



November 30, 2019

Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Water Resources Officer
CIRNAC
P.O. Box 100
Iqaluit, NU X0A 0H0

RE: Water Licence 2AM-MRY1325 Monthly SNP Report – October 2019

The following is the monthly report for October 2019 as required under Part I, Item 21 of the Type 'A' Water Licence 2AM-MRY1325 (the Licence). Part I, Item 21 of the above referenced Water Licence states:

"The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:

- a. All data and information required by this Part and generated by the Monitoring Program in the tables of Schedule I;*
- b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Part F"*

Monitoring Program

During the month of October 2019, water samples were collected as part of the Water Licence Monitoring Program.

Table 1 presents a list of samples/monitoring required under the Licence and the details concerning which water quality samples were collected along with sample date/laboratory identification number as appropriate. Analytical water quality testing results received are presented in Table 2. Volumes consumed for domestic and industrial water purposes and the volumes of effluent discharged at the Mary River Mine Site and Milne Port are presented in the attached Table 3.

Monitoring Program Results

A) Water Sampling and Analysis Results

Table 2 provides the analytical results related to the Monitoring Program sampling requirements for October 2019. There were no exceedences of the site specific daily grab or monthly average samples.

B) Flow and Volume Measurements

Table 3 provides a breakdown of volume measurements as required by Part I, Item 9 of the Licence for October 2019. There were no exceedences of the source specific daily volume withdrawal limits.

We trust that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact myself or Shawn Stevens (ext. 6016).

Regards,

Connor Devereaux
Environmental Superintendent

Reviewed by:

Christopher Murray
Environmental & Regulatory Compliance Manager

Attach: Tables 1, 2, and 3

Cc: Jeremy Fraser, Justin Hack (CIRNAC); Megan Lord-Hoyle, Lou Kamermans, Timothy Ray Sewell, Shawn Stevens, Sylvain Proulx, Francois Gaudrau (Baffinland); Jared Ottenhof, Chris Spencer (QIA)

Table 1: Monitoring Program Water Sampling Summary for October 2019

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Milne Port			
MP-01 (Sewage Treatment Facility)	2019-10-08	L2364110-1	Volume reported daily during discharge
MP-01a (Polishing Waste Stabilization Pond)	N/A	N/A	No flow.
MP-01B (Sewage Treatment Facility)	2019-10-08	L2363292-1	Volume reported daily during discharge
MP-MRY-3 (Freshwater Intake from Km 32 Lake - Winter)	N/A	N/A	No flow.
MP-MRY-04 (RBC at Exploration Camp)	N/A	N/A	No flow.
MP-03 (Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No flow.
MP-04 (Landfarm Facility & Snow Containment Facility)	N/A	N/A	No flow.
MP-05 Ore Stockpile Sedimentation Pond (East)	2019-10-02	L2359617-1	Volume reported daily during discharge
MP-06 Ore Stockpile Sedimentation Pond (West)	2019-10-02	L2359798-1	Volume reported daily during discharge
MP-MRY-12 (Bulk Sample Stockpile Area Seepage)	N/A	N/A	No flow.
MP-C-A (Downstream of Construction Area)	N/A	N/A	No flow.
MP-C-B (Downstream of Construction Area)	2019-10-03	L2359618-2	
MP-C-B01 (Downstream of Construction Area)	2019-10-03	L2359618-1	
MP-C-D (Downstream of Construction Area)	N/A	N/A	No flow.
MP-C-E (Downstream of Construction Area)	N/A	N/A	No flow.
MP-C-F (Downstream of Construction Area)	N/A	N/A	No flow.
MP-C-H (Downstream of Construction Area)	2019-10-03	L2359618-3	
MP-Q1-01 (Downstream of Q1 Quarry)	N/A	N/A	No flow.
MP-Q1-02 (Downstream of Q1 Quarry)	2019-10-03	L2359618-4	

