027 5	0.0023 1	0.0023 2	0.0024 2	0.0024 1	0.0026 3	0.0024 6	0.0028 2	0.0028 2	0.0023 9	0.0024 1	0.0023 7	0.0023 8	0.0023 2	0.0023 0	0.0020 8	0.0024 0	0.0022 4	0.0015 1	0.0017 5	
Cadmium (Cd)-Total	mg/L	<0.000 0500	<0.000 0250	<0.000 0250	0.0000 338	0.0000 252	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	<0.000 0250	
Calcium (Ca)-Total	mg/L	210	255	205	197	174	160	174	150	146	159	165	165	156	170	147	144	153	175	167	166	153	199	157	154	157	
Chromium (Cr)-Total	mg/L	<0.005 00	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	<0.002 50	0.0030 4	0.0030 3	
Copper (Cu)-Total	mg/L	0.0157	0.0173	0.0181	0.0154	0.0150	0.0123	0.0119	0.0124	0.0128	0.0124	0.0135	0.0124	0.0156	0.0132	0.0126	0.0131	0.0130	0.0110	0.0113	0.0111	0.0105	0.0110	0.0107	0.0109	0.0110	
Iron (Fe)-Total	mg/L	0.126	0.145	0.140	0.085	0.076	0.135	0.088	0.106	0.172	0.274	0.242	0.696	0.809	1.06	0.806	0.899	0.701	0.490	0.496	0.468	0.450	0.442	0.434	0.333	0.335	
Lead (Pb)-Total	mg/L	<0.000 500	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	0.0003 31	0.0002 77	0.0003 03	0.0003 33	0.0003 91	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	<0.000 250	
Magnesium (Mg)-Total	mg/L	170	165	172	158	137	122	116	117	120	127	122	124	126	118	110	107	110	125	126	118	110	120	113	118	118	
Mercury (Hg)-Total	mg/L	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	0.0000 061	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	<0.000 0050	
Molybdenum (Mo)-Total	mg/L	0.0059 0	0.0057 6	0.0049 4	0.0047 0	0.0046 3	0.0039 5	0.0035 6	0.0038 3	0.0039 5	0.0034 6	0.0038 4	0.0038 6	0.0036 7	0.0039 6	0.0037 3	0.0036 7	0.0038 6	0.0039 7	0.0037 8	0.0039 3	0.0037 5	0.0040 4	0.0039 9	0.0042 5	0.0041 8	
Nickel (Ni)-Total	mg/L	0.0082 4	0.0085 6	0.0075 7	0.0084 7	0.0083 9	0.0069 0	0.0058 6	0.0059 0	0.0057 7	0.0060 6	0.0061 3	0.0069 6	0.0065 6	0.0063 3	0.0058 6	0.0057 0	0.0607	0.0056 6	0.0058 5	0.0057 1	0.0056 2	0.0057 0	0.0059 4	0.773	0.854	
Potassium (K)-Total	mg/L	53.7	57.0	59.1	51.0	43.9	38.3	37.2	34.8	33.5	35.5	39.8	39.2	41.0	37.9	36.1	36.3	35.9	40.9	41.5	39.4	37.9	40.9	36.9	38.8	39.8	
Selenium (Se)-Total	mg/L	<0.000 500	0.0003 57	<0.000 250	0.0003 11	0.0007 68	<0.000 250	<0.000 250	0.0002 53	0.0007 14	0.0002 66	<0.000 250	0.0002 94	0.0003 30	<0.000 250	0.0002 83	<0.000 250	0.0003 31	<0.000 250	0.0002 86	<0.000 250	<0.000 250	0.0002 70	<0.000 250	<0.000 250	<0.000 250	
Silver (Ag)-Total	mg/L	<0.000 100	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	
Sodium (Na)-Total	mg/L	1630	1520	1540	1490	1260	1080	1010	1010	945	1050	1090	1090	1130	1030	963	963	996	1120	1130	1020	998	1070	962	1040	1020	
Thallium (Tl)-Total	mg/L	<0.000 100	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	<0.000 050	
Zinc (Zn)-Total	mg/L	<0.030 0	<0.015 0	<0.015 0	<0.015 0	0.0259	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	<0.015 0	



Sample ID		TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1	TL-1^	TL-1	TL-1	TL-1^	TL-1	TL1^	TL-1	TL-1	TL-1	TL-1^	
ALS ID		EO240 5382-001	EO240 5682-001	EO240 5962-001	EO240 6156-001	EO240 6684-001	EO240 6959-001	EO240 7411-001	EO240 7631-001	EO240 7897-001	EO240 8160-001	EO240 8389-001	EO240 8657-001	EO240 8970-001	EO240 9227-001	EO240 9568-001	EO240 9568-002	EO240 9886-001	EO241 0639-001	EO241 0639-002	EO241 0869-001	EO241 0869-002	EO241 1012-001	EO241 1219-001	EO241 1402-001	EO241 1402-002
Date Sampled		7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/6/2024	8/13/2024	8/27/2024	9/3/2024	9/10/2024	9/17/2024	9/24/2024	10/1/2024	10/8/2024	10/15/2024	10/22/2024	10/22/2024	10/29/2024	11/26/2024	11/26/2024	12/3/2024	12/3/2024	12/10/2024	12/17/2024	12/24/2024	12/24/2024
Parameter	Unit																									
Fecal Coliforms	MPN/100mL	<1				<1			<1				<1								<1	<1				
Oil and Grease	mg/L	<5.0				<5.0			<5.0				<5.0								<5.0	<5.0				
Oil And Grease (Visible Sheen)		Absent				Absent			Absent				Absent								Absent	Absent				
Benzene	mg/L	<0.00050				<0.00050			<0.00050				<0.00050								<0.00050	<0.00050				
Toluene	mg/L	<0.00050				<0.00050			<0.00050				<0.00050								<0.00050	<0.00050				
Ethylbenzene	mg/L	<0.00050				<0.00050			<0.00050				<0.00050								<0.00050	<0.00050				
Dissolved Oxygen	mg/L																									
Redox Potential	mV																				262.5	262.5	242	243	248.7	248.7
Biochemical Oxygen Demand (BOD5)	mg/L																									

^ Indicates duplicate sample.

Table D1 - 23. Seepage from Underground Backfilled Stopes (TL-11), September 2024

Sample ID		TL-11 120 West Limb	TL-11 120 West Limb^	TL-11 110 Right	TL-11 110 Left	TL-11 134 Doris CPR
Lab ID		EO2407635-001	EO2407635-002	EO2407635-004	EO2407635-003	EO2407635-007
Date Sampled		9/1/2024	9/1/2024	9/1/2024	9/1/2024	9/1/2024
Parameter	Units					
Conventional Parameters						
pH	pH units	8.19	8.17	8.17	8.12	8.17
Conductivity	uS/cm	12900	12900	16100	16700	9540
Alkalinity, Total (as CaCO3)	mg/L	200	200	251	246	247
Total acidity	mg/L	10.8	9.9	15.0	16.4	13.8
Total Dissolved Solids	mg/L	8120	8120	10600	10800	11300
Total Suspended Solids	mg/L	68.2	106	241	152	<3.0
Major Ions						
Chloride (Cl)	mg/L	4190	4210	5350	5520	2880
Cyanide, Total	mg/L	0.0144	<0.0050	0.0076	0.0097	<0.0050
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Sulfate (SO4)	mg/L	514	521	861	867	534
Nutrients and Chlorophyll a						
Ammonia, Total (as N)	mg/L	0.0284	0.0273	0.231	0.306	0.187
Nitrate (as N)	mg/L	3.60	3.54	8.79	9.75	3.50
Nitrite (as N)	mg/L	<0.0100	<0.0100	0.652	0.680	0.0432
Phosphorus (P)-Dissolved	mg/L	<0.500	<0.500	<0.500	<0.500	<0.500
Dissolved Metals						
Aluminum (Al)-Dissolved	mg/L	<0.0100	0.0141	<0.0100	<0.0100	<0.0100
Antimony (Sb)-Dissolved	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Dissolved	mg/L	0.00205	0.00312	0.00105	0.00100	<0.00100
Barium (Ba)-Dissolved	mg/L	0.0254	0.0239	0.0274	0.0271	0.0224

Sample ID		TL-11 120 West Limb	TL-11 120 West Limb^	TL-11 110 Right	TL-11 110 Left	TL-11 134 Doris CPR
Lab ID		EO2407635-001	EO2407635-002	EO2407635-004	EO2407635-003	EO2407635-007
Date Sampled		9/1/2024	9/1/2024	9/1/2024	9/1/2024	9/1/2024
Parameter	Units					
Beryllium (Be)-Dissolved	mg/L	<0.000200	<0.000200	<0.000200	0.0518	<0.000200
Bismuth (Bi)-Dissolved	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Dissolved	mg/L	1.39	1.36	1.72	1.77	1.11
Cadmium (Cd)-Dissolved	mg/L	0.0000616	0.0000540	0.000203	0.000171	0.000210
Calcium (Ca)-Dissolved	mg/L	166	170	316	312	196
Cesium (Cs)-Dissolved	mg/L	0.000426	0.000421	0.000197	0.000177	<0.000100
Chromium (Cr)-Dissolved	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Cobalt (Co)-Dissolved	mg/L	0.00690	0.00797	0.0107	0.0108	0.0104
Copper (Cu)-Dissolved	mg/L	0.00827	0.00908	0.0112	0.0104	0.0110
Iron (Fe)-Dissolved	mg/L	<0.100	0.175	<0.100	<0.100	<0.100
Lead (Pb)-Dissolved	mg/L	0.00422	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Dissolved	mg/L	0.0420	0.0405	0.0615	0.0584	0.0334
Magnesium (Mg)-Dissolved	mg/L	241	242	373	392	194
Manganese (Mn)-Dissolved	mg/L	0.482	0.488	0.454	0.550	0.512
Mercury (Hg)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00419	0.00423	0.00363	0.00356	0.00230
Nickel (Ni)-Dissolved	mg/L	0.0140	0.0157	0.0244	0.0234	0.0227
Potassium (K)-Dissolved	mg/L	70.2	69.9	85.6	86.9	50.0
Rubidium (Rb)-Dissolved	mg/L	0.0380	0.0391	0.0346	0.0347	0.0185
Selenium (Se)-Dissolved	mg/L	0.000565	<0.000500	0.00181	0.00219	0.000998
Silicon (Si)-Dissolved	mg/L	3.34	3.38	3.08	3.03	2.41
Silver (Ag)-Dissolved	mg/L	<0.000100	<0.000100	0.000204	0.000225	<0.000100
Sodium (Na)-Dissolved	mg/L	2200	2120	2610	2620	1450
Strontium (Sr)-Dissolved	mg/L	2.11	2.21	3.39	3.50	1.64
Sulfur (S)-Dissolved	mg/L	202	195	346	337	201
Tellurium (Te)-Dissolved	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

Sample ID		TL-11 120 West Limb	TL-11 120 West Limb^	TL-11 110 Right	TL-11 110 Left	TL-11 134 Doris CPR
Lab ID		EO2407635-001	EO2407635-002	EO2407635-004	EO2407635-003	EO2407635-007
Date Sampled		9/1/2024	9/1/2024	9/1/2024	9/1/2024	9/1/2024
Parameter	Units					
Thallium (Tl)-Dissolved	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Dissolved	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Dissolved	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Dissolved	mg/L	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
Tungsten (W)-Dissolved	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Uranium (U)-Dissolved	mg/L	0.000137	0.000164	0.000326	0.000400	0.000295
Vanadium (V)-Dissolved	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Dissolved	mg/L	<0.0100	<0.0100	0.0270	0.0149	0.0196
Zirconium (Zr)-Dissolved	mg/L	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300

^ Indicates duplicate sample

Table D1 - 24. Seepage from Underground Backfilled Stopes (TL-11), November 2024

Sample ID		TL-11 120 Level	TL-11^	TL-11 114	TL-11 110 EXT
Lab ID		EO2410127-002	EO2410127-004	EO2410127-001	EO2410127-003
Date Sampled		11/3/2024	11/3/2024	11/3/2024	11/3/2024
Parameter	Units				
Conventional Parameters					
pH	pH units	8.71	7.56	8.38	8.06
Conductivity	uS/cm	12200	12300	9130	10600
Alkalinity, Total (as CaCO ₃)	mg/L	206	205	212	208
Total acidity	mg/L	5.7	5.4	5.5	6.3
Total Dissolved Solids	mg/L	7220	7240	5120	6160
Total Suspended Solids	mg/L	44.2	50.6	35.8	43.8
Major Ions					
Chloride (Cl)	mg/L	4100	4110	2890	3620
Cyanide, Total	mg/L	0.0056	<0.0050	0.0131	0.0052
Cyanide, Free	mg/L	<0.0050	<0.0050	<0.0200	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0200	<0.0050
Sulfate (SO ₄)	mg/L	547	552	376	369
Nutrients and Chlorophyll a					
Ammonia, Total (as N)	mg/L	0.0431	0.0431	0.361	0.0873
Nitrate (as N)	mg/L	3.49	3.53	0.792	2.11
Nitrite (as N)	mg/L	0.0227	0.0270	0.0233	0.0275
Phosphorus (P)-Dissolved	mg/L	<0.500	<0.500	<0.250	<0.500
Dissolved Metals					
Aluminum (Al)-Dissolved	mg/L	<0.0100	<0.0100	<0.0050	<0.0100
Antimony (Sb)-Dissolved	mg/L	<0.00100	<0.00100	<0.00050	<0.00100
Arsenic (As)-Dissolved	mg/L	0.00251	0.00248	0.00422	0.00114
Barium (Ba)-Dissolved	mg/L	0.0255	0.0254	0.0328	0.0439
Beryllium (Be)-Dissolved	mg/L	<0.000200	<0.000200	<0.000100	<0.000200
Bismuth (Bi)-Dissolved	mg/L	<0.000500	<0.000500	<0.000250	<0.000500
Boron (B)-Dissolved	mg/L	1.45	1.46	1.28	1.24

Sample ID		TL-11 120 Level	TL-11^	TL-11 114	TL-11 110 EXT
Lab ID		EO2410127-002	EO2410127-004	EO2410127-001	EO2410127-003
Date Sampled		11/3/2024	11/3/2024	11/3/2024	11/3/2024
Parameter	Units				
Cadmium (Cd)-Dissolved	mg/L	0.0000539	0.0000614	<0.0000250	<0.0000500
Calcium (Ca)-Dissolved	mg/L	165	170	131	164
Cesium (Cs)-Dissolved	mg/L	0.000409	0.000438	0.000206	0.000401
Chromium (Cr)-Dissolved	mg/L	<0.00500	<0.00500	<0.00250	<0.00500
Cobalt (Co)-Dissolved	mg/L	0.00777	0.00764	0.00369	0.00226
Copper (Cu)-Dissolved	mg/L	0.00787	0.00811	0.00573	<0.00200
Iron (Fe)-Dissolved	mg/L	<0.100	<0.100	<0.050	<0.100
Lead (Pb)-Dissolved	mg/L	0.000602	<0.000500	<0.000250	<0.000500
Lithium (Li)-Dissolved	mg/L	0.0421	0.0426	0.0339	0.0410
Magnesium (Mg)-Dissolved	mg/L	260	265	190	228
Manganese (Mn)-Dissolved	mg/L	0.446	0.455	0.224	0.135
Mercury (Hg)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00417	0.00413	0.00456	0.00267
Nickel (Ni)-Dissolved	mg/L	0.0142	0.0148	0.00370	<0.00500
Potassium (K)-Dissolved	mg/L	72.3	73.6	54.7	66.5
Rubidium (Rb)-Dissolved	mg/L	0.0386	0.0372	0.0218	0.0310
Selenium (Se)-Dissolved	mg/L	0.000543	<0.000500	<0.000250	<0.000500
Silicon (Si)-Dissolved	mg/L	3.55	3.57	3.63	3.57
Silver (Ag)-Dissolved	mg/L	<0.000100	<0.000100	<0.000050	<0.000100
Sodium (Na)-Dissolved	mg/L	2230	2280	1570	1870
Strontium (Sr)-Dissolved	mg/L	2.09	2.11	1.77	2.21
Sulfur (S)-Dissolved	mg/L	193	192	136	124
Tellurium (Te)-Dissolved	mg/L	<0.00200	<0.00200	<0.00100	<0.00200
Thallium (Tl)-Dissolved	mg/L	<0.000100	<0.000100	<0.000050	<0.000100
Thorium (Th)-Dissolved	mg/L	<0.00100	<0.00100	<0.00050	<0.00100
Tin (Sn)-Dissolved	mg/L	<0.00100	<0.00100	<0.00050	<0.00100

Sample ID		TL-11 120 Level	TL-11^	TL-11 114	TL-11 110 EXT
Lab ID		EO2410127-002	EO2410127-004	EO2410127-001	EO2410127-003
Date Sampled		11/3/2024	11/3/2024	11/3/2024	11/3/2024
Parameter	Units				
Titanium (Ti)-Dissolved	mg/L	<0.00300	<0.00300	<0.00150	<0.00300
Tungsten (W)-Dissolved	mg/L	<0.00100	<0.00100	<0.00050	0.00228
Uranium (U)-Dissolved	mg/L	0.000164	0.000180	0.000632	0.000290
Vanadium (V)-Dissolved	mg/L	<0.00500	<0.00500	<0.00250	<0.00500
Zinc (Zn)-Dissolved	mg/L	<0.0100	0.0103	0.0133	0.0442
Zirconium (Zr)-Dissolved	mg/L	<0.00300	<0.00300	<0.00150	<0.00300

^ Indicates duplicate sample

TL-12 Monitoring of Underground Dewatering

Dewatering of the Doris underground workings continued in 2024. Table D1 - 25 provides the dewatering volumes for the Doris mine in 2024. Water quality samples were collected weekly and submitted for laboratory analysis as outlined in Schedule I of the water license. Results of this sampling is provided in Table D1 - 26 through Table D1 - 33.