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Mary River Mine Site			
MS-01 (Sewage Treatment Facility)	2019-10-07	L2362257-1	Discharge volume reported daily
MS-01B (Sewage Treatment Facility)	2019-10-07	L2362250-1	Discharge volume reported daily
MS-MRY-1 (Freshwater Intake Camp Lake)	N/A	N/A	No flow.
MS-MRY-04a	N/A	N/A	No flow.
MS-MRY-04b	N/A	N/A	No flow.
MS-MRY-04c	N/A	N/A	No flow.
MS-03 (Milne Site Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No flow.
MS-06 (Ore Stockpile Pond Stormwater)	N/A	N/A	Discharge volume reported daily.
MS-08 (Mine Waste Rock Stockpile pond)	2019-10-01	L2357232-1	Discharge volume reported daily.
MS-MRY-6 (Exploration Camp Bladder Farm Stormwater)	N/A	N/A	No flow.
MS-MRY-09 (Deposit 1 Surface Water Drainage)	2019-10-03	L2359622-1	
MS-MRY-10 (Weathered Ore Bulk Sample Stockpile)	N/A	N/A	No flow.
MS-MRY-11 (Processing Bulk Sample Stockpile)	N/A	N/A	No flow.
MS-MRY-13A (Downstream Non-Hazardous Landfill)	N/A	N/A	No flow.
MS-MRY-13B (Downstream Non-Hazardous Landfill)	2019-10-03	L2359622-8	
MS-C-A (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-9	
MS-C-B (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-10	
MS-C-C (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-7	
MS-C-D (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-6	
MS-C-E (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-5	

Monitoring Program Station	Sampling Date	Lab ID#	Comment
MS-C-F (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-4	
MS-C-F01 (Field Duplicate of MS-C-F)	2019-10-03	L2359622-15	
MS-C-G (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-3	
MS-C-H (Downstream of Construction and Borrow Areas)	2019-10-03	L2359622-2	
MQ-C-A (Downstream of QMR2 Quarry)	2019-10-03	L2359622-13	
MQ-C-A01 (Field Duplicate of MQ-C-A)	2019-10-03	L2359622-14	
MQ-C-B (Downstream of QMR2 Quarry)	2019-10-03	L2359622-11	
MQ-C-D (Downstream of QMR2 Quarry)	2019-10-03	L2359622-12	
Steensby Port			
Steensby Exploration Camp is presently inactive.	N/A	N/A	

TABLE 2.1 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-01

Analyte	Sample ID			MP-01
	ALS Laboratory Sample ID			L2364110-1
	Sample Date & Time			10/8/2019 3:00:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.95
Total Suspended Solids	mg/L	2	<120	2.2
Turbidity	NTU	0.1	-	2.95
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	173
Ammonia, Total (as N)	mg/L	0.02	-	0.221
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.71
Phosphorus, Total	mg/L	0.003	-	7.7
Fecal Coliforms	CFU/100mL	0	10,000	0
BOD	mg/L	2	100	<2.0
COD	mg/L	10	-	47
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean

TABLE 2.2 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-01B

Analyte	Sample ID			MP-01B
	ALS Laboratory Sample ID			L2363292-1
	Sample Date & Time			10/8/2019 2:45:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.93
Total Suspended Solids	mg/L	2	<120	<2.0
Total Dissolved Solids	mg/L	20	-	843
Turbidity	NTU	0.1	-	0.32
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	120
Ammonia, Total (as N)	mg/L	0.02	-	0.026
Total Kjeldahl Nitrogen	mg/L	0.15	-	<0.15
Phosphorus, Total	mg/L	0.003	-	7.68
Fecal Coliforms	CFU/100mL	0	10,000	0
BOD	mg/L	2	100	<2.0
COD	mg/L	10	-	56
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0
Acute Lethality	-	-	Not Acutely Toxic	Not Acutely Toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean

TABLE 2.3 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-05

Analyte	Sample ID			MP-05
	ALS Laboratory Sample ID			L2359617-1
	Sample Date & Time			10/2/2019 5:55:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Hardness (as CaCO ₃)	mg/L	10	-	414
pH	pH units	0.1	6.0 - 9.5	8.26
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	11.2
Total Dissolved Solids	mg/L	20	-	636
Turbidity	NTU	0.1	-	8.33
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	198
Ammonia, Total (as N)	mg/L	0.02	-	0.323
Chloride (Cl)	mg/L	0.5	-	162
Fluoride (F)	mg/L	0.02	-	0.19
Nitrate (as N)	mg/L	0.02	-	3.52
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.6
Phosphorus, Total	mg/L	0.003	-	<0.030
Sulfate (SO ₄)	mg/L	0.3	-	164
Dissolved Organic Carbon	mg/L	1	-	4.1
Total Organic Carbon	mg/L	1	-	3.7
Aluminum (Al)-Total	mg/L	0.01	-	0.106
Arsenic (As)-Total	mg/L	0.0001	0.5	0.00027
Cadmium (Cd)-Total	mg/L	0.00001	-	0.0000067
Calcium (Ca)-Total	mg/L	0.5	-	83.1
Copper (Cu)-Total	mg/L	0.001	0.3	0.0014
Iron (Fe)-Total	mg/L	0.05	-	0.198
Lead (Pb)-Total	mg/L	0.0001	0.2	0.000224
Magnesium (Mg)-Total	mg/L	0.05	-	51.9
Manganese (Mn)-Total	mg/L	0.0005	-	0.202
Mercury (Hg)-Total	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00399
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.00137
Potassium (K)-Total	mg/L	0.05	-	8.7
Selenium (Se)-Total	mg/L	0.00005	-	0.000199
Sodium (Na)-Total	mg/L	0.5	-	69.9
Thallium (Tl)-Total	mg/L	0.00001	-	0.000015
Uranium (U)-Total	mg/L	0.00001	-	0.0684
Zinc (Zn)-Total	mg/L	0.003	0.5	0.0086
Aluminum (Al)-Dissolved	mg/L	0.005	-	0.0072
Arsenic (As)-Dissolved	mg/L	0.0001	-	0.00025
Cadmium (Cd)-Dissolved	mg/L	0.00001	-	<0.000010
Calcium (Ca)-Dissolved	mg/L	0.05	-	81.5
Copper (Cu)-Dissolved	mg/L	0.0002	-	0.00116
Iron (Fe)-Dissolved	mg/L	0.01	-	<0.010
Lead (Pb)-Dissolved	mg/L	0.00005	-	<0.000050
Magnesium (Mg)-Dissolved	mg/L	0.05	-	51.1
Manganese (Mn)-Dissolved	mg/L	0.0005	-	0.181
Mercury (Hg)-Dissolved	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.0043
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.00116
Potassium (K)-Dissolved	mg/L	0.05	-	9.28
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.000239
Sodium (Na)-Dissolved	mg/L	0.5	-	71.7
Thallium (Tl)-Dissolved	mg/L	0.00001	-	0.000015
Uranium (U)-Dissolved	mg/L	0.00001	-	0.066
Zinc (Zn)-Dissolved	mg/L	0.001	-	0.0072