Table D1 - 25. Doris Underground Mine Dewatering, 2024

Month	Monthly Volume (m ³)*	Cumulative Volume (m ³)*
January	52,982	52,982
February	54,217	107,199
March	61,038	168,237
April	52,249	220,486
May	54,383	274,869
June	55,793	330,662
July	43,070	373,732
August	31,188	404,920
September	53,696	458,616
October	43,890	502,506
November	49,358	551,865
December	53,256	605,121
Total (m³)		605,121

* Values rounded to nearest whole cubic metre.

Table D1 - 26. Water Sampling Monitoring Program Results for TL-12A, January to March 2024

Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a
ALS ID		EO240005 3-001	EO240021 7-001	EO240043 4-001	EO240052 2-001	EO240070 9-001	EO240092 6-001	EO240092 6-002	EO240111 3-001	EO240128 7-001	EO240146 3-001	EO240163 6-001	EO240163 6-002	EO240181 8-001	EO240202 4-001	EO240222 3-001
Date Sampled		1/2/2024	1/9/2024	1/16/2024	1/23/2024	1/30/2024	2/6/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units															
pH	pH	7.99	7.88	7.78	7.9	7.83	7.80	7.87	7.75	7.97	7.84	7.79	7.80	7.84	7.82	7.87
Conductivity	uS/cm	16000		17100			15100	15300				18900	19200			
Total Suspended Solids	mg/L	3.4	5.5	7	11.1	5.3	37.3	36.6	19.1	15.3	7.6	39.6	37.2	3.6	3.8	7.9
Total Dissolved Solids	mg/L	10000	10100	11200	11200	9800	9510	9550	10300	10300	10400	12000	11900	10200	10200	9430
Chloride (Cl)	mg/L	5650	5890	625	6010	5890	5190	5170	5860	5910	6000	6800	6700	5860	6950	5330
Bromide (Br)	mg/L	20.5					19.4	19.4				26.4	25.8			
Fluoride (F)	mg/L	<0.400					<0.400	<0.400				<0.400	<0.400			
Cyanide, Total	mg/L	0.0067	<0.0200	<0.0200	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0200	0.0056	0.0050	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050					<0.0050	<0.0050				<0.0050	<0.0050			
Ammonia, Total (as N)	mg/L	1.37	0.701	0.633	1.06	0.652	1.82	1.78	0.738	0.724	0.500	0.685	0.676	0.637	3.02	3.65
Nitrate (as N)	mg/L	3.12	1.72	0.183	2.64	1.61	4.68	4.64	2.33	2.03	1.75	1.33	1.83	1.75	6.14	6.57
Nitrite (as N)	mg/L	0.142	0.209	0.0187	0.198	0.0591	0.171	0.174	0.101	0.143	0.156	0.0836	0.0824	0.0812	0.217	0.130
Sulfate (SO4)	mg/L	592					582	580				653	638			
Aluminum (Al)-Total	mg/L	0.143	0.231	0.217	0.464	0.156	1.18	1.26	0.398	0.575	0.316	0.973	0.835	0.148	0.148	0.250
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	0.00109	0.00118	0.00112	0.00137	0.00114	0.00144	0.00163	0.00160	0.00166	0.00120	0.00212	0.00222	0.00110	0.00117	0.00140
Barium (Ba)-Total	mg/L	0.0335	0.0347	0.0361	0.0356	0.0355	0.0339	0.0356	0.0326	0.0359	0.0343	0.0382	0.0376	0.0369	0.0378	0.0360
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500



Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a
ALS ID		EO2400053-001	EO2400217-001	EO2400434-001	EO2400522-001	EO2400709-001	EO2400926-001	EO2400926-002	EO2401113-001	EO2401287-001	EO2401463-001	EO2401636-001	EO2401636-002	EO2401818-001	EO2402024-001	EO2402223-001
Date Sampled		1/2/2024	1/9/2024	1/16/2024	1/23/2024	1/30/2024	2/6/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units															
Boron (B)-Total	mg/L	1.91	1.98	2.05	1.86	2.11	1.86	1.94	1.89	1.94	1.84	1.94	1.98	1.94	1.74	1.69
Cadmium (Cd)-Total	mg/L	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.0000712	0.000112	0.0000618	0.0000607	0.0000559	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.0000683
Calcium (Ca)-Total	mg/L	405	399	414	398	367	381	409	402	428	396	481	481	406	441	362
Cesium (Cs)-Total	mg/L	0.000467	0.000541	0.000599	0.000497	0.000506	0.000492	0.000469	0.000504	0.000494	0.000586	0.000651	0.000675	0.000579	0.000656	0.000608
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00958	0.00873	<0.00500	<0.00250	<0.00500
Cobalt (Co)-Total	mg/L	0.00384	0.00307	0.00343	0.00300	0.00304	0.00952	0.0105	0.00446	0.00398	0.00305	0.00304	0.00295	0.00260	0.00369	0.00540
Copper (Cu)-Total	mg/L	0.00710	0.00631	0.00621	0.00707	<0.0050	0.0132	0.0152	0.00789	0.0111	0.00657	0.0146	0.0145	0.00532	0.00653	0.0103
Iron (Fe)-Total	mg/L	0.864	1.12	1.00	1.54	0.818	3.46	3.80	1.40	1.95	1.21	3.19	2.87	0.866	0.862	1.06
Lead (Pb)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000816	0.00105	<0.000500	<0.000500	<0.000500	0.000715	0.000726	<0.000500	<0.000250	0.000802
Lithium (Li)-Total	mg/L	0.0612	0.0569	0.0635	0.0594	0.0598	0.0579	0.0595	0.0628	0.0665	0.0603	0.0694	0.0686	0.0654	0.0624	0.0624
Magnesium (Mg)-Total	mg/L	320	327	376	320	329	314	341	348	351	354	405	392	355	336	331
Manganese (Mn)-Total	mg/L	0.754	0.761	0.778	0.733	0.738	0.833	0.901	0.784	0.792	0.763	0.934	0.938	0.749	0.738	0.709
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00237	0.00246	0.00268	0.00250	0.00212	0.00322	0.00332	0.00265	0.00259	0.00239	0.00240	0.00264	0.00247	0.00298	0.00352
Nickel (Ni)-Total	mg/L	0.00640	0.00541	0.00581	0.00623	0.00570	0.0204	0.0261	0.00702	0.0102	<0.00500	0.0130	0.0129	<0.00500	0.00625	0.00688
Phosphorus (P)-Total	mg/L	<0.500	<0.500	<0.500			<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Potassium (K)-Total	mg/L	84.3	86.3	90.8	85.2	85.0	77.9	83.7	87.0	90.9	85.4	98.1	96.4	89.3	86.2	81.1
Rubidium (Rb)-Total	mg/L	0.0447	0.0465	0.0478	0.0438	0.0472	0.0421	0.0471	0.0478	0.0484	0.0477	0.0582	0.0556	0.0475	0.0472	0.0455
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000799	0.000757	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000528
Silicon (Si)-Total	mg/L	4.18	3.96	4.14	5.08	4.21	5.10	5.36	4.50	4.79	4.44	5.27	5.07	4.38	4.22	4.20



Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a
ALS ID		EO240005 3-001	EO240021 7-001	EO240043 4-001	EO240052 2-001	EO240070 9-001	EO240092 6-001	EO240092 6-002	EO240111 3-001	EO240128 7-001	EO240146 3-001	EO240163 6-001	EO240163 6-002	EO240181 8-001	EO240202 4-001	EO240222 3-001
Date Sampled		1/2/2024	1/9/2024	1/16/2024	1/23/2024	1/30/2024	2/6/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units															
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	2780	3080	3220	2960	2830	2650	2760	3140	3170	3000	3530	3420	3220	2920	2770
Strontium (Sr)-Total	mg/L	5.08	5.20	4.98	4.69	4.74	4.40	4.67	4.79	4.86	4.70	6.09	6.00	5.06	5.12	4.54
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	0.00332	0.00592	0.00504	0.00946	0.00451	0.0369	0.0408	0.00925	0.0167	0.00723	0.0266	0.0225	0.00412	0.00332	0.00781
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00100	0.00108	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00102	0.00117	0.00129	<0.00100	0.00316	0.00448
Uranium (U)-Total	mg/L	0.000218	0.000221	0.000256	0.000232	0.000180	0.000232	0.000234	0.000224	0.000297	0.000198	0.000174	0.000208	0.000231	0.000254	0.000222
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00516	0.00554	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.130	0.0758	0.0593	0.0593	0.0551	0.0608	0.0618	0.0614	0.0576	0.146	0.146	0.144	0.0863	0.239	0.298
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	194					189	187				184	184			

^ Indicates duplicate sample

Table D1 - 27. Water Sampling Monitoring Program Results for TL-12A, April to May 2024

Sample ID		TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2402417-001	EO2402417-002	EO2402583-001	EO2402793-001	EO2402961-001	EO2403146-001	EO2403361-001	EO2403660-001	EO2403846-001	EO2404039-001
Date Sampled		4/2/2024	4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024
Parameter	Units	UW	UW	UW	UW	UW	UW	UW	UW	UW	UW
pH	pH	7.80	7.80	7.74	7.79	7.84	7.94	7.83	7.69	8.01	7.99



Sample ID		TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2402417-001	EO2402417-002	EO2402583-001	EO2402793-001	EO2402961-001	EO2403146-001	EO2403361-001	EO2403660-001	EO2403846-001	EO2404039-001
Date Sampled		4/2/2024	4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024
Parameter	Units	UW	UW	UW	UW	UW	UW	UW	UW	UW	UW
Conductivity	uS/cm	15200	15400					18800			
Total Suspended Solids	mg/L	10.2	11.5	9.6	2.3	7.6	2.8	10.9	12.9	4.8	5.4
Total Dissolved Solids	mg/L	10000	9810	10800	10300	9910	10600	12500	11400	10700	9390
Chloride (Cl)	mg/L	5490	5450	6110	6060	5950	6040	6580	308	6080	5260
Bromide (Br)	mg/L	21.0	21.3					22.2			
Fluoride (F)	mg/L	<0.400	<0.400					<0.400			
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0200	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050	<0.0050					<0.0050			
Ammonia, Total (as N)	mg/L	1.21	1.40	2.86	0.668	0.528	0.674	0.518	2.60	1.08	1.93
Nitrate (as N)	mg/L	3.18	3.18	4.40	1.84	1.54	1.66	1.57	0.248	2.74	2.66
Nitrite (as N)	mg/L	0.105	0.126	0.148	0.136	0.0624	0.0974	0.0585	0.0079	0.0670	0.0738
Sulfate (SO4)	mg/L	565	562					640			
Aluminum (Al)-Total	mg/L	0.0783	0.144	0.227	0.133	0.262	0.109	0.226	0.346	0.198	0.160
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	0.00114	0.00117	0.00121	0.00109	<0.00100	<0.00100	0.00116	0.00161	0.00132	0.00113
Barium (Ba)-Total	mg/L	0.0340	0.0344	0.0399	0.0349	0.0379	0.0396	0.0385	0.0380	0.0393	0.0314
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	1.57	1.53	1.99	1.86	1.79	1.93	1.74	1.89	1.88	1.64
Cadmium (Cd)-Total	mg/L	<0.0000500	<0.0000500	0.0000566	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.0000703	0.0000515	<0.0000500
Calcium (Ca)-Total	mg/L	352	337	475	390	364	399	457	409	412	382
Cesium (Cs)-Total	mg/L	0.000540	0.000523	0.000574	0.000571	0.000487	0.000491	0.000645	0.000550	0.000516	0.000497
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Cobalt (Co)-Total	mg/L	0.00311	0.00324	0.00397	0.00268	0.00265	0.00268	0.00268	0.00367	0.00383	0.00903
Copper (Cu)-Total	mg/L	0.0237	0.0238	0.00696	<0.00500	0.00523	<0.00500	0.0230	0.0110	0.0115	0.00884
Iron (Fe)-Total	mg/L	0.758	0.801	1.24	0.693	1.09	0.754	1.07	2.33	1.01	0.870
Lead (Pb)-Total	mg/L	0.000670	0.000680	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Total	mg/L	0.0557	0.0563	0.0703	0.0603	0.0598	0.0668	0.0634	0.0691	0.0669	0.0558
Magnesium (Mg)-Total	mg/L	317	316	435	342	332	350	409	353	359	348

Sample ID		TL-12a	TL-12a^	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2402417-001	EO2402417-002	EO2402583-001	EO2402793-001	EO2402961-001	EO2403146-001	EO2403361-001	EO2403660-001	EO2403846-001	EO2404039-001
Date Sampled		4/2/2024	4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024
Parameter	Units	UW	UW	UW	UW	UW	UW	UW	UW	UW	UW
Manganese (Mn)-Total	mg/L	0.682	0.680	0.919	0.699	0.694	0.730	0.869	0.798	0.831	0.853
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00246	0.00232	0.00298	0.00219	0.00251	0.00263	0.00244	0.00277	0.00258	0.00200
Nickel (Ni)-Total	mg/L	0.0105	0.0106	0.00637	<0.00500	<0.00500	0.00505	0.00876	0.00627	0.00588	0.00816
Phosphorus (P)-Total	mg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500				
Potassium (K)-Total	mg/L	81.8	83.3	101	87.0	86.4	94.4	93.0	87.7	94.5	83.0
Rubidium (Rb)-Total	mg/L	0.0466	0.0472	0.0530	0.0443	0.0452	0.0482	0.0536	0.0524	0.0486	0.0425
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	0.000567	<0.000500	<0.000500	<0.000500	0.000507	<0.000500	<0.000500	0.000638
Silicon (Si)-Total	mg/L	4.09	3.90	4.49	3.91	4.52	4.40	4.59	4.64	4.30	4.07
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	0.000106	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	2690	2710	3600	3060	2760	3130	3660	2990	3300	3070
Strontium (Sr)-Total	mg/L	4.43	4.24	5.62	4.75	4.48	5.15	5.25	5.26	5.08	4.42
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	0.00764	0.00606	0.00573	0.00361	0.00610	<0.00300	0.00536	0.0104	0.00512	0.00390
Tungsten (W)-Total	mg/L	0.00200	0.00212	0.00145	<0.00100	<0.00100	<0.00100	0.00146	0.00162	0.00110	<0.00100
Uranium (U)-Total	mg/L	0.000229	0.000221	0.000219	0.000225	0.000244	0.000239	0.000241	0.000257	0.000262	0.000235
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.122	0.131	0.116	0.0447	0.0358	0.0394	0.0470	0.118	0.0654	0.0670
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	197	197					182			

^ Indicates duplicate sample

Table D1 - 28. Water Sampling Monitoring Program Results for TL-12A, June to August 2024

Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2404307-001	EO2404617-001	EO2404906-001	EO2405175-001	EO2405385-001	EO2405684-001	EO2405966-001	EO2406157-001	EO2406690-001	EO2406961-001	EO2407416-001
Date Sampled		6/4/2024	6/11/2024	6/18/2024	6/25/2024	7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/6/2024	8/13/2024	8/27/2024
Parameter	Units											
pH	pH	8.10	8.19	8.00	8.02	8.10	8.16	7.95	8.06	7.84	7.89	8.11
Conductivity	uS/cm	13400				18300				18900		
Total Suspended Solids	mg/L	4.4	2.1	3.3	8.2	4.9	6.5	3.8	4.3	17.9	7.6	7.3
Total Dissolved Solids	mg/L	9030	9160	10300	11000	10800	10100	10100	10600	12000	11400	12000
Chloride (Cl)	mg/L	5010	5110	5620	6070	5780	5640	5160	381	7360	6040	6440
Bromide (Br)	mg/L	17.8				19.9				26.5		
Fluoride (F)	mg/L	<0.400				<0.400				<0.400		
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050				<0.0050				<0.0050		
Ammonia, Total (as N)	mg/L	0.669	0.545	0.556	0.624	0.554	0.498	0.444	0.507	0.655	0.535	0.517
Nitrate (as N)	mg/L	2.30	5.49	4.50	1.80	1.72	1.61	2.02	11.2	1.88	1.47	1.94
Nitrite (as N)	mg/L	0.0892	0.0580	0.0749	0.0615	0.0411	0.0467	0.0583	0.169	0.0724	0.0468	0.0677
Sulfate (SO4)	mg/L	529				582				707		
Aluminum (Al)-Total	mg/L	0.166	0.155	0.105	0.269	0.165	0.192	0.326	0.178	0.552	0.181	0.231
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	<0.00100	<0.00100	<0.00100	0.00123	0.00111	0.00112	<0.00100	0.00116	0.00112	0.00147	0.00242
Barium (Ba)-Total	mg/L	0.0326	0.0335	0.0346	0.0371	0.0361	0.0354	0.0311	0.0350	0.0399	0.0404	0.0351
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	1.51	1.73	2.07	1.97	2.07	2.11	1.58	1.71	2.04	2.13	1.88
Cadmium (Cd)-Total	mg/L	0.0000695	0.0000661	0.0000530	<0.0000500	0.0000516	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.0000571	<0.0000500
Calcium (Ca)-Total	mg/L	355	367	491	404	405	454	398	403	531	465	515
Cesium (Cs)-Total	mg/L	0.000435	0.000467	0.000482	0.000565	0.000579	0.000563	0.000454	0.000567	0.000616	0.000629	0.000531
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	0.00555	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Cobalt (Co)-Total	mg/L	0.00794	0.00520	0.00401	0.00378	0.00336	0.00325	0.00600	0.00287	0.00226	0.00349	0.00412
Copper (Cu)-Total	mg/L	0.00841	0.00688	0.00645	0.00692	0.00595	0.00620	0.00580	0.00546	0.00733	0.00527	0.00616



Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2404307-001	EO2404617-001	EO2404906-001	EO2405175-001	EO2405385-001	EO2405684-001	EO2405966-001	EO2406157-001	EO2406690-001	EO2406961-001	EO2407416-001
Date Sampled		6/4/2024	6/11/2024	6/18/2024	6/25/2024	7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/6/2024	8/13/2024	8/27/2024
Parameter	Units											
Iron (Fe)-Total	mg/L	0.739	0.667	0.874	1.31	0.727	0.906	0.123	0.814	1.87	0.969	1.24
Lead (Pb)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Total	mg/L	0.0500	0.0600	0.0650	0.0565	0.0694	0.0648	0.0581	0.0608	0.0794	0.0754	0.0696
Magnesium (Mg)-Total	mg/L	307	296	322	354	364	340	343	337	413	389	360
Manganese (Mn)-Total	mg/L	0.786	0.737	0.741	0.839	0.762	0.771	0.799	0.748	0.964	0.855	0.745
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00243	0.00272	0.00234	0.00259	0.00415	0.00258	0.00213	0.00215	0.00244	0.00250	0.00241
Nickel (Ni)-Total	mg/L	0.00738	0.00581	0.00958	0.00530	0.00523	<0.00500	0.00510	<0.00500	<0.00500	0.00561	0.00611
Phosphorus (P)-Total	mg/L					<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Potassium (K)-Total	mg/L	74.7	77.7	85.7	92.9	87.4	95.4	89.7	84.0	105	102	97.1
Rubidium (Rb)-Total	mg/L	0.0392	0.0417	0.0457	0.0478	0.0474	0.0480	0.0455	0.0470	0.0620	0.0545	0.0478
Selenium (Se)-Total	mg/L	0.000604	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Silicon (Si)-Total	mg/L	3.75	3.98	4.02	4.68	4.51	4.54	3.18	4.16	5.42	4.74	4.06
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	0.000104	<0.000100
Sodium (Na)-Total	mg/L	2660	2830	2730	3270	3330	3020	2860	3060	3700	3480	3140
Strontium (Sr)-Total	mg/L	4.17	4.40	6.27	5.13	5.42	5.54	4.82	5.30	6.74	5.74	6.56
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	0.00315	<0.00300	<0.00300	0.00622	0.00484	0.00552	<0.00300	0.00452	0.0172	0.00484	0.00555
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Uranium (U)-Total	mg/L	0.000420	0.000221	0.000271	0.000255	0.000258	0.000225	0.000190	0.000264	0.000222	0.000256	0.000244
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.0510	0.0514	0.0452	0.0486	0.0396	0.0461	<0.0300	0.0546	0.126	0.102	0.159
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	186				189				190		



Table D1 - 29. Water Sampling Monitoring Program Results for TL-12A, September to November 2024

Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2308109-001	EO2308321-001	YL2301208-001	EO2308913-001	EO2309156-001	EO2309323-001	YL2301495-001	EO2309910-001	EO2310145-001	EO2310415-001	EO2310618-001	EO2310856-001
Date Sampled		9/5/2023 13:10	9/12/2023 11:45	9/20/2023 10:15	9/26/2023 14:05	10/3/2023 15:45	10/10/2023 16:05	10/17/2023 14:00	10/24/2023 9:50	10/31/2023 23:30	11/7/2023 13:30	11/14/2023 13:50	11/21/2023 10:35
Parameter	Units	Results											
pH	pH	8.17	8.16	7.96	8.17	8.15	8.14	8.11	8.02	8.17	8.11	7.91	7.95
Conductivity	µS/cm	13000				17200					17200		
Total Suspended Solids	mg/L	4.7	5.5	5.6	15.4	86.2	6.2	6.1	5.7	4.1	2.7	<2.0	7.8
Total Dissolved Solids	mg/L	9550	11200	14400	13300	11100	10600	10500	10400	10200	10600	10200	10400
Chloride (Cl)	mg/L	5840	6370	7830	7430	6000	63000	5990	5960	5800	6300	5910	5480
Bromide (Br)	mg/L	20.7				21.3					20.5		
Fluoride (F)	mg/L	<0.200				<0.400					0.238		
Cyanide, Total	mg/L	0.0055	<0.0050	<0.0050	<0.0050	0.005	0.007	0.0055	<0.0050	<0.0050	<0.0200	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050				<0.0050					<0.0050		
Ammonia, Total (as N)	mg/L	1.24	0.842	0.835	0.795	0.714	0.686	0.645	0.555	0.645	0.682	0.671	0.673
Nitrate (as N)	mg/L	3.36	3.32	1.02	1.04	1.7	1.74	1.89	1.98	1.51	1.68	1.72	1.87
Nitrite (as N)	mg/L	0.0881	0.0943	<0.100	0.153	0.274	0.11	0.115	0.0667	0.0896	0.0699	0.156	0.0717
Sulfate (SO4)	mg/L	643				612					646		
Aluminum (Al)-Total	mg/L	0.155	0.17	0.249	0.476	0.158	0.189	0.232	0.213	0.0942	0.101	0.0619	0.317
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	0.00154	0.00175	<0.00200	0.00173	0.0016	0.00209	0.00132	0.00115	<0.00100	<0.00100	0.00113	0.00118
Barium (Ba)-Total	mg/L	0.0337	0.0354	0.0412	0.0432	0.0354	0.0364	0.0364	0.0348	0.036	0.0346	0.0394	0.0339
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000400	<0.000200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.000200	<0.000200	<0.000200
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.00100	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	1.66	1.99	2.52	2.47	1.98	1.87	1.85	1.94	1.85	1.9	1.96	1.6
Cadmium (Cd)-Total	mg/L	0.0000602	0.0000605	<0.000100	<0.0000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.0000500	0.0000525	0.0000581
Calcium (Ca)-Total	mg/L	385	448	641	591	404	430	401	416	437	439	440	390
Cesium (Cs)-Total	mg/L	0.000472	0.000576	0.000796	0.000706	0.000537	0.000523	0.000601	0.000551	0.000549	0.000569	0.000503	0.000509
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00200	<0.00500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.00500	<0.00500	<0.00500
Cobalt (Co)-Total	mg/L	0.00705	0.00402	<0.00200	0.00314	0.00311	0.0036	0.00371	0.00361	0.00351	0.00314	0.00333	0.0035
Copper (Cu)-Total	mg/L	0.0187	0.0149	0.0145	0.00845	0.0137	0.0153	0.00846	0.00756	0.00545	<0.00500	0.0053	0.00686
Iron (Fe)-Total	mg/L	0.842	0.914	1.65	3.07	1.06	1.07	1.12	1.05	0.743	0.768	0.628	1.24



Sample ID		TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a	TL-12a
ALS ID		EO2308109-001	EO2308321-001	YL2301208-001	EO2308913-001	EO2309156-001	EO2309323-001	YL2301495-001	EO2309910-001	EO2310145-001	EO2310415-001	EO2310618-001	EO2310856-001
Date Sampled		9/5/2023 13:10	9/12/2023 11:45	9/20/2023 10:15	9/26/2023 14:05	10/3/2023 15:45	10/10/2023 16:05	10/17/2023 14:00	10/24/2023 9:50	10/31/2023 23:30	11/7/2023 13:30	11/14/2023 13:50	11/21/2023 10:35
Parameter	Units	Results											
Lead (Pb)-Total	mg/L	0.0006	<0.000500	<0.00100	0.000544	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Total	mg/L	0.0562	0.0672	0.0952	0.0901	0.0685	0.0668	0.0658	0.0638	0.0669	0.0642	0.0672	0.0588
Magnesium (Mg)-Total	mg/L	357	380	454	522	351	371	369	343	385	386	400	355
Manganese (Mn)-Total	mg/L	0.836	0.89	1.08	1.07	0.774	0.78	0.793	0.768	0.815	0.765	0.843	0.741
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00264	0.00266	0.00245	0.00271	0.00246	0.00244	0.00303	0.00228	0.00226	0.00212	0.00254	0.00266
Nickel (Ni)-Total	mg/L	0.00802	0.0069	<0.0100	<0.00500	<0.00500	<0.00500	0.00646	0.00852	0.00522	<0.00500	0.00511	0.00655
Phosphorus (P)-Total	mg/L	<0.500	<0.500	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Potassium (K)-Total	mg/L	89.9	96.2	116	121	93.8	94	96.4	87.2	92.2	91	99.6	87.2
Rubidium (Rb)-Total	mg/L	0.0449	0.0518	0.0676	0.0631	0.047	0.0544	0.0512	0.0467	0.048	0.0487	0.0538	0.0445
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	<0.00100	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Silicon (Si)-Total	mg/L	4.21	3.8	4.92	5.65	3.87	3.86	4.56	4.15	4.25	4.04	4.16	4.44
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000200	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	2990	3400	4280	4300	3200	3260	3200	2730	3310	3350	3290	3050
Strontium (Sr)-Total	mg/L	4.57	5.1	8.4	8.14	5.13	5.15	5.75	5.18	5.25	5	5.09	4.62
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00400	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000200	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	0.00392	0.00395	0.00826	0.0142	0.00348	0.00336	0.00691	0.00638	<0.00300	<0.00300	<0.00300	0.00958
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00200	0.00553	0.00122	<0.00100	0.00107	0.00135	<0.00100	0.00128	<0.00100	<0.00100
Uranium (U)-Total	mg/L	0.000243	0.000225	<0.000200	0.000136	0.000201	0.000225	0.00023	0.000232	0.000216	0.000209	0.000208	0.000218
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.0578	0.0464	0.0622	0.317	0.0658	0.0621	0.0635	0.0809	0.0576	0.071	0.0501	0.0728
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00400	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	180				193					190		



Table D1 - 30 Water Sampling Monitoring Program Results for TL-12A, December 2024

Sample ID		TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a
ALS ID		EO2410868-001	EO2411009-001	EO2411220-001	EO2411220-002	EO2411403-001	EO2500040-001
Date Sampled		12/3/2024	12/10/2024	12/17/2024	12/17/2024	12/24/2024	12/31/2024
Parameter	Units						
pH	pH	7.99	7.90	7.85	7.95	7.95	8.06
Conductivity	uS/cm	15200				15700	
Total Suspended Solids	mg/L	14.0	8.4	11.1	8.5	12.5	8.9
Total Dissolved Solids	mg/L	11000	10500	11100	11000	11600	12200
Chloride (Cl)	mg/L	6610	5980	5920	5890	5730	6050
Bromide (Br)	mg/L	22.4					
Fluoride (F)	mg/L	<0.400					
Cyanide, Total	mg/L	0.0075	<0.0050	<0.0050	0.0057	0.0057	<0.0050
Cyanide, WAD	mg/L	<0.0050					
Ammonia, Total (as N)	mg/L	0.664	0.681	0.616	0.608	0.584	0.607
Nitrate (as N)	mg/L	1.62	1.41	1.47	1.42	1.31	1.53
Nitrite (as N)	mg/L	0.155	0.0789	0.0548	0.0480	0.140	0.141
Sulfate (SO4)	mg/L	663					
Aluminum (Al)-Total	mg/L	0.487	0.277	0.334	0.342	0.431	0.217
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	0.00173	0.00119	0.00131	0.00128	0.00135	0.00122
Barium (Ba)-Total	mg/L	0.0358	0.0385	0.0374	0.0366	0.0377	0.0355
Beryllium (Be)-Total	mg/L	<0.000200	<0.00100	<0.00100	<0.00100	<0.000200	<0.00100
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	1.82	2.19	1.79	1.86	1.81	1.88
Cadmium (Cd)-Total	mg/L	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500
Calcium (Ca)-Total	mg/L	425	504	402	415	397	405
Cesium (Cs)-Total	mg/L	0.000494	0.000536	0.000520	0.000523	0.000553	0.000530
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Cobalt (Co)-Total	mg/L	0.00280	0.00238	0.00217	0.00224	0.00233	0.00192
Copper (Cu)-Total	mg/L	0.0107	0.00562	0.00653	0.00671	0.00764	0.00568
Iron (Fe)-Total	mg/L	1.92	1.30	1.47	1.47	1.74	1.12



Sample ID		TL-12a	TL-12a	TL-12a	TL-12a^	TL-12a	TL-12a
ALS ID		EO2410868-001	EO2411009-001	EO2411220-001	EO2411220-002	EO2411403-001	EO2500040-001
Date Sampled		12/3/2024	12/10/2024	12/17/2024	12/17/2024	12/24/2024	12/31/2024
Parameter	Units						
Lead (Pb)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Total	mg/L	0.0644	0.0726	0.0620	0.0642	0.0594	0.0610
Magnesium (Mg)-Total	mg/L	308	325	306	307	320	307
Manganese (Mn)-Total	mg/L	0.717	0.705	0.718	0.714	0.700	0.679
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00271	0.00265	0.00263	0.00266	0.00269	0.00254
Nickel (Ni)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Phosphorus (P)-Total	mg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Potassium (K)-Total	mg/L	85.3	90.0	86.1	84.6	87.3	84.0
Rubidium (Rb)-Total	mg/L	0.0474	0.0459	0.0479	0.0465	0.0457	0.0453
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Silicon (Si)-Total	mg/L	4.93	4.38	4.46	4.61	4.58	4.20
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	2760	2850	2610	2550	2790	2720
Strontium (Sr)-Total	mg/L	5.37	6.65	5.23	5.31	5.11	5.10
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	0.0156	0.00790	0.00998	0.00880	0.0118	0.00330
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	0.00112	<0.00100
Uranium (U)-Total	mg/L	0.000239	0.000245	0.000236	0.000224	0.000233	0.000200
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.0348	0.0409	0.0369	0.0359	0.0472	0.0402
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	200					

^ Indicates duplicate sample

Table D1 - 31. Water Sampling Monitoring Program Results for TL-12B, January to March 2024