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds

TABLE 2.4 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-06

Analyte	Sample ID			MP-06
	ALS Laboratory Sample ID			L2359798-1
	Sample Date & Time			10/2/2019 1:25:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Hardness (as CaCO3)	mg/L	10	-	440
pH	pH units	0.1	6.0 - 9.5	8.24
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	2.2
Total Dissolved Solids	mg/L	20	-	668
Turbidity	NTU	0.1	-	8.77
Alkalinity, Total (as CaCO3)	mg/L	10	-	161
Ammonia, Total (as N)	mg/L	0.02	-	0.255
Chloride (Cl)	mg/L	0.5	-	163
Fluoride (F)	mg/L	0.02	-	0.21
Nitrate (as N)	mg/L	0.02	-	3.65
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.72
Phosphorus, Total	mg/L	0.003	-	0.0067
Sulfate (SO4)	mg/L	0.3	-	216
Dissolved Organic Carbon	mg/L	1	-	3.26
Total Organic Carbon	mg/L	1	-	4.21
Aluminum (Al)-Total	mg/L	0.01	-	0.129
Arsenic (As)-Total	mg/L	0.0001	0.5	0.00025
Cadmium (Cd)-Total	mg/L	0.00001	-	0.0000066
Calcium (Ca)-Total	mg/L	0.5	-	76.9
Copper (Cu)-Total	mg/L	0.001	0.3	0.0011
Iron (Fe)-Total	mg/L	0.05	-	0.192
Lead (Pb)-Total	mg/L	0.0001	0.2	0.000273
Magnesium (Mg)-Total	mg/L	0.05	-	54.6
Manganese (Mn)-Total	mg/L	0.0005	-	0.135
Mercury (Hg)-Total	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00354
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.00118
Potassium (K)-Total	mg/L	0.05	-	8.37
Selenium (Se)-Total	mg/L	0.00005	-	0.000304
Sodium (Na)-Total	mg/L	0.5	-	66.3
Thallium (Tl)-Total	mg/L	0.00001	-	0.000014
Uranium (U)-Total	mg/L	0.00001	-	0.0489
Zinc (Zn)-Total	mg/L	0.003	0.5	0.0045
Aluminum (Al)-Dissolved	mg/L	0.005	-	0.0103
Arsenic (As)-Dissolved	mg/L	0.0001	-	0.00021
Cadmium (Cd)-Dissolved	mg/L	0.00001	-	<0.000010
Calcium (Ca)-Dissolved	mg/L	0.05	-	76.4
Copper (Cu)-Dissolved	mg/L	0.0002	-	0.00106
Iron (Fe)-Dissolved	mg/L	0.01	-	<0.010
Lead (Pb)-Dissolved	mg/L	0.00005	-	<0.000050
Magnesium (Mg)-Dissolved	mg/L	0.05	-	60.6
Manganese (Mn)-Dissolved	mg/L	0.0005	-	0.135
Mercury (Hg)-Dissolved	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00351
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.00108
Potassium (K)-Dissolved	mg/L	0.05	-	8.99
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.000352
Sodium (Na)-Dissolved	mg/L	0.5	-	71.2
Thallium (Tl)-Dissolved	mg/L	0.00001	-	0.000012
Uranium (U)-Dissolved	mg/L	0.00001	-	0.0509
Zinc (Zn)-Dissolved	mg/L	0.001	-	0.0036

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds

TABLE 2.5 -WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-C-B

Analyte	Sample ID			MP-C-B
	ALS Laboratory Sample ID			L2359618-2
	Sample Date & Time			10/3/2019 9:45:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	927
pH	pH units	0.1	6.0 - 9.5	8.07
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	508
Turbidity	NTU	0.1	-	0.85
Ammonia, Total (as N)	mg/L	0.02	-	0.296
Nitrate (as N)	mg/L	0.02	-	6.91
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.6 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-C-B01

Analyte	Sample ID			MP-C-B01
	ALS Laboratory Sample ID			L2359618-1
	Sample Date & Time			10/3/2019 9:25:00 AM
	QA/QC Sample Type			
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	1690
pH	pH units	0.1	6.0 - 9.5	7.94
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	959
Turbidity	NTU	0.1	-	0.4
Ammonia, Total (as N)	mg/L	0.02	-	1.12
Nitrate (as N)	mg/L	0.02	-	9.24
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.7 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-C-H