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2400715-001	EO2400927-001	EO2401118-001	EO2401288-001	EO2401465-001	EO2401635-001	EO2401819-001	EO2402025-001	EO2402225-001
Date Sampled		1/30/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units									
pH	pH	7.53	7.74	7.53	7.89	7.67	7.51	7.57	7.75	7.78
Conductivity	uS/cm		15200				18700			
Total Suspended Solids	mg/L	<2.0	<2.0	<2.0	4.0	<2.0	3.7	2.2	<2.0	<2.0
Total Dissolved Solids	mg/L	11500	9590	10200	10200	10300	11800	10100	10100	9280
Chloride (Cl)	mg/L	6000	5270	5940	6030	5930	6690	5750	5700	5350
Bromide (Br)	mg/L		19.7				25.8			
Fluoride (F)	mg/L		<0.400				<0.400			
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L		<0.0050				<0.0050			
Ammonia, Total (as N)	mg/L	0.678	1.84	0.744	0.653	0.523	0.651	0.597	3.19	3.58
Nitrate (as N)	mg/L	1.55	4.69	2.38	2.19	1.76	1.32	1.59	5.28	6.52
Nitrite (as N)	mg/L	0.0501	0.148	0.158	0.114	0.165	0.0824	0.0754	0.167	0.110
Sulfate (SO4)	mg/L		588				643			
Aluminum (Al)-Total	mg/L	0.325	0.256	0.178	0.228	0.203	0.332	0.422	0.146	0.145
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Barium (Ba)-Total	mg/L	0.0337	0.0320	0.0315	0.0351	0.0345	0.0360	0.0361	0.0367	0.0339
Beryllium (Be)-Total	mg/L	<0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	2.18	1.80	1.90	1.80	1.95	1.95	1.85	1.75	1.70
Cadmium (Cd)-Total	mg/L	<0.0000500	0.000108	<0.0000500	0.0000561	<0.0000500	<0.0000500	<0.0000500	0.0000668	0.0000718
Calcium (Ca)-Total	mg/L	392	388	403	423	426	480	406	436	365
Cesium (Cs)-Total	mg/L	0.000558	0.000484	0.000534	0.000459	0.000560	0.000588	0.000568	0.000653	0.000605
Chromium (Cr)-Total	mg/L	<0.00500	0.0184	<0.00500	<0.00500	<0.00500	0.00709	<0.00500	<0.00250	<0.00500

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2400715-001	EO2400927-001	EO2401118-001	EO2401288-001	EO2401465-001	EO2401635-001	EO2401819-001	EO2402025-001	EO2402225-001
Date Sampled		1/30/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units									
Cobalt (Co)-Total	mg/L	0.00320	0.00818	0.00393	0.00348	0.00293	0.00204	0.00230	0.00365	0.00503
Copper (Cu)-Total	mg/L	<0.00500	0.00752	<0.00500	0.00631	<0.00500	0.00558	<0.00500	0.00436	0.00577
Iron (Fe)-Total	mg/L	<0.100	0.124	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Lead (Pb)-Total	mg/L	<0.000500	0.000611	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000250	<0.000500
Lithium (Li)-Total	mg/L	0.0623	0.0559	0.0645	0.0620	0.0650	0.0686	0.0623	0.0616	0.0605
Magnesium (Mg)-Total	mg/L	353	318	346	344	385	412	350	331	323
Manganese (Mn)-Total	mg/L	0.790	0.771	0.741	0.762	0.796	0.890	0.733	0.725	0.690
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00220	0.00314	0.00259	0.00250	0.00243	0.00268	0.00238	0.00284	0.00343
Nickel (Ni)-Total	mg/L	0.00575	0.0228	0.00625	0.00903	<0.00500	0.0126	<0.00500	0.00837	0.00615
Phosphorus (P)-Total	mg/L									
Potassium (K)-Total	mg/L	89.6	77.9	86.2	90.6	92.9	97.2	87.5	85.3	82.1
Rubidium (Rb)-Total	mg/L	0.0480	0.0444	0.0463	0.0465	0.0513	0.0568	0.0470	0.0463	0.0462
Selenium (Se)-Total	mg/L	<0.000500	0.000922	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000502	<0.000500
Silicon (Si)-Total	mg/L	3.64	3.42	3.47	3.79	3.85	3.75	3.77	3.66	3.65
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	3080	2660	3080	3070	3260	3570	3090	2950	2770
Strontium (Sr)-Total	mg/L	5.08	4.38	4.94	4.86	4.98	6.07	4.96	5.22	4.63
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	0.00106	0.00112	<0.00100	0.00324	0.00386
Uranium (U)-Total	mg/L	0.000183	0.000182	0.000238	0.000224	0.000220	0.000161	0.000178	0.000226	0.000200
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Zinc (Zn)-Total	mg/L	0.0407	0.0378	0.0386	0.0428	0.0858	0.120	0.0790	0.257	0.229

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2400715-001	EO2400927-001	EO2401118-001	EO2401288-001	EO2401465-001	EO2401635-001	EO2401819-001	EO2402025-001	EO2402225-001
Date Sampled		1/30/2024	2/6/2024	2/13/2024	2/20/2024	2/27/2024	3/5/2024	3/12/2024	3/19/2024	3/26/2024
Parameter	Units									
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L		180				172			

^ Indicates duplicate sample

Table D1 - 32. Water Sampling Monitoring Program Results for TL-12B, April to June 2024

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2402418-001	EO2402585-001	EO2402794-001	EO2402963-001	EO2403147-001	EO2403362-001	EO2403657-001	EO2403847-001	EO2404040-001	EO2404312-001	EO2404908-001	EO2405172-001
Date Sampled		4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024	6/4/2024	6/18/2024	6/25/2024
Parameter	Unit												
pH	pH	7.75	7.69	7.71	7.73	7.86	7.84	7.87	8.00	7.95	8.08	8.02	7.94
Conductivity	uS/cm	15500					18700				13300		
Total Suspended Solids	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	2.8	4.4	<2.0	<2.0	3.3	2.7
Total Dissolved Solids	mg/L	9980	10800	10200	9940	10800	12600	11200	10800	9300	8880	10400	10800
Chloride (Cl)	mg/L	5490	6160	5820	5760	5940	6670	5980	6160	5150	4860	5570	6080
Bromide (Br)	mg/L	21.3					22.8				17.3		
Fluoride (F)	mg/L	<0.400					<0.400				<0.400		
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050					<0.0050				<0.0050		
Ammonia, Total (as N)	mg/L	1.08	3.00	0.612	0.507	0.562	0.497	2.92	1.00	1.84	0.597	0.549	0.589
Nitrate (as N)	mg/L	2.82	4.78	1.92	1.54	1.81	0.160	5.41	2.91	2.71	2.17	2.18	1.84
Nitrite (as N)	mg/L	0.131	0.203	0.116	0.128	0.0490	0.0776	0.159	0.0674	0.0570	0.0922	0.0672	0.0612
Sulfate (SO4)	mg/L	564					646				508		
Aluminum (Al)-Total	mg/L	0.133	0.127	0.134	0.152	0.159	0.133	0.234	0.171	0.213	0.286	0.0997	0.232
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Arsenic (As)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Barium (Ba)-Total	mg/L	0.0340	0.0352	0.0349	0.0368	0.0385	0.0383	0.0376	0.0392	0.0310	0.0324	0.0343	0.0341
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.00100
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Boron (B)-Total	mg/L	1.52	1.84	1.85	1.79	1.82	1.74	1.88	1.94	1.55	1.51	2.12	2.03
Cadmium (Cd)-Total	mg/L	<0.0000500	0.0000564	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.0000857	0.0000591	0.0000615	0.0000804	<0.0000500	<0.0000500
Calcium (Ca)-Total	mg/L	343	420	383	361	388	450	408	433	388	363	486	427
Cesium (Cs)-Total	mg/L	0.000536	0.000510	0.000518	0.000486	0.000530	0.000608	0.000583	0.000580	0.000493	0.000427	0.000481	0.000565
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00543	<0.00500



Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2402418-001	EO2402585-001	EO2402794-001	EO2402963-001	EO2403147-001	EO2403362-001	EO2403657-001	EO2403847-001	EO2404040-001	EO2404312-001	EO2404908-001	EO2405172-001
Date Sampled		4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024	6/4/2024	6/18/2024	6/25/2024
Parameter	Unit												
Cobalt (Co)-Total	mg/L	0.00281	0.00348	0.00253	0.00227	0.00251	0.00250	0.00362	0.00359	0.00876	0.00797	0.00388	0.00333
Copper (Cu)-Total	mg/L	0.0233	0.00513	<0.00500	<0.00500	<0.00500	0.0216	0.00644	<0.00500	0.00543	<0.00500	0.00664	<0.00500
Iron (Fe)-Total	mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.804	<0.100
Lead (Pb)-Total	mg/L	0.000536	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Lithium (Li)-Total	mg/L	0.0554	0.0637	0.0590	0.0576	0.0633	0.0644	0.0696	0.0688	0.0550	0.0506	0.0629	0.0592
Magnesium (Mg)-Total	mg/L	320	371	345	320	342	420	363	356	335	300	321	337
Manganese (Mn)-Total	mg/L	0.682	0.791	0.718	0.686	0.696	0.829	0.767	0.827	0.826	0.778	0.750	0.792
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00246	0.00269	0.00223	0.00249	0.00246	0.00202	0.00277	0.00283	0.00220	0.00223	0.00236	0.00260
Nickel (Ni)-Total	mg/L	0.0109	0.00541	0.00510	<0.00500	<0.00500	0.00820	0.00597	0.00540	0.00830	0.00729	0.00982	0.00503
Phosphorus (P)-Total	mg/L												
Potassium (K)-Total	mg/L	83.4	89.7	89.0	85.5	91.8	94.8	87.2	96.1	83.9	74.8	87.2	86.3
Rubidium (Rb)-Total	mg/L	0.0475	0.0502	0.0460	0.0436	0.0495	0.0534	0.0518	0.0507	0.0423	0.0399	0.0465	0.0462
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000533	<0.000500	<0.000500	<0.000500
Silicon (Si)-Total	mg/L	3.68	3.57	3.47	3.68	3.74	3.99	3.60	3.71	3.51	3.35	3.97	3.74
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Sodium (Na)-Total	mg/L	2700	3170	2940	2780	3050	3600	2990	3080	3000	2580	2790	2980
Strontium (Sr)-Total	mg/L	4.17	4.96	4.83	4.48	4.99	5.10	5.25	5.41	4.41	4.07	6.26	5.35
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Titanium (Ti)-Total	mg/L	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
Tungsten (W)-Total	mg/L	0.00196	0.00119	<0.00100	<0.00100	<0.00100	0.00137	0.00148	0.00109	<0.00100	<0.00100	<0.00100	<0.00100
Uranium (U)-Total	mg/L	0.000189	0.000209	0.000202	0.000188	0.000209	0.000219	0.000228	0.000206	0.000219	0.000177	0.000245	0.000222
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500



Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2402418-001	EO2402585-001	EO2402794-001	EO2402963-001	EO2403147-001	EO2403362-001	EO2403657-001	EO2403847-001	EO2404040-001	EO2404312-001	EO2404908-001	EO2405172-001
Date Sampled		4/2/2024	4/9/2024	4/16/2024	4/23/2024	4/30/2024	5/7/2024	5/14/2024	5/21/2024	5/28/2024	6/4/2024	6/18/2024	6/25/2024
Parameter	Unit												
Zinc (Zn)-Total	mg/L	0.0862	0.117	0.0374	<0.0300	0.0393	0.0404	0.108	0.0605	0.0691	0.0476	0.0447	0.0339
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Alkalinity, Total (as CaCO3)	mg/L	192					182				176		

Table D1 - 33. Water Sampling Monitoring Program Results for TL-12B, July to October 2024

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2405388-001	EO2405685-001	EO2405960-001	EO2406158-001	EO2406688-001	EO2406958-001	EO2407417-001	EO2407637-001	EO2407902-001	EO2408159-001	EO2408391-001	EO2408660-001	EO2409888-001
Date Sampled		7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/7/2024	8/13/2024	8/27/2024	9/3/2024	9/10/2024	9/17/2024	9/24/2024	10/1/2024	10/29/2024
Parameter	Unit													
pH	pH	8.03	8.08	8.09	7.85	7.52	7.70	8.03	8.04	7.95	8.13	7.92	7.95	7.94
Conductivity	uS/cm	18200				17400			17600				15400	
Total Suspended Solids	mg/L	2.5	<2.0	10.0	<2.0	4.6	4.9	2.3	<2.0	<2.0	<2.0	3.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10200	10400	10000	10400	11000	11300	11900	12600	10000	10200	11300	8200	9850
Chloride (Cl)	mg/L	6060	5620	5130	395	6640	6350	6260	5950	5840	6120	6350	5260	5900
Bromide (Br)	mg/L	20.9				23.9			20.8				18.0	
Fluoride (F)	mg/L	<0.400				<0.400			<0.200				<0.400	
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, WAD	mg/L	<0.0050				<0.0050			<0.0050				<0.0050	
Ammonia, Total (as N)	mg/L	0.545	0.485	0.432	0.482	0.623	0.512	0.466	0.544	0.576	0.504	0.468	0.717	0.530
Nitrate (as N)	mg/L	1.94	1.64	1.92	11.8	1.68	1.60	1.79	1.47	1.63	1.64	2.04	3.11	1.91
Nitrite (as N)	mg/L	0.0459	0.0472	0.0735	0.253	0.0423	0.0376	0.0480	0.0323	0.0858	0.0647	0.0661	0.0603	0.107
Sulfate (SO4)	mg/L	609				668			566				572	
Aluminum (Al)-Total	mg/L	0.174	0.214	0.378	0.365	0.738	0.276	0.160	0.186	0.184	0.169	0.150	0.177	0.163
Antimony (Sb)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00200



Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO2405388-001	EO2405685-001	EO2405960-001	EO2406158-001	EO2406688-001	EO2406958-001	EO2407417-001	EO2407637-001	EO2407902-001	EO2408159-001	EO2408391-001	EO2408660-001	EO2409888-001
Date Sampled		7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/7/2024	8/13/2024	8/27/2024	9/3/2024	9/10/2024	9/17/2024	9/24/2024	10/1/2024	10/29/2024
Parameter	Unit													
Arsenic (As)-Total	mg/L	<0.00100	<0.00100	0.00187	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00200
Barium (Ba)-Total	mg/L	0.0350	0.0337	0.0348	0.0336	0.0358	0.0408	0.0345	0.0336	0.0343	0.0373	0.0364	0.0303	0.0355
Beryllium (Be)-Total	mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.00100	<0.00100	<0.000200	<0.000200	<0.000400
Bismuth (Bi)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.00100
Boron (B)-Total	mg/L	2.05	2.20	1.45	1.77	1.90	2.22	1.86	2.03	1.82	1.77	2.12	1.52	1.83
Cadmium (Cd)-Total	mg/L	<0.0000500	<0.0000500	0.0000651	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	<0.0000500	0.000110	<0.000100
Calcium (Ca)-Total	mg/L	400	462	369	399	441	494	466	397	380	418	469	368	379
Cesium (Cs)-Total	mg/L	0.000575	0.000576	0.000445	0.000557	0.000595	0.000740	0.000553	0.000520	0.000489	0.000547	0.000574	0.000446	0.000537
Chromium (Cr)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0100
Cobalt (Co)-Total	mg/L	0.00315	0.00311	0.00672	0.00268	0.00244	0.00340	0.00392	0.00216	0.00252	0.00264	0.00352	0.0116	0.00330
Copper (Cu)-Total	mg/L	<0.00500	<0.00500	0.0109	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00563	<0.0100
Iron (Fe)-Total	mg/L	<0.100	<0.100	1.37	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200
Lead (Pb)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.00100
Lithium (Li)-Total	mg/L	0.0663	0.0644	0.0510	0.0633	0.0701	0.0811	0.0683	0.0662	0.0628	0.0656	0.0691	0.0587	0.0608
Magnesium (Mg)-Total	mg/L	349	349	340	336	387	442	381	344	350	377	350	321	321
Manganese (Mn)-Total	mg/L	0.743	0.787	0.828	0.744	0.852	0.927	0.770	0.699	0.685	0.768	0.790	0.828	0.708
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00271	0.00274	0.00203	0.00211	0.00257	0.00299	0.00248	0.00287	0.00276	0.00253	0.00256	0.00264	0.00261
Nickel (Ni)-Total	mg/L	0.00500	<0.00500	0.00623	<0.00500	<0.00500	0.00610	0.00581	<0.00500	<0.00500	<0.00500	<0.00500	0.0107	<0.0100
Phosphorus (P)-Total	mg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00
Potassium (K)-Total	mg/L	86.5	97.7	89.0	83.6	99.1	114	101	86.2	83.5	88.8	90.6	81.6	84.9
Rubidium (Rb)-Total	mg/L	0.0468	0.0498	0.0449	0.0460	0.0544	0.0592	0.0505	0.0469	0.0461	0.0506	0.0492	0.0431	0.0481
Selenium (Se)-Total	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	0.000836	<0.000500	<0.000500	<0.000500	0.000507	<0.000500	<0.000500	0.000534	<0.00100

Sample ID		TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b	TL-12b
ALS ID		EO240538-001	EO2405685-001	EO2405960-001	EO2406158-001	EO2406688-001	EO2406958-001	EO2407417-001	EO2407637-001	EO2407902-001	EO2408159-001	EO2408391-001	EO2408660-001	EO2409888-001
Date Sampled		7/2/2024	7/9/2024	7/16/2024	7/23/2024	8/7/2024	8/13/2024	8/27/2024	9/3/2024	9/10/2024	9/17/2024	9/24/2024	10/1/2024	10/29/2024
Parameter	Unit													
Silicon (Si)-Total	mg/L	3.79	3.95	4.05	3.72	4.21	4.42	3.47	3.64	3.57	3.94	3.74	3.87	3.71
Silver (Ag)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000200
Sodium (Na)-Total	mg/L	3250	3110	2870	3030	3440	3780	3270	2940	2840	3180	3010	2730	2910
Strontium (Sr)-Total	mg/L	5.36	5.61	4.70	5.48	5.89	6.38	5.94	4.88	4.88	5.44	5.64	3.99	4.63
Tellurium (Te)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00400
Thallium (Tl)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000200
Thorium (Th)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00200
Tin (Sn)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00200
Titanium (Ti)-Total	mg/L	<0.00300	<0.00300	0.0105	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00600
Tungsten (W)-Total	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00200
Uranium (U)-Total	mg/L	0.000212	0.000194	0.000208	0.000168	0.000213	0.000279	0.000234	0.000179	0.000233	0.000212	0.000222	0.000220	<0.000200
Vanadium (V)-Total	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0100
Zinc (Zn)-Total	mg/L	<0.0300	0.0338	0.0556	0.0407	0.0512	0.0881	0.0912	0.0503	<0.0300	0.0530	0.0682	0.0478	<0.0600
Zirconium (Zr)-Total	mg/L	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00400
Alkalinity, Total (as CaCO3)	mg/L	184				180			180				180	

MMS-1 Madrid North Contact Water Pond

The Madrid North Contact Water Pond (MMS-1) was constructed in 2019 to support the commencement of mining activities at the Madrid North site. The pond incorporates a rockfill berm with a geomembrane liner anchored to bedrock to capture contact water runoff from the Madrid North Waste Rock storage pad. Contact water is then either discharged to tundra from the Contact Water Pond if water quality meets the criteria outlined in Part F Item 18(a) of the license or is transferred to the TIA via water truck.

Water quality samples were collected from this facility from May through September 2024 and results met the criteria outlined in Part F Item 18(a) of the license. Notification of discharge from this facility was provided to the Inspector. Table D1 - 34 provides the volume of water collected in the contact water pond in 2024. Results of this sampling are provided in Table D1 - 35 and Table D1 - 36. In 2024, the entire volume of 1,414 m³ of water was discharged to tundra (location 13W 433443 7549897) from this facility.

Table D1 - 34. Madrid North Contact Water Pond Dewatering, 2024

Month	Monthly Volume (m ³)*	Cumulative Volume (m ³)*
May	436	436
June	453	890
July	149	1,038
August	376	1,414
Total (m³)		1,414

* Values rounded to nearest whole cubic metre.

MMS-6 Brine Mixing Facility

No samples were collected in 2024 from the brine mixing tank (MMS-6) located at the Madrid North Portal entrance as it was demobilized in 2021 and was not reinstalled in 2024.

Table D1 - 35. Water Quality Monitoring Program Results for MMS-1 North, May to September 2024

Sample ID		MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	Part F Item 18(b)	
Lab ID		EO2403844-001	YL2400668-001	YL2400899-001	YL2401254-001	EO2408141-001	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024		
Parameter	Units							
Conventional Parameters								
pH	pH units	7.81	8.28	8.38	7.88	8.06	6.0-9.5	6.0-9.5
Conductivity	uS/cm	159	745	1490	5750	3610		
Hardness, as CaCO ₃ -Dissolved	mg/L	50.1	167	286	1220	937		
Hardness, Calcium and Magnesium	mg/L	54.6	189	272	1210	1080		
Alkalinity, Total (as CaCO ₃)	mg/L	45.7	114	161	193	338		
Total Suspended Solids	mg/L	8.8	53.1	15.9	6.1	13.2	50	100
Major Ions								
Bromide (Br)	mg/L	0.093	0.493	0.988	5.46	3.63		
Chloride (Cl)	mg/L	14.4	124	244	1370	731		
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Fluoride (F)	mg/L	0.041	0.111	0.115	<1.00	0.121		
Sulfate (SO ₄)	mg/L	13.8	118	180	950	581		
Nutrients and Chlorophyll a								
Ammonia, Total (as N)	mg/L	0.0272	0.0365	0.0536	1.54	1.31		
Nitrate (as N)	mg/L	0.163	0.244	0.603	12.2	1.07		
Nitrite (as N)	mg/L	0.0019	0.0058	0.0058	0.135	0.0244		
Phosphorus (P)-Total	mg/L	<0.050	0.154	<0.050	<0.250	0.150		
Phosphorus (P)-Dissolved	mg/L	<0.050	<0.050	<0.050	<0.250	<0.100		
General Organics								
Total phenolics	mg/L	<0.0010	0.0013	0.0040	<0.0010	0.0062		

Sample ID		MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	Part F Item 18(b)	
Lab ID		EO2403844-001	YL2400668-001	YL2400899-001	YL2401254-001	EO2408141-001	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024		
Parameter	Units							
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	5, no visible sheen	10, no visible sheen
Oil And Grease (Visible Sheen)	none	Absent	Absent	Absent	Absent	Absent		
Total Metals								
Aluminum (Al)-Total	mg/L	1.03	2.57	0.385	0.174	0.0606		
Antimony (Sb)-Total	mg/L	0.00083	0.00137	0.00098	0.00412	0.00175		
Arsenic (As)-Total	mg/L	0.139	0.130	0.0420	0.153	0.0633	0.5	1.0
Barium (Ba)-Total	mg/L	0.0118	0.0259	0.0196	0.0912	0.0601		
Beryllium (Be)-Total	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000200		
Bismuth (Bi)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.000250	<0.000100		
Boron (B)-Total	mg/L	0.036	0.165	0.163	0.590	0.372		
Cadmium (Cd)-Total	mg/L	0.0000084	0.0000433	0.0000104	0.000116	0.0000717		
Calcium (Ca)-Total	mg/L	14.6	42.4	55.7	281	231		
Cesium (Cs)-Total	mg/L	0.000044	0.000106	0.000022	<0.000050	0.000022		
Chromium (Cr)-Total	mg/L	0.00481	0.0154	0.00127	<0.00250	0.00105		
Cobalt (Co)-Total	mg/L	0.00214	0.00573	0.00098	0.00513	0.00740		
Copper (Cu)-Total	mg/L	0.00368	0.0147	0.00753	0.00820	0.0135		
Iron (Fe)-Total	mg/L	1.27	5.31	0.405	0.284	2.28		
Lead (Pb)-Total	mg/L	0.000393	0.00185	0.000250	<0.000250	0.000178		
Lithium (Li)-Total	mg/L	0.0034	0.0072	0.0055	0.0158	0.0161		
Magnesium (Mg)-Total	mg/L	4.40	20.1	32.4	124	122		
Manganese (Mn)-Total	mg/L	0.0397	0.378	0.0765	0.348	1.28		
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000058	<0.0000050		

Sample ID		MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	Part F Item 18(b)	
Lab ID		EO2403844-001	YL2400668-001	YL2400899-001	YL2401254-001	EO2408141-001	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024		
Parameter	Units							
Molybdenum (Mo)-Total	mg/L	0.000920	0.00377	0.00433	0.0153	0.00704		
Nickel (Ni)-Total	mg/L	0.0212	0.0317	0.0147	0.0605	0.0480	0.5	1.0
Potassium (K)-Total	mg/L	2.04	8.96	11.9	46.5	27.1		
Rubidium (Rb)-Total	mg/L	0.00167	0.00318	0.00233	0.0106	0.00544		
Selenium (Se)-Total	mg/L	0.000360	0.00111	0.00138	0.0157	0.00525		
Silicon (Si)-Total	mg/L	2.38	4.02	1.64	3.23	2.85		
Silver (Ag)-Total	mg/L	0.000051	0.000235	0.000027	<0.000050	0.000040		
Sodium (Na)-Total	mg/L	10.6	106	182	777	462		
Strontium (Sr)-Total	mg/L	0.0472	0.115	0.185	1.12	0.787		
Sulfur (S)-Total	mg/L	4.99	44.0	70.7	346	232		
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00100	<0.00040		
Thallium (Tl)-Total	mg/L	<0.000010	0.000017	<0.000010	<0.000050	<0.000020		
Thorium (Th)-Total	mg/L	0.00018	<0.00050	<0.00020	<0.00050	<0.00020		
Tin (Sn)-Total	mg/L	<0.00010	0.00013	<0.00010	<0.00050	0.00038		
Titanium (Ti)-Total	mg/L	0.0351	0.0624	0.0108	0.00723	0.00345		
Tungsten (W)-Total	mg/L	0.00230	0.00293	0.00080	0.00068	0.00042		
Uranium (U)-Total	mg/L	0.000270	0.00125	0.00202	0.00370	0.0111		
Vanadium (V)-Total	mg/L	0.00339	0.0116	0.00156	<0.00250	0.00319		
Zinc (Zn)-Total	mg/L	0.0037	0.0154	<0.0030	<0.0150	<0.0060		
Zirconium (Zr)-Total	mg/L	0.00036	<0.00040	0.00064	<0.00100	0.00137		
Dissolved Metals								
Aluminum (Al)-Dissolved	mg/L	0.0099	0.0255	0.0114	0.0099	0.0088		
Antimony (Sb)-Dissolved	mg/L	0.00086	0.00127	0.00097	0.00438	0.00150		
Arsenic (As)-Dissolved	mg/L	0.126	0.0702	0.0397	0.145	0.0306		

Sample ID		MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	Part F Item 18(b)	
Lab ID		EO2403844-001	YL2400668-001	YL2400899-001	YL2401254-001	EO2408141-001	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024		
Parameter	Units							
Barium (Ba)-Dissolved	mg/L	0.00554	0.0115	0.0189	0.0905	0.0480		
Beryllium (Be)-Dissolved	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000200		
Bismuth (Bi)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000250	<0.000100		
Boron (B)-Dissolved	mg/L	0.028	0.144	0.181	0.652	0.312		
Cadmium (Cd)-Dissolved	mg/L	<0.0000050	0.0000061	<0.0000100	0.0000804	0.0000496		
Calcium (Ca)-Dissolved	mg/L	14.0	36.1	60.9	278	194		
Cesium (Cs)-Dissolved	mg/L	<0.000010	<0.000010	0.000010	<0.000050	0.000024		
Chromium (Cr)-Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00250	<0.00100		
Cobalt (Co)-Dissolved	mg/L	0.00081	0.00054	0.00070	0.00482	0.00606		
Copper (Cu)-Dissolved	mg/L	0.00084	0.00438	0.00622	0.00725	0.0107		
Iron (Fe)-Dissolved	mg/L	<0.010	<0.010	0.017	<0.050	0.878		
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000250	0.000108		
Lithium (Li)-Dissolved	mg/L	0.0024	0.0044	0.0060	0.0163	0.0137		
Magnesium (Mg)-Dissolved	mg/L	3.68	18.6	32.5	128	110		
Manganese (Mn)-Dissolved	mg/L	0.0195	0.0470	0.0677	0.333	1.11		
Mercury (Hg)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
Molybdenum (Mo)-Dissolved	mg/L	0.000861	0.00368	0.00412	0.0159	0.00570		
Nickel (Ni)-Dissolved	mg/L	0.0149	0.00914	0.0131	0.0564	0.0389		
Potassium (K)-Dissolved	mg/L	1.84	8.84	12.3	46.2	22.4		
Rubidium (Rb)-Dissolved	mg/L	0.00059	0.00161	0.00187	0.0105	0.00456		
Selenium (Se)-Dissolved	mg/L	0.000346	0.000889	0.00140	0.0158	0.00459		
Silicon (Si)-Dissolved	mg/L	0.515	0.448	0.794	3.01	2.20		
Silver (Ag)-Dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000050	0.000026		

Sample ID		MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	MMS-1 N	Part F Item 18(b)	
Lab ID		EO2403844-001	YL2400668-001	YL2400899-001	YL2401254-001	EO2408141-001	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024		
Parameter	Units							
Sodium (Na)-Dissolved	mg/L	10.5	116	194	750	393		
Strontium (Sr)-Dissolved	mg/L	0.0429	0.104	0.184	1.20	0.664		
Sulfur (S)-Dissolved	mg/L	4.67	40.1	66.7	338	190		
Tellurium (Te)-Dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00100	<0.00040		
Thallium (Tl)-Dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000050	0.000020		
Thorium (Th)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00050	<0.00020		
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00050	<0.00020		
Titanium (Ti)-Dissolved	mg/L	<0.00030	<0.00030	0.00051	<0.00150	0.00103		
Tungsten (W)-Dissolved	mg/L	0.00178	0.00129	0.00064	0.00055	0.00032		
Uranium (U)-Dissolved	mg/L	0.000199	0.00109	0.00189	0.00370	0.00934		
Vanadium (V)-Dissolved	mg/L	<0.00050	0.00085	0.00071	<0.00250	0.00138		
Zinc (Zn)-Dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0050	0.0020		
Zirconium (Zr)-Dissolved	mg/L	<0.00020	<0.00020	0.00029	<0.00100	0.00110		

Notes:

No exceedance of Part F Item 18(a) Maximum Concentration occurred in 2024

N denotes north section of pond

Table D1 - 36. Water Quality Monitoring Program Results for MMS-1 South, May to September 2024

Sample ID		MMS1-S	MMS1-S	MMS1-S	MMS1-S	MMS1-S
Lab ID		EO2403844-002	YL2400668-006	YL2400899-006	YL2401254-005	EO2408141-004
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024
Parameter	Units					
HOB02- Conventional Parameters						
pH	pH units	7.67	8.13	8.17	7.86	8.36
Conductivity	uS/cm	136	803	530	1520	1540
Hardness, as CaCO ₃ -Dissolved	mg/L	39.3	198	130	389	461
Hardness, Calcium and Magnesium	mg/L	41.6	201	130	406	426
Alkalinity, Total (as CaCO ₃)	mg/L	35.2	113	88.4	194	197
Total Suspended Solids	mg/L	8.8	3.3	20.5	19.7	<3.0
HOB03- Major Ions						
Bromide (Br)	mg/L	0.069	0.444	0.244	0.497	1.77
Chloride (Cl)	mg/L	13.8	82.2	50.8	167	322
Cyanide, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoride (F)	mg/L	0.021	<0.100	0.052	<0.100	<0.100
Sulfate (SO ₄)	mg/L	12.6	134	81.8	316	316
HOB04- Nutrients and Chlorophyll a						
Ammonia, Total (as N)	mg/L	0.0261	0.0469	0.0100	0.108	0.0295
Nitrate (as N)	mg/L	0.260	2.50	1.30	5.78	3.02
Nitrite (as N)	mg/L	0.0020	0.0109	0.0027	0.0211	0.0087
Phosphorus (P)-Total	mg/L	<0.050	<0.050	<0.050	0.127	<0.050
Phosphorus (P)-Dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
HOB05- General Organics						
Total phenolics	mg/L	<0.0010	0.0022	0.0040	0.0026	0.0030
Oil and Grease	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0
Oil And Grease (Visible Sheen)	none	Absent	Absent	Absent	Absent	Absent
HOB06- Total Metals						

Sample ID		MMS1-S	MMS1-S	MMS1-S	MMS1-S	MMS1-S
Lab ID		EO2403844-002	YL2400668-006	YL2400899-006	YL2401254-005	EO2408141-004
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024
Parameter	Units					
Aluminum (Al)-Total	mg/L	0.759	0.473	1.18	3.85	0.0660
Antimony (Sb)-Total	mg/L	0.00017	0.00050	0.00040	0.00061	0.00050
Arsenic (As)-Total	mg/L	0.0243	0.0175	0.0167	0.0341	0.0955
Barium (Ba)-Total	mg/L	0.00810	0.0126	0.0118	0.0355	0.0244
Beryllium (Be)-Total	mg/L	<0.000100	<0.000100	<0.000100	0.000102	<0.000100
Bismuth (Bi)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.028	0.173	0.097	0.297	0.222
Cadmium (Cd)-Total	mg/L	0.0000082	0.0000346	0.0000279	0.000142	0.0000974
Calcium (Ca)-Total	mg/L	11.7	54.5	33.8	108	113
Cesium (Cs)-Total	mg/L	0.000042	0.000037	0.000053	0.000225	0.000021
Chromium (Cr)-Total	mg/L	0.00303	0.00241	0.00429	0.0183	0.00052
Cobalt (Co)-Total	mg/L	0.00090	0.00136	0.00172	0.0105	0.00868
Copper (Cu)-Total	mg/L	0.00497	0.0117	0.0112	0.0302	0.0146
Iron (Fe)-Total	mg/L	1.09	0.796	2.04	6.17	0.506
Lead (Pb)-Total	mg/L	0.000266	0.000132	0.000360	0.00128	0.000054
Lithium (Li)-Total	mg/L	0.0018	0.0030	0.0022	0.0078	0.0048
Magnesium (Mg)-Total	mg/L	3.02	15.8	11.2	33.0	34.9
Manganese (Mn)-Total	mg/L	0.0370	0.0549	0.0484	0.338	0.227
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000593	0.00235	0.00148	0.00312	0.00249
Nickel (Ni)-Total	mg/L	0.00447	0.00598	0.00675	0.0265	0.0117
Potassium (K)-Total	mg/L	1.45	6.90	4.23	11.3	9.88
Rubidium (Rb)-Total	mg/L	0.00141	0.00312	0.00201	0.00602	0.00307
Selenium (Se)-Total	mg/L	0.000221	0.00157	0.000965	0.00341	0.00264
Silicon (Si)-Total	mg/L	1.68	2.47	3.18	9.28	2.06
Silver (Ag)-Total	mg/L	0.000025	0.000038	0.000060	0.000056	0.000027