Analyte	Sample ID			MP-C-H
	ALS Laboratory Sample ID			L2359618-3
	Sample Date & Time			10/3/2019 8:50:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	352
pH	pH units	0.1	6.0 - 9.5	8.25
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	4.7
Total Dissolved Solids	mg/L	10	-	193
Turbidity	NTU	0.1	-	2.71
Ammonia, Total (as N)	mg/L	0.02	-	0.015
Nitrate (as N)	mg/L	0.02	-	0.203
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.8 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-Q1-02

Analyte	Sample ID			MP-Q1-02
	ALS Laboratory Sample ID			L2359618-4
	Sample Date & Time			10/3/2019 2:45:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	484
pH	pH units	0.1	6.0 - 9.5	7.91
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	267
Turbidity	NTU	0.1	-	0.89
Ammonia, Total (as N)	mg/L	0.02	-	0.07
Nitrate (as N)	mg/L	0.02	-	5
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0
Acute Toxicity	-	-	Not acutely toxic	Not acutely toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.9- WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-01

Analyte	Sample ID			MS-01
	ALS Laboratory Sample ID			L2362257-1
	Sample Date & Time			10/7/2019 3:00:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.38
Total Suspended Solids	mg/L	2	35	12.8
Turbidity	NTU	0.1	-	5.76
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	59
Ammonia, Total (as N)	mg/L	0.02	4	0.094
Total Kjeldahl Nitrogen	mg/L	0.15	-	4.9
Phosphorus, Total	mg/L	0.003	4	1.46
Fecal Coliforms	CFU/100mL	0	1,000	2
BOD	mg/L	2	30	<2.0
COD	mg/L	10	-	45
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4: Effluent Quality Discharge Limits for Sewage Treatment Facilities to Freshwater Receiving Environment

TABLE 2.10- WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-01B

Analyte	Sample ID			MS-01B
	ALS Laboratory Sample ID			L2362250-1
	Sample Date & Time			10/7/2019 3:00:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.9
Total Suspended Solids	mg/L	2	35	5.8
Turbidity	NTU	0.1	-	1.84
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	192
Ammonia, Total (as N)	mg/L	0.02	4	0.073
Total Kjeldahl Nitrogen	mg/L	0.15	-	<1.5
Phosphorus, Total	mg/L	0.003	4	3.54
Fecal Coliforms	CFU/100mL	0	1,000	3
BOD	mg/L	2	30	<2.0
COD	mg/L	10	-	54
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4: Effluent Quality Discharge Limits for Sewage Treatment Facilities to Freshwater Receiving Environment