Sample ID		MMS1-S	MMS1-S	MMS1-S	MMS1-S	MMS1-S
Lab ID		EO2403844-002	YL2400668-006	YL2400899-006	YL2401254-005	EO2408141-004
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024
Parameter	Units					
Sodium (Na)-Total	mg/L	10.7	79.0	53.0	169	156
Strontium (Sr)-Total	mg/L	0.0237	0.0962	0.0609	0.178	0.194
Sulfur (S)-Total	mg/L	4.32	50.7	31.4	114	113
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000048	0.000016
Thorium (Th)-Total	mg/L	0.00016	<0.00010	0.00015	0.00066	<0.00010
Tin (Sn)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00021
Titanium (Ti)-Total	mg/L	0.0315	0.0154	0.0383	0.149	0.00251
Tungsten (W)-Total	mg/L	0.00093	0.00066	0.00056	0.00020	0.00023
Uranium (U)-Total	mg/L	0.000153	0.00100	0.000550	0.00178	0.00198
Vanadium (V)-Total	mg/L	0.00286	0.00268	0.00541	0.0165	0.00188
Zinc (Zn)-Total	mg/L	0.0035	0.0042	0.0092	0.0270	0.0088
Zirconium (Zr)-Total	mg/L	0.00024	<0.00040	0.00036	0.00062	0.00030
HOB07- Dissolved Metals						
Aluminum (Al)-Dissolved	mg/L	0.0072	0.0133	0.0151	0.0120	0.0094
Antimony (Sb)-Dissolved	mg/L	0.00018	0.00047	0.00034	0.00063	0.00051
Arsenic (As)-Dissolved	mg/L	0.0212	0.0145	0.0125	0.0163	0.0728
Barium (Ba)-Dissolved	mg/L	0.00314	0.0107	0.00740	0.0222	0.0241
Beryllium (Be)-Dissolved	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100
Bismuth (Bi)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.024	0.157	0.106	0.290	0.240
Cadmium (Cd)-Dissolved	mg/L	<0.0000050	0.0000202	0.0000115	0.0000667	0.0000860
Calcium (Ca)-Dissolved	mg/L	11.5	53.4	35.6	102	122
Cesium (Cs)-Dissolved	mg/L	<0.000010	0.000014	<0.000010	0.000040	0.000021
Chromium (Cr)-Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00015	0.00074	0.00033	0.00215	0.00841

Sample ID		MMS1-S	MMS1-S	MMS1-S	MMS1-S	MMS1-S
Lab ID		EO2403844-002	YL2400668-006	YL2400899-006	YL2401254-005	EO2408141-004
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024
Parameter	Units					
Copper (Cu)-Dissolved	mg/L	0.00103	0.00954	0.00644	0.0150	0.0140
Iron (Fe)-Dissolved	mg/L	<0.010	<0.010	<0.010	0.020	0.168
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	<0.0010	0.0024	0.0016	0.0043	0.0051
Magnesium (Mg)-Dissolved	mg/L	2.57	15.6	9.89	32.6	38.0
Manganese (Mn)-Dissolved	mg/L	0.0226	0.0353	0.0124	0.0838	0.235
Mercury (Hg)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000549	0.00227	0.00140	0.00325	0.00256
Nickel (Ni)-Dissolved	mg/L	0.00155	0.00435	0.00300	0.0113	0.0115
Potassium (K)-Dissolved	mg/L	1.31	6.96	4.07	11.5	10.3
Rubidium (Rb)-Dissolved	mg/L	0.00041	0.00305	0.00107	0.00292	0.00304
Selenium (Se)-Dissolved	mg/L	0.000202	0.00148	0.000925	0.00376	0.00265
Silicon (Si)-Dissolved	mg/L	0.308	1.67	1.21	3.08	1.85
Silver (Ag)-Dissolved	mg/L	<0.000010	0.000012	<0.000010	0.000012	0.000018
Sodium (Na)-Dissolved	mg/L	11.0	84.5	53.0	168	156
Strontium (Sr)-Dissolved	mg/L	0.0220	0.0952	0.0592	0.190	0.196
Sulfur (S)-Dissolved	mg/L	4.25	45.8	30.0	116	107
Tellurium (Te)-Dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	<0.000010	<0.000010	<0.000010	0.000017	0.000018
Thorium (Th)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	<0.00030	<0.00030	<0.00030	0.00034	0.00035
Tungsten (W)-Dissolved	mg/L	0.00071	0.00045	0.00021	<0.00010	0.00024
Uranium (U)-Dissolved	mg/L	0.000128	0.000951	0.000516	0.00170	0.00213
Vanadium (V)-Dissolved	mg/L	<0.00050	<0.00050	<0.00050	0.00067	0.00080
Zinc (Zn)-Dissolved	mg/L	<0.0010	0.0030	<0.0010	0.0056	0.0078

Sample ID		MMS1-S	MMS1-S	MMS1-S	MMS1-S	MMS1-S
Lab ID		EO2403844-002	YL2400668-006	YL2400899-006	YL2401254-005	EO2408141-004
Date Sampled		5/20/2024	6/12/2024	7/10/2024	8/18/2024	9/16/2024
Parameter	Units					
Zirconium (Zr)-Dissolved	mg/L	<0.00020	<0.00020	<0.00020	0.00027	0.00032

*Notes:**No exceedance of Part F Item 18(a) Maximum Concentration occurred in 2023.**S denotes south section of pond*

Appendix D.2. 2BE-HOP2232

SUMMARY OF MONITORING INFORMATION

The following tables summarize the results of sampling undertaken as part of the monitoring program detailed in Part J of 2BE-HOP2232.

The camp water treatment and wastewater treatment facility (WWTF) permitted under this license were not operational in 2024, therefore no sampling was conducted at monitoring stations HOP-2 (WWTF discharge), or HOP-3 (point of entry of WWTF discharge to Windy Lake). Water was utilized from Windy Lake for domestic consumption at Doris Camp and the monitoring station ST-7a/MMS-4b/HOP-1 (raw water supply intake at Windy Lake) was sampled for the monitoring criteria under the Doris North Water License 2AM-DOH1335 (see Table D1 - 11 and Table D1 - 12 in Appendix D.1). The Landfarm at Windy Camp (HOP-4) was dismantled in 2008, so no sampling was conducted at this monitoring station.

The bulk fuel storage tanks at Windy Camp were moved to Doris Camp in winter 2009 for use there, and the bulk fuel storage berm (HOP-5) was dismantled in 2012. The bulk fuel storage berm at Patch Lake laydown (HOP-6) was also dismantled in 2012. No sampling was conducted at either of these monitoring stations.

No sampling occurred at monitoring stations HOP-7A and HOP-7B (Quarries A and B) during 2024 because no discharge occurred from these locations. Sampling was done at HOP-7D and results presented in Table D2 – 2.

On-ice surface exploration was conducted in the license area from January to April 2024, and under-ice water quality sampling outlined in Part F Item 7 and Part J Item 7 of the license was carried out. Results are presented in Table D2 - 3 to Table D2 – 4.

Quantities of Water Utilized for Camp, Drilling and Other Purposes

Water used from Windy Lake for domestic, industrial, winter track and surface drilling purposes at Doris Camp was reported under monitoring station ST-7a/MMS-4bn (station HOP-2 under this license) of water license 2AM-DOH1335. All surface exploration water consumption from Windy Lake was declared under 2BE-HOP2232. For the ST-7a/MMS-4b water use see Table D1-11 in Appendix D.1 of this report.

A total of 7,348 m³ of water was taken from proximal sources to drilling targets, taken from Windy Lake, Doris Lake and Patch Lake, supporting surface exploration in 2024. Water volumes used under license 2BE-HOP2232 are presented in Table D2 - 1 below. Pre-drill under-ice sampling results are presented in Table D2 - 3 and post-drill under-ice sampling results are presented in Table D2 - 4.

Table D2 - 1. Volume of Water Utilized for Drilling Purposes, 2024

Date	Regional Drill Water Usage Total (m ³)	Total Usage (m ³)
January	1,617	1,617
February	847	2,464
March	729	3,193

Date	Regional Drill Water Usage Total (m ³)	Total Usage (m ³)
April	776	3,963
May	540	4,509
June	470	4,979
July	396	5,375
August	303	5,678
September	353	6,031
October	385	6,416
November	743	7,159
December	189	7,348
Total	7,348	7,348

Note: Values rounded to nearest whole cubic metre.

Quantity of Effluent Discharged

In 2024, discharge only occurred at Quarry D. Two samples were taken on June 19, 2024 at monitoring station HOP-7D, located in Quarry D. Results of the monitoring are presented in Table D2 - 2. Samples met discharge criteria as per Part J, Item 6(a) and a total of 4.1 m³ of water was discharged to the tundra in 2024. Notification of discharge was provided to the Inspector.

Volume of Sludge Removed from Sewage Disposal Facility

No sludge was removed from the Windy Camp WWTF in 2024 because this facility was not operational, and the camp was closed.

Table D2 - 2. Water Quality Monitoring Program Results for HOP-7D, June 2024

Sample ID		Quarry D	Quarry D - Dup	Part J Item 6 (a)&(b)	
ALS ID		YL2400721-001	YL2400721-002	"Maximum Authorized Monthly Mean Concentration (mg/L)"	"Maximum Authorized Concentration in a Grab Sample (mg/L)"
Date Sampled		6/19/2024	6/19/2024		
Parameter	Units	Results			
pH	pH	8.10	8.10	6.0 to 9.0	9.0
Conductivity	uS/cm	165	163	500	500
Ammonia, Total (as N)	mg/L	0.0071	0.0076	2	4
Total Suspended Solids	mg/L	<3.0	<3.0	15	30
Oil and Grease	mg/L	<5.0	<5.0	5	10
Oil And Grease (Visible Sheen)		Absent	Absent	No visible sheen	No visible sheen
Aluminum (Al)-Total	mg/L	0.184	0.179	1.0	2.0
Arsenic (As)-Total	mg/L	0.00262	0.00254	0.05	0.10
Copper (Cu)-Total	mg/L	0.00315	0.00298	0.02	0.04
Iron (Fe)-Total	mg/L	0.146	0.142	0.30	0.60
Lead (Pb)-Total	mg/L	0.000103	0.000099	0.01	0.02
Nickel (Ni)-Total	mg/L	0.00150	0.00143	0.05	0.10
Zinc (Zn)-Total	mg/L	<0.0030	<0.0030	0.01	0.02

^ Indicates duplicate sample

Bold and underline indicates exceedance per Part J, Item 6(a)

Table D2 - 3. Water Quality Monitoring Program Results for Pre-drill, Under-ice Water Quality Samples, 2024

Sample ID		GAP_ICE_1 4	GAP_ICE_0 23	GAP_ICE_2 1	GAP_ICE_0 01	GAP_ICE_0 15	GAP_ICE_0 19	GAP_ICE_0 10	GAP_ICE_0 19	Zone D
ALS ID		EO2400436- 001	EO2400436- 002	EO2400436- 004	EO2400525- 001	EO2400432- 001	EO2400432- 002	EO2400524- 001	EO2400524- 002	EO2401826- 001
Date Sampled		1/11/2024	1/11/2024	1/11/2024	1/17/2024	1/17/2024	1/17/2024	1/23/2024	1/23/2024	2/8/2024
Parameter	Unit s									
pH	pH	7.49	7.40	7.36	7.44	7.40	7.39	7.34	7.38	7.38
Conductivity	uS/cm	380	364	371	372	369	377	382	366	373
Total Suspended Solids	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aluminum (Al)-Dissolved	mg/L	0.0244	0.0220	0.0204	0.0239	0.0200	0.0203	0.0231	0.0237	0.0190
Antimony (Sb)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00031	0.00031	0.00028	0.00034	0.00029	0.00030	0.00032	0.00033	0.00031
Barium (Ba)-Dissolved	mg/L	0.00352	0.00311	0.00323	0.00320	0.00319	0.00319	0.00349	0.00327	0.00321
Beryllium (Be)-Dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cadmium (Cd)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved	mg/L	0.00172	0.00156	0.00157	0.00168	0.00159	0.00157	0.00182	0.00171	0.00177
Iron (Fe)-Dissolved	mg/L	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	0.013	0.012	<0.010
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0055	0.0051	0.0050	0.0051	0.0050	0.0051	0.0057	0.0053	0.0055
Manganese (Mn)-Dissolved	mg/L	0.00147	0.00048	0.00051	0.00201	0.00060	0.00059	0.00226	0.00090	0.00114
Mercury (Hg) -Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000336	0.000306	0.000309	0.000318	0.000330	0.000323	0.000339	0.000315	0.000261
Nickel (Ni)-Dissolved	mg/L	0.00082	0.00074	0.00078	0.00075	0.00086	0.00080	0.00083	0.00074	0.00077
Selenium (Se)-Dissolved	mg/L	<0.000050	0.000055	<0.000050	<0.000050	<0.000050	<0.000050	0.000060	<0.000050	<0.000050
Strontium (Sr)-Dissolved	mg/L	0.0628	0.0564	0.0578	0.0607	0.0578	0.0583	0.0671	0.0636	0.0612
Thallium (Tl) -Dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

Sample ID		GAP_ICE_1 4	GAP_ICE_0 23	GAP_ICE_2 1	GAP_ICE_0 01	GAP_ICE_0 15	GAP_ICE_0 19	GAP_ICE_0 10	GAP_ICE_0 19	Zone D
ALS ID		EO2400436- 001	EO2400436- 002	EO2400436- 004	EO2400525- 001	EO2400432- 001	EO2400432- 002	EO2400524- 001	EO2400524- 002	EO2401826- 001
Date Sampled		1/11/2024	1/11/2024	1/11/2024	1/17/2024	1/17/2024	1/17/2024	1/23/2024	1/23/2024	2/8/2024
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti) - Dissolved	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Uranium (U) - Dissolved	mg/L	0.000070	0.000064	0.000065	0.000066	0.000066	0.000065	0.000068	0.000061	0.000066
Vanadium (V) - Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn) - Dissolved	mg/L	0.0023	0.0017	0.0022	0.0015	0.0014	0.0019	0.0017	0.0014	0.0016

^ Indicates duplicate sample

Table D2 - 4. Water Quality Monitoring Program Results for Post-drill, Under-ice Water Quality Samples, 2024

Sample ID		ZONE D	Zone A	Zone C	Zone B	Zone B^
ALS ID		EO2402965-001	EO2403148-001	EO2403148-003	EO2403148-002	EO2403148-004
Date Sampled		4/21/2024	4/29/2024	4/29/2024	4/29/2024	4/29/2024
Parameter	Units					
pH	pH	7.45	7.13	7.33	7.18	7.25
Total Suspended Solids	mg/L	387	460	415	480	471
Conductivity	uS/cm	<3.0	<3.0	<3.0	<3.0	<3.0
Aluminum (Al)-Dissolved	mg/L	0.0195	0.0151	0.0161	0.0208	0.0158
Antimony (Sb)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00030	0.00031	0.00030	0.00033	0.00034
Barium (Ba)-Dissolved	mg/L	0.00320	0.00394	0.00332	0.00432	0.00405
Beryllium (Be)-Dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Cadmium (Cd)-Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved	mg/L	0.00174	0.00188	0.00202	0.00209	0.00217
Iron (Fe)-Dissolved	mg/L	<0.010	0.012	<0.010	0.015	0.015
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0053	0.0061	0.0055	0.0064	0.0065
Manganese (Mn)-Dissolved	mg/L	0.00108	0.00184	0.00105	0.00334	0.00339
Mercury (Hg) - Dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000314	0.000368	0.000337	0.000378	0.000328
Nickel (Ni)-Dissolved	mg/L	0.00075	0.00235	0.00126	0.00128	0.00127
Selenium (Se)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	0.000091	0.000073
Tin (Sn)-Dissolved	mg/L	0.0624	0.0697	0.0618	0.0712	0.0736
Strontium (Sr)-Dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl) - Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti) - Dissolved	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Uranium (U) - Dissolved	mg/L	0.000064	0.000068	0.000065	0.000068	0.000068
Vanadium (V) - Dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn) - Dissolved	mg/L	<0.0010	0.0216	<0.0010	<0.0010	<0.0010

^ Indicates duplicate sample

Results of Toxicity Testing

The camp is closed and no effluent was discharged (the WWTF has been removed; HOP-3).