TABLE 2.11 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-08

Analyte	Sample ID			MS-08
	ALS Laboratory Sample ID			L2357232-1
	Sample Date & Time			10/1/2019 9:15:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	5040
Hardness (as CaCO3)	mg/L	10	-	3990
pH	pH units	0.1	6.0-9.5	8.79
Total Suspended Solids	mg/L	2	15	6
Total Dissolved Solids	mg/L	20	-	5620
Turbidity	NTU	0.1	-	4.52
Acidity (as CaCO3)	mg/L	2	-	2.3
Alkalinity, Total (as CaCO3)	mg/L	10	-	39
Ammonia, Total (as N)	mg/L	0.1	-	3.79
Chloride (Cl)	mg/L	0.5	-	17.2
Fluoride (F)	mg/L	0.02	-	<0.20
Nitrate (as N)	mg/L	0.02	-	16.7
Total Kjeldahl Nitrogen	mg/L	0.15	-	4.38
Phosphorus, Total	mg/L	0.03	-	<0.0030
Sulfate (SO4)	mg/L	0.3	-	4070
Cyanide, Total	mg/L	0.002	-	0.0128
Dissolved Organic Carbon	mg/L	0.5	-	3.82
Total Organic Carbon	mg/L	0.5	-	4.16
Aluminum (Al)-Total	mg/L	0.05	-	0.082
Antimony (Sb)-Total	mg/L	0.001	-	<0.0010
Arsenic (As)-Total	mg/L	0.001	0.5	<0.0010
Barium (Ba)-Total	mg/L	0.001	-	0.012
Beryllium (Be)-Total	mg/L	0.001	-	<0.0010
Bismuth (Bi)-Total	mg/L	0.0005	-	<0.00050
Boron (B)-Total	mg/L	0.1	-	<0.10
Cadmium (Cd)-Total	mg/L	0.00005	-	<0.000050
Calcium (Ca)-Total	mg/L	0.5	-	507
Cesium (Cs)-Total	mg/L	0.0001	-	<0.00010
Chromium (Cr)-Total	mg/L	0.005	-	<0.0050
Cobalt (Co)-Total	mg/L	0.001	-	0.005
Copper (Cu)-Total	mg/L	0.01	0.3	<0.010
Iron (Fe)-Total	mg/L	0.1	-	0.42
Lead (Pb)-Total	mg/L	0.0005	0.2	<0.00050
Lithium (Li)-Total	mg/L	0.01	-	0.03
Magnesium (Mg)-Total	mg/L	0.05	-	664
Manganese (Mn)-Total	mg/L	0.005	-	1.12
Mercury (Hg)-Total	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.0005	-	0.00141
Nickel (Ni)-Total	mg/L	0.005	0.5	0.0071
Phosphorus (P)-Total	mg/L	0.5	-	<0.50
Potassium (K)-Total	mg/L	0.5	-	6.91
Rubidium (Rb)-Total	mg/L	0.002	-	0.0082
Selenium (Se)-Total	mg/L	0.0005	-	0.00642
Silicon (Si)-Total	mg/L	1	-	<1.0
Silver (Ag)-Total	mg/L	0.0005	-	<0.00050
Sodium (Na)-Total	mg/L	0.5	-	6.41
Strontium (Sr)-Total	mg/L	0.01	-	1.58
Sulfur (S)-Total	mg/L	5	-	1350
Tellurium (Te)-Total	mg/L	0.002	-	<0.0020
Thallium (Tl)-Total	mg/L	0.0001	-	<0.00010
Thorium (Th)-Total	mg/L	0.001	-	<0.0010
Tin (Sn)-Total	mg/L	0.001	-	<0.0010
Titanium (Ti)-Total	mg/L	0.003	-	0.0037
Tungsten (W)-Total	mg/L	0.001	-	<0.0010
Uranium (U)-Total	mg/L	0.0001	-	0.0019
Vanadium (V)-Total	mg/L	0.005	-	<0.0050
Zinc (Zn)-Total	mg/L	0.03	0.5	<0.030
Zirconium (Zr)-Total	mg/L	0.003	-	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.05	-	<0.050
Antimony (Sb)-Dissolved	mg/L	0.001	-	<0.0010
Arsenic (As)-Dissolved	mg/L	0.001	-	<0.0010
Barium (Ba)-Dissolved	mg/L	0.001	-	0.0117
Beryllium (Be)-Dissolved	mg/L	0.001	-	<0.0010
Bismuth (Bi)-Dissolved	mg/L	0.0005	-	<0.00050
Boron (B)-Dissolved	mg/L	0.1	-	<0.10
Cadmium (Cd)-Dissolved	mg/L	0.00005	-	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.5	-	509
Cesium (Cs)-Dissolved	mg/L	0.0001	-	<0.00010
Chromium (Cr)-Dissolved	mg/L	0.005	-	<0.0050
Cobalt (Co)-Dissolved	mg/L	0.001	-	0.0046
Copper (Cu)-Dissolved	mg/L	0.002	-	0.005
Iron (Fe)-Dissolved	mg/L	0.1	-	<0.10
Lead (Pb)-Dissolved	mg/L	0.0005	-	<0.00050
Lithium (Li)-Dissolved	mg/L	0.01	-	0.033
Magnesium (Mg)-Dissolved	mg/L	0.05	-	661
Manganese (Mn)-Dissolved	mg/L	0.005	-	1.1
Mercury (Hg)-Dissolved	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.0005	-	0.00156
Nickel (Ni)-Dissolved	mg/L	0.005	-	0.0067
Phosphorus (P)-Dissolved	mg/L	0.5	-	<0.50
Potassium (K)-Dissolved	mg/L	0.5	-	6.97
Rubidium (Rb)-Dissolved	mg/L	0.002	-	0.0079
Selenium (Se)-Dissolved	mg/L	0.0005	-	0.0069
Silicon (Si)-Dissolved	mg/L	0.5	-	<0.50
Silver (Ag)-Dissolved	mg/L	0.0005	-	<0.00050
Sodium (Na)-Dissolved	mg/L	0.5	-	6.41
Strontium (Sr)-Dissolved	mg/L	0.01	-	1.63
Sulfur (S)-Dissolved	mg/L	5	-	1370
Tellurium (Te)-Dissolved	mg/L	0.002	-	<0.0020
Thallium (Tl)-Dissolved	mg/L	0.0001	-	<0.00010
Thorium (Th)-Dissolved	mg/L	0.001	-	<0.0010
Tin (Sn)-Dissolved	mg/L	0.001	-	<0.0010
Titanium (Ti)-Dissolved	mg/L	0.003	-	<0.0030
Tungsten (W)-Dissolved	mg/L	0.001	-	<0.0010
Uranium (U)-Dissolved	mg/L	0.0001	-	0.00185
Vanadium (V)-Dissolved	mg/L	0.005	-	<0.0050
Zinc (Zn)-Dissolved	mg/L	0.01	-	<0.010
Zirconium (Zr)-Dissolved	mg/L	0.003	-	<0.0020
Ra-226	Bq/L	0.0044	-	0.018
Acute Toxicity	-	-	Not acutely toxic	Not acutely toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles and Sedimentation Ponds

TABLE 2.12 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-MRY-09

Analyte	Sample ID			MS-MRY-9
	ALS Laboratory Sample ID			L2359622-1
	Sample Date & Time			10/3/2019 5:20:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Hardness	mg/L	0.05	-	87.6
pH	pH units	0.1	6.0 - 9.5	8.13
Total Suspended Solids	mg/L	2	15	<2.0
Total Dissolved Solids	mg/L	10	-	100
Turbidity	NTU	0.1	-	0.34
Alkalinity, Total (as CaCO3)	mg/L	10	-	82
Ammonia, Total (as N)	mg/L	0.02	-	<0.010
Chloride (Cl)	mg/L	0.02	-	3.02
Fluoride (F)	mg/L	10	-	0.024
Nitrate (as N)	mg/L	0.01	-	0.142
Total Kjeldahl Nitrogen	mg/L	0.5	-	<0.15
Phosphorus, Total	mg/L	0.02	-	0.0045
Sulfate (SO4)	mg/L	0.02	-	6.76
Dissolved Organic Carbon	mg/L	0.5	-	1.71
Total Organic Carbon	mg/L	0.5	-	1.91
Aluminum (Al)-Total	mg/L	0.005	-	0.0249
Arsenic (As)-Total	mg/L	0.0001	0.5	<0.00010
Cadmium (Cd)-Total	mg/L	0.000005	-	<0.0000050
Calcium (Ca)-Total	mg/L	0.05	-	16
Copper (Cu)-Total	mg/L	0.001	0.3	0.0023
Iron (Fe)-Total	mg/L	0.01	-	0.027
Lead (Pb)-Total	mg/L	0.00005	0.2	<0.000050
Magnesium (Mg)-Total	mg/L	0.005	-	10.9
Manganese (Mn)-Total	mg/L	0.0005	-	0.00072
Mercury (Hg)-Total	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00164
Nickel (Ni)-Total