Hydrology Monitoring – Windy Lake Water Level

Windy Lake water level monitoring was conducted in 2024 as outlined in Part J Item 9 of the license. In 2019, the station was relocated to the north end of Windy Lake (13W 431404 7554948) to facilitate discharge measurements of the Windy Lake outflow and water level monitoring as outlined in the Hope Bay Aquatic Effects Monitoring Plan. The water level station was reactivated on June 19th after being deactivated during the winter. The station uses an Onset MX-2001 vented pressure transducer with water level readings recorded every 15 minutes. The station operated throughout the open water season and was demobilized on September 9. Agnico personnel did not perform under ice water level surveys on during the 2024 monitoring program due to broken equipment and logistical issues surrounding the replacement of the damaged equipment. Five water level surveys and five discharge measurements were performed between June 19 and September 9. Mean daily water levels (measured and modelled) in meters above sea level and are shown in Table D2 - 15.

Table D2 - 5. Summary of Windy Lake Mean Daily Water Levels, in Metres above Sea Level (masl), 2024

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	18.340	18.340	18.340	18.340	18.340	18.435	18.354	18.316	18.251	18.339	18.355	18.355
2	18.340	18.340	18.340	18.340	18.340	18.434	18.354	18.314	18.248	18.342	18.355	18.355
3	18.340	18.340	18.340	18.340	18.340	18.432	18.354	18.309	18.243	18.345	18.355	18.355
4	18.340	18.340	18.340	18.340	18.340	18.430	18.356	18.304	18.245	18.351	18.355	18.355
5	18.340	18.340	18.340	18.340	18.340	18.427	18.361	18.302	18.243	18.355	18.355	18.355
6	18.340	18.340	18.340	18.340	18.340	18.424	18.364	18.300	18.240	18.359	18.355	18.355
7	18.340	18.340	18.340	18.340	18.340	18.421	18.362	18.298	18.238	18.360	18.355	18.355
8	18.340	18.340	18.340	18.340	18.340	18.418	18.358	18.292	18.237	18.360	18.355	18.355
9	18.340	18.340	18.340	18.340	18.340	18.416	18.360	18.293	18.243	18.360	18.355	18.355
10	18.340	18.340	18.340	18.340	18.340	18.414	18.369	18.294	18.236	18.360	18.355	18.355
11	18.340	18.340	18.340	18.340	18.340	18.412	18.365	18.286	18.236	18.359	18.355	18.355
12	18.340	18.340	18.340	18.340	18.340	18.409	18.364	18.282	18.242	18.358	18.355	18.355
13	18.340	18.340	18.340	18.340	18.340	18.406	18.365	18.281	18.244	18.358	18.355	18.355
14	18.340	18.340	18.340	18.340	18.340	18.404	18.365	18.277	18.233	18.354	18.355	18.355
15	18.340	18.340	18.340	18.340	18.340	18.402	18.361	18.276	18.233	18.356	18.355	18.355
16	18.340	18.340	18.340	18.340	18.340	18.402	18.357	18.274	18.233	18.358	18.355	18.355
17	18.340	18.340	18.340	18.340	18.340	18.400	18.353	18.271	18.233	18.357	18.355	18.355
18	18.340	18.340	18.340	18.340	18.340	18.396	18.356	18.267	18.232	18.355	18.355	18.355
19	18.340	18.340	18.340	18.340	18.340	18.393	18.356	18.268	18.241	18.355	18.355	18.355
20	18.340	18.340	18.340	18.340	18.340	18.379	18.355	18.265	18.249	18.355	18.355	18.355
21	18.340	18.340	18.340	18.340	18.340	18.374	18.352	18.262	18.253	18.355	18.355	18.355
22	18.340	18.340	18.340	18.340	18.340	18.368	18.350	18.263	18.255	18.355	18.355	18.355
23	18.340	18.340	18.340	18.340	18.340	18.362	18.351	18.259	18.256	18.355	18.355	18.355
24	18.340	18.340	18.340	18.340	18.336	18.359	18.349	18.260	18.258	18.355	18.355	18.355
25	18.340	18.340	18.340	18.340	18.364	18.361	18.343	18.262	18.261	18.355	18.355	18.355
26	18.340	18.340	18.340	18.340	18.395	18.362	18.341	18.261	18.268	18.355	18.355	18.355
27	18.340	18.340	18.340	18.340	18.416	18.362	18.337	18.260	18.282	18.355	18.355	18.355
28	18.340	18.340	18.340	18.340	18.425	18.360	18.338	18.257	18.302	18.355	18.355	18.355
29	18.340	18.340	18.340	18.340	18.431	18.359	18.334	18.255	18.316	18.355	18.355	18.355
30	18.340		18.340	18.340	18.435	18.358	18.329	18.252	18.331	18.355	18.355	18.355
31	18.340		18.340		18.435		18.325	18.248		18.355		18.355
Minimum	18.340	18.340	18.340	18.340	18.357	18.396	18.353	18.278	18.253	18.355	18.355	18.355
Maximum	18.340	18.340	18.340	18.340	18.435	18.435	18.369	18.316	18.331	18.360	18.355	18.355

Date	January	February	March	April	May	June	July	August	September	October	November	December
Mean	18.340	18.340	18.340	18.340	18.336	18.358	18.325	18.248	18.232	18.339	18.355	18.355

Estimated and modelled values are italicized.

Appendix D.3. 2BB-MAE1727

SUMMARY OF MONITORING INFORMATION

The following summarizes the results of sampling undertaken as part of the monitoring program detailed in Part J of 2BB-MAE1727.

No activity occurred at the Madrid North or Madrid South sites under this license in 2024. Monitoring was not undertaken at monitoring stations MAE-01 (Madrid North Windy Lake Freshwater intake), MAE-02 (Madrid South Patch Lake Freshwater intake) or MAE-03 (Freshwater intake at other lakes) as no water was obtained from these locations for use under this license. Water from Patch Lake was used for constructing the winter track and drilling purposes throughout 2024. No water was used for domestic, or all other purposes and no waste was deposited under this license in 2024. All water taken from Patch and Windy Lakes is declared under the 2AM-DOH1335 and 2BE-HOP2232, as shown in Appendix D.1 in Table D1 - 8 and in Appendix D2 in Table D2 - 1 respectively.

No discharge occurred and no monitoring was conducted at MAE-04 (Madrid North Pollution Control Pond Water), MAE-05 (Madrid South Pollution Control Pond No.1) or MAE-06 (Madrid South Pollution Control Pond No.2) as these facilities have not yet been constructed.

The Fuel Storage Areas and Transfer Stations at Madrid North (MAE-07 and MAE-08) and Madrid South (MAE-09 and MAE-10) have not yet been constructed. No water quality monitoring was conducted and no discharge occurred at these sampling locations.

Quarrying activities have not yet been undertaken at Quarry G (MAE-11), Quarry H (MAE-12) or Quarry I (MAE-13). No sampling or discharge was required for these monitoring locations in 2024.

No sampling was conducted at lakes located immediately downgradient of Madrid North and Madrid South Pollution Control Pond discharge locations (MAE-14, Windy Lake; MAE-15, Patch Lake; MAE-16, Wolverine Lake). The Madrid North Contact Water Pond is monitored under water license 2AM-DOH1335 and the Madrid South Pollution Control Ponds have not yet been constructed.

Underground mining and surface mining was not resumed in 2024 at the Madrid deposits. No water was discharged from underground sumps at Madrid North in 2024 and no water quality monitoring was conducted.

On-ice surface exploration was conducted in the license area in 2024, and under-ice water quality sampling as outlined in Part F Item 12 of the license are reported under the 2BE-HOP2232 license. All sample results for pre- and post-drill under-ice samples can be found in Appendix D.2 in Table D2 - 3 and Table D.2 - 4.

Appendix D.4. 2BB-BOS1727

TABULAR SUMMARY OF MONITORING INFORMATION

The following tables summarize the results of sampling undertaken in 2024 as part of the monitoring program detailed in Part J of license 2BB-BOS1727.

Boston Camp was not operational in 2024. No water for domestic use was taken from Aimaokatalok (Spyder) Lake (BOS-1a). No water was taken from Stickleback Lake (BOS-1b) for domestic use, surface drilling or any other purpose. No water quality samples were collected from the BOS-1a or BOS-1b location in 2024.

The Sewage Treatment Facility (BOS-3) was not active and no samples were taken at this location in 2024. No effluent quality sampling was conducted at the point prior to treated effluent entering into Aimaokatalok (Spyder) Lake (BOS-4) as nothing was discharged from the treatment facility.

The Containment Pond (BOS-2) has been used to consolidate water from the smaller fuel containment berms and from the Bulk Fuel Storage Facility (BOS-5). Water from the Containment Pond (BOS-2) is sampled for and screened against BOS-2, BOS-3 and BOS-5 criteria found in Part D Item 6, 14 and 19 of the water license. Results of the Contact Water Pond (BOS-2) water quality samples met criteria in Part D, Item 15 of the water license for industrial use; a total of 50 m³ was used as dust suppressant within the Boston mine infrastructure. Samples at the BOS-2 sample location were taken in June and results presented in Table D4 - 1.

Results of sampling conducted at the Bulk Fuel Storage Facility (BOS-5) and the Portal Decline (BOS-9) are presented in Table D4 - 2 and Table D4 – 3, respectively. Results from both locations met criteria found in Part D, Item 15 of the water license for industrial use. A total of 75 m³ of water from BOS-5 and a total of 100 m³ of water from BOS-9 was used as dust suppressant within the Boston mine infrastructure.

Dewatering of the Landfarm Treatment Area (LTA; BOS-6) was not required in 2024. In 2017, reclamation of the LTA at Boston was initiated, with the excavation and stockpiling of contaminated soils from the LTA into mega-bags for future disposal. In March 2019, the contaminated soil from the LTA was transported to Doris Camp via a winter track and disposed of underground in the Doris Mine as approved in the Hope Bay Mine Hazardous Waste Management Plan. The Boston LTA was decommissioned in 2019 and no additional materials will be placed in this facility. Hydrocarbon contaminated materials generated from future activities conducted at Boston will be packaged for backhaul to Doris until a new LTA facility is constructed.

No landfill exists at Boston and the status of monitoring station BOS-7 is inactive.

Underground mining activities were not conducted in 2024. Mine water was not pumped from underground, and no water quality monitoring was conducted of the underground mine water sumps (BOS-10). On-ice exploration drilling did not occur in the license area in 2024, therefore no samples were taken through lake ice (required by Part F Item 6 and Part J Item 15) to establish water quality prior to, and upon completion of, an on-ice drilling program.

Table D4 - 1 Water Quality Monitoring Program for Boston Containment Pond (BOS-2) Effluent, June 2024

Sample ID		BOS-2	BOS-2^	BOS-2	Part D Item 15
Lab ID		EO2404304-001	EO2404304-002	EO2404612-001	Maximum Concentration in Any Grab Sample (mg/L)
Date Sampled		6/4/2024	6/4/2024	6/11/2024	
Matrix		UW	UW	UW	
Parameter	Units				
Field Measured					
Temperature, field	deg c	7.6	7.6	11	
pH, field	pH units	9.41	9.41	9.89	
Conductivity, field	uS/cm	1272	1272	1343	
Redox potential, field	RmV	216	216	148	
Salinity, field	PSU	0.6	0.6	0.7	
Conventional Parameters					
pH	pH units	8.35	8.44	9.34	6.5-9.5
Conductivity	uS/cm	1250	1250	1260	
Hardness, Calcium and Magnesium	mg/L	142	137	128	
Alkalinity, Total (as CaCO3)	mg/L	179	180	177	
Total Suspended Solids	mg/L	57.8	59.0	82.6	100
Major Ions					
Chloride (Cl)	mg/L	69.8	70.0	73.8	
Sulfate (SO4)	mg/L	331	331	351	
Nutrients and Chlorophyll a					
Nitrate (as N)	mg/L	<0.0050	<0.0050	<0.0050	
Nitrite (as N)	mg/L	<0.0010	<0.0010	<0.0010	
Biochemical Oxygen Demand (BOD5)	mg/L	16.7	16.3	31.1	80
Phosphorus (P)-Total	mg/L	1.30	1.34	1.55	
General Organics					
Total phenolics	mg/L	<0.0010	<0.0010	0.0012	
Oil and Grease	mg/L	<5.0	<5.0	<5.0	

Sample ID		BOS-2	BOS-2^	BOS-2	Part D Item 15
Lab ID		EO2404304-001	EO2404304-002	EO2404612-001	Maximum Concentration in Any Grab Sample (mg/L)
Date Sampled		6/4/2024	6/4/2024	6/11/2024	
Matrix		UW	UW	UW	
Parameter	Units				
Oil And Grease (Visible Sheen)	none	Absent	Absent	Absent	No visible sheen
Total Metals					
Aluminum (Al)-Total	mg/L	0.103	0.107	0.223	
Antimony (Sb)-Total	mg/L	0.00070	0.00064	0.00126	
Arsenic (As)-Total	mg/L	0.0340	0.0338	0.0403	
Barium (Ba)-Total	mg/L	0.00386	0.00359	0.00396	
Beryllium (Be)-Total	mg/L	<0.000100	<0.000100	<0.000100	
Bismuth (Bi)-Total	mg/L	<0.000050	<0.000050	0.000092	
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	
Cadmium (Cd)-Total	mg/L	0.0000107	0.0000110	0.0000151	
Calcium (Ca)-Total	mg/L	33.6	32.3	27.5	
Cesium (Cs)-Total	mg/L	0.000104	0.000097	0.000104	
Chromium (Cr)-Total	mg/L	0.00054	0.00052	0.00121	
Cobalt (Co)-Total	mg/L	0.00531	0.00530	0.00724	
Copper (Cu)-Total	mg/L	0.00804	0.00814	0.0170	
Iron (Fe)-Total	mg/L	0.737	0.727	0.793	
Lead (Pb)-Total	mg/L	0.00115	0.00108	0.00204	
Lithium (Li)-Total	mg/L	0.0018	0.0017	0.0018	
Magnesium (Mg)-Total	mg/L	14.1	13.7	14.5	
Manganese (Mn)-Total	mg/L	0.0240	0.0246	0.0176	
Mercury (Hg)-Total	mg/L	<0.0000050	<0.0000050	<0.0000050	
Molybdenum (Mo)-Total	mg/L	0.00262	0.00245	0.00704	
Nickel (Ni)-Total	mg/L	0.0167	0.0165	0.0285	
Potassium (K)-Total	mg/L	15.5	15.4	16.2	
Rubidium (Rb)-Total	mg/L	0.0208	0.0206	0.0217	

Sample ID		BOS-2	BOS-2^	BOS-2	Part D Item 15
Lab ID		EO2404304-001	EO2404304-002	EO2404612-001	Maximum Concentration in Any Grab Sample (mg/L)
Date Sampled		6/4/2024	6/4/2024	6/11/2024	
Matrix		UW	UW	UW	
Parameter	Units				
Selenium (Se)-Total	mg/L	0.000172	0.000165	0.000244	
Silicon (Si)-Total	mg/L	0.49	0.45	0.57	
Silver (Ag)-Total	mg/L	0.000012	0.000012	0.000881	
Sodium (Na)-Total	mg/L	226	221	229	
Strontium (Sr)-Total	mg/L	0.217	0.209	0.218	
Sulfur (S)-Total	mg/L	128	122	130	
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	
Thallium (Tl)-Total	mg/L	<0.000010	<0.000010	0.000012	
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	
Tin (Sn)-Total	mg/L	0.00030	0.00033	0.00049	
Titanium (Ti)-Total	mg/L	0.00054	0.00050	0.00070	
Tungsten (W)-Total	mg/L	0.00041	0.00043	0.00088	
Uranium (U)-Total	mg/L	0.000147	0.000143	0.000162	
Vanadium (V)-Total	mg/L	0.00102	0.00073	0.00114	
Zinc (Zn)-Total	mg/L	0.0213	0.0210	0.0379	
Zirconium (Zr)-Total	mg/L	<0.00020	<0.00020	0.00025	
Volatile Organics					
Benzene	mg/L	<0.00050	<0.00050	<0.00050	
Ethylbenzene	mg/L	<0.00050	<0.00050	<0.00050	
Chrysene-d12	%	122	121	126	
Toluene	mg/L	<0.00050	<0.00050	<0.00050	
Xylenes	mg/L	<0.00075	<0.00075	<0.00075	
m,p-Xylenes	mg/L	<0.00050	<0.00050	<0.00050	
o-Xylene	mg/L	<0.00050	<0.00050	<0.00050	
Styrene	mg/L	<0.00050	<0.00050	<0.00050	

Sample ID		BOS-2	BOS-2^	BOS-2	Part D Item 15
Lab ID		EO2404304-001	EO2404304-002	EO2404612-001	Maximum Concentration in Any Grab Sample (mg/L)
Date Sampled		6/4/2024	6/4/2024	6/11/2024	
Matrix		UW	UW	UW	
Parameter	Units				
Methyl tert-butyl ether	mg/L	<0.00050	<0.00050	<0.00050	
4-Bromofluorobenzene	%	91.5	88.7	77.2	
2-Bromobenzotrifluoride	%	77.0	77.3	99.3	
Naphthalene-d8	%	115	108	110	
Phenanthrene-d10	%	127	117	126	
1,4-Difluorobenzene	%	113	113	118	
Total Petroleum Hydrocarbons	mg/L	<0.50	<0.50	<0.50	
Alkylated PAHs					
1-Methylnaphthalene	mg/L	<0.000010	<0.000010	<0.000010	
2-Methylnaphthalene	mg/L	<0.000010	<0.000010	0.000012	
Parent PAHs					
Quinoline	mg/L	<0.000050	<0.000050	<0.000050	
Acridine	mg/L	<0.000010	<0.000010	<0.000010	
Naphthalene	mg/L	<0.000050	<0.000050	<0.000050	
Acenaphthylene	mg/L	<0.000010	<0.000010	<0.000010	
Acenaphthene	mg/L	<0.000010	<0.000010	<0.000010	
Fluorene	mg/L	<0.000010	<0.000010	<0.000010	
Phenanthrene	mg/L	<0.000020	<0.000020	<0.000020	
Anthracene	mg/L	<0.000010	<0.000010	<0.000010	
Pyrene	mg/L	<0.000010	<0.000010	<0.000010	
Fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	
Benzo(a)anthracene	mg/L	<0.000010	<0.000010	<0.000010	
Chrysene	mg/L	<0.000010	<0.000010	<0.000010	
Benzo(b,j)fluoranthenes	mg/L	<0.000010	<0.000010	<0.000010	
Benzo(b,j,k)fluoranthenes	mg/L	<0.000015	<0.000015	<0.000015	

Sample ID		BOS-2	BOS-2^	BOS-2	Part D Item 15
Lab ID		EO2404304-001	EO2404304-002	EO2404612-001	Maximum Concentration in Any Grab Sample (mg/L)
Date Sampled		6/4/2024	6/4/2024	6/11/2024	
Matrix		UW	UW	UW	
Parameter	Units				
Benzo(k)fluoranthene	mg/L	<0.000010	<0.000010	<0.000010	
Benzo(a)pyrene	mg/L	<0.0000050	<0.0000050	<0.0000050	
Benzo(g,h,i)perylene	mg/L	<0.000010	<0.000010	<0.000010	
Indeno(c,d-123)pyrene	mg/L	<0.000010	<0.000010	<0.000010	
Dibenzo(a,h)anthracene	mg/L	<0.0000050	<0.0000050	<0.0000050	
Coliforms					
Fecal Coliform	CFU/100ml	>2420	>2420	2420	10,000

Bold and underline indicates exceedance of Part D Item 6 Maximum Concentration

^ indicates duplicate sample..

Table D4 - 2 Water Quality Monitoring Program for Bulk Fuel Storage Facility (BOS-5), June 2024

Sample ID		BOS-5	Part D Item 15
Lab ID		EO2404305-001	Maximum Concentration in Any Grab Sample
Date Sampled		6/4/2024	
Parameter	Units		
Field Measured			
Temperature, field	deg c	6.4	
pH, field	pH units	8.57	
Conductivity, field	uS/cm	868	
Redox potential, field	RmV	182	
Salinity, field	PSU	0.4	
Conventional Parameters			
pH	pH units	7.74	6.5-9.5
Conductivity	uS/cm	830	
Hardness, Calcium and Magnesium	mg/L	442	
Alkalinity, Total (as CaCO ₃)	mg/L	50.2	
Total Suspended Solids	mg/L	9.8	100
Major Ions			
Chloride (Cl)	mg/L	9.05	
Sulfate (SO ₄)	mg/L	387	
Nutrients and Chlorophyll a			
Nitrate (as N)	mg/L	<0.0050	
Nitrite (as N)	mg/L	<0.0010	
Phosphorus (P)-Total	mg/L	0.076	
General Organics			
Total phenolics	mg/L	0.0022	
Oil and Grease	mg/L	<5.0	
Oil And Grease (Visible Sheen)	none	Absent	No visible sheen
Total Metals			

Sample ID		BOS-5	Part D Item 15
Lab ID		EO2404305-001	Maximum Concentration in Any Grab Sample
Date Sampled		6/4/2024	
Parameter	Units		
Aluminum (Al)-Total	mg/L	0.0296	
Antimony (Sb)-Total	mg/L	0.00194	
Arsenic (As)-Total	mg/L	0.121	
Barium (Ba)-Total	mg/L	0.00468	
Beryllium (Be)-Total	mg/L	<0.000100	
Bismuth (Bi)-Total	mg/L	0.000061	
Boron (B)-Total	mg/L	0.072	
Cadmium (Cd)-Total	mg/L	0.0000898	
Calcium (Ca)-Total	mg/L	103	
Cesium (Cs)-Total	mg/L	0.000171	
Chromium (Cr)-Total	mg/L	<0.00050	
Cobalt (Co)-Total	mg/L	0.00762	
Copper (Cu)-Total	mg/L	0.00495	
Iron (Fe)-Total	mg/L	0.556	
Lead (Pb)-Total	mg/L	0.00454	
Lithium (Li)-Total	mg/L	0.0054	
Magnesium (Mg)-Total	mg/L	44.8	
Manganese (Mn)-Total	mg/L	0.0184	
Mercury (Hg)-Total	mg/L	<0.0000050	
Molybdenum (Mo)-Total	mg/L	0.00112	
Nickel (Ni)-Total	mg/L	0.0869	
Potassium (K)-Total	mg/L	4.65	
Rubidium (Rb)-Total	mg/L	0.00495	
Selenium (Se)-Total	mg/L	0.000220	
Silicon (Si)-Total	mg/L	<0.10	
Silver (Ag)-Total	mg/L	0.000014	

Sample ID		BOS-5	Part D Item 15
Lab ID		EO2404305-001	Maximum Concentration in Any Grab Sample
Date Sampled		6/4/2024	
Parameter	Units		
Sodium (Na)-Total	mg/L	11.7	
Strontium (Sr)-Total	mg/L	0.225	
Sulfur (S)-Total	mg/L	149	
Tellurium (Te)-Total	mg/L	<0.00020	
Thallium (Tl)-Total	mg/L	<0.000010	
Thorium (Th)-Total	mg/L	<0.00010	
Tin (Sn)-Total	mg/L	<0.00010	
Titanium (Ti)-Total	mg/L	<0.00030	
Tungsten (W)-Total	mg/L	<0.00010	
Uranium (U)-Total	mg/L	0.000055	
Vanadium (V)-Total	mg/L	<0.00050	
Zinc (Zn)-Total	mg/L	0.0051	
Zirconium (Zr)-Total	mg/L	<0.00020	
Volatile Organics			
Benzene	mg/L	<0.00050	
Ethylbenzene	mg/L	<0.00050	
Chrysene-d12	%	101	
Toluene	mg/L	<0.00050	
Xylenes	mg/L	<0.00075	
m,p-Xylenes	mg/L	<0.00050	
o-Xylene	mg/L	<0.00050	
Styrene	mg/L	<0.00050	
Methyl tert-butyl ether	mg/L	<0.00050	
4-Bromofluorobenzene	%	88.0	
2-Bromobenzotrifluoride	%	76.2	
Naphthalene-d8	%	89.1	

Sample ID		BOS-5	Part D Item 15
Lab ID		EO2404305-001	Maximum Concentration in Any Grab Sample
Date Sampled		6/4/2024	
Parameter	Units		
Phenanthrene-d10	%	94.6	
1,4-Difluorobenzene	%	114	
Total Petroleum Hydrocarbons	mg/L	<0.50	
Alkylated PAHs			
1-Methylnaphthalene	mg/L	0.000032	
2-Methylnaphthalene	mg/L	0.000022	
Parent PAHs			
Quinoline	mg/L	<0.000050	
Acridine	mg/L	0.000010	
Naphthalene	mg/L	<0.000050	
Acenaphthylene	mg/L	<0.000010	
Acenaphthene	mg/L	<0.000010	
Fluorene	mg/L	<0.000010	
Phenanthrene	mg/L	<0.000020	
Anthracene	mg/L	<0.000010	
Pyrene	mg/L	<0.000010	
Fluoranthene	mg/L	<0.000010	
Benzo(a)anthracene	mg/L	<0.000010	
Chrysene	mg/L	<0.000010	
Benzo(b,j)fluoranthenes	mg/L	<0.000010	
Benzo(b,j,k)fluoranthenes	mg/L	<0.000015	
Benzo(k)fluoranthene	mg/L	<0.000010	
Benzo(a)pyrene	mg/L	<0.0000050	
Benzo(g,h,i)perylene	mg/L	<0.000010	
Indeno(c,d-123)pyrene	mg/L	<0.000010	
Dibenzo(a,h)anthracene	mg/L	<0.0000050	

Bold and underline indicates exceedance of Part D Item 19 Maximum Concentration.

[^] Indicates duplicate samples

Table D4 - 3 Water Quality Monitoring Program for Portal Decline (BOS-9) Effluent, June 2024

Sample ID		BOS-9	Combined effluent limits: Part D Item 6, Item 14 and Item 19	
Lab ID		EO2405390-001	Maximum Average Concentration (mg/L)	Maximum Average Concentration (mg/L)
Date Sampled		6/30/2024		
Parameter	Units			
Conventional Parameters				
pH	pH units	7.38	6.5-9.0	6.5-9.0
Conductivity	uS/cm	64.5		
Total Suspended Solids	mg/L	<3.0	15	15
Major Ions				
Chloride (Cl)	mg/L	5.51		
Sulfate (SO4)	mg/L	9.63		
Nutrients and Chlorophyll a				
Ammonia, Total (as N)	mg/L	0.0120		
Nitrate (as N)	mg/L	0.0514	130	260
Phosphorus (P)-Total	mg/L	<0.050		
Phosphorus (P)-Dissolved	mg/L	<0.050		
General Organics				
Oil and Grease	mg/L	<5.0	5	10
Oil And Grease (Visible Sheen)	none	Absent	No visible sheen	No visible sheen
Total Metals				
Aluminum (Al)-Total	mg/L	0.334		
Antimony (Sb)-Total	mg/L	0.00042		
Arsenic (As)-Total	mg/L	0.0233	0.050	0.050
Barium (Ba)-Total	mg/L	0.00207		
Beryllium (Be)-Total	mg/L	<0.000020		
Bismuth (Bi)-Total	mg/L	<0.000050		
Boron (B)-Total	mg/L	0.016		
Cadmium (Cd)-Total	mg/L	0.0000079		

Sample ID		BOS-9	Combined effluent limits: Part D Item 6, Item 14 and Item 19	
Lab ID		EO2405390-001	Maximum Average Concentration (mg/L)	Maximum Average Concentration (mg/L)
Date Sampled		6/30/2024		
Parameter	Units			
Calcium (Ca)-Total	mg/L	5.01		
Cesium (Cs)-Total	mg/L	0.000035		
Chromium (Cr)-Total	mg/L	0.00375		
Cobalt (Co)-Total	mg/L	0.00494		
Copper (Cu)-Total	mg/L	0.00298	0.02	0.04
Iron (Fe)-Total	mg/L	0.666		
Lead (Pb)-Total	mg/L	0.000587	0.01	0.01
Lithium (Li)-Total	mg/L	0.0016		
Magnesium (Mg)-Total	mg/L	2.22		
Manganese (Mn)-Total	mg/L	0.0289		
Molybdenum (Mo)-Total	mg/L	0.000111		
Nickel (Ni)-Total	mg/L	0.0166	0.25	0.5
Potassium (K)-Total	mg/L	0.475		
Rubidium (Rb)-Total	mg/L	0.00035		
Selenium (Se)-Total	mg/L	0.000055		
Silicon (Si)-Total	mg/L	0.63		
Silver (Ag)-Total	mg/L	0.000012		
Sodium (Na)-Total	mg/L	2.61		
Strontium (Sr)-Total	mg/L	0.0212		
Sulfur (S)-Total	mg/L	3.30		
Tellurium (Te)-Total	mg/L	<0.00020		
Thallium (Tl)-Total	mg/L	<0.000010		
Thorium (Th)-Total	mg/L	<0.00010		
Tin (Sn)-Total	mg/L	<0.00010		
Titanium (Ti)-Total	mg/L	0.00867		
Tungsten (W)-Total	mg/L	0.00017		

Sample ID		BOS-9	Combined effluent limits: Part D Item 6, Item 14 and Item 19	
Lab ID		EO2405390-001	Maximum Average Concentration (mg/L)	Maximum Average Concentration (mg/L)
Date Sampled		6/30/2024		
Parameter	Units			
Uranium (U)-Total	mg/L	0.000057		
Vanadium (V)-Total	mg/L	0.00241		
Zinc (Zn)-Total	mg/L	0.0069	0.3	0.6
Zirconium (Zr)-Total	mg/L	0.00030		
Dissolved Metals				
Aluminum (Al)-Dissolved	mg/L	0.0018		
Antimony (Sb)-Dissolved	mg/L	0.00028		
Arsenic (As)-Dissolved	mg/L	0.00991		
Barium (Ba)-Dissolved	mg/L	0.00086		
Beryllium (Be)-Dissolved	mg/L	<0.000020		
Bismuth (Bi)-Dissolved	mg/L	<0.000050		
Boron (B)-Dissolved	mg/L	0.012		
Cadmium (Cd)-Dissolved	mg/L	<0.0000050		
Calcium (Ca)-Dissolved	mg/L	5.02		
Cesium (Cs)-Dissolved	mg/L	<0.000010		
Chromium (Cr)-Dissolved	mg/L	<0.00050		
Cobalt (Co)-Dissolved	mg/L	0.00201		
Copper (Cu)-Dissolved	mg/L	0.00074		
Iron (Fe)-Dissolved	mg/L	0.017		
Lead (Pb)-Dissolved	mg/L	<0.000050		
Lithium (Li)-Dissolved	mg/L	<0.0010		
Magnesium (Mg)-Dissolved	mg/L	2.06		
Manganese (Mn)-Dissolved	mg/L	0.00952		
Molybdenum (Mo)-Dissolved	mg/L	<0.000050		
Nickel (Ni)-Dissolved	mg/L	0.00999		
Potassium (K)-Dissolved	mg/L	0.378		

Sample ID		BOS-9	Combined effluent limits: Part D Item 6, Item 14 and Item 19	
Lab ID		EO2405390-001	Maximum Average Concentration (mg/L)	Maximum Average Concentration (mg/L)
Date Sampled		6/30/2024		
Parameter	Units			
Rubidium (Rb)-Dissolved	mg/L	<0.00020		
Selenium (Se)-Dissolved	mg/L	0.000067		
Silicon (Si)-Dissolved	mg/L	0.064		
Silver (Ag)-Dissolved	mg/L	<0.000010		
Sodium (Na)-Dissolved	mg/L	2.42		
Strontium (Sr)-Dissolved	mg/L	0.0210		
Sulfur (S)-Dissolved	mg/L	3.50		
Tellurium (Te)-Dissolved	mg/L	<0.00020		
Thallium (Tl)-Dissolved	mg/L	<0.000010		
Thorium (Th)-Dissolved	mg/L	<0.00010		
Tin (Sn)-Dissolved	mg/L	<0.00010		
Titanium (Ti)-Dissolved	mg/L	<0.00030		
Tungsten (W)-Dissolved	mg/L	<0.00010		
Uranium (U)-Dissolved	mg/L	0.000032		
Vanadium (V)-Dissolved	mg/L	<0.00050		
Zinc (Zn)-Dissolved	mg/L	0.0024		
Zirconium (Zr)-Dissolved	mg/L	<0.00030		

^ Indicates duplicate sample.

Bold and underline indicates exceedance of Part D Item 19 Maximum Concentration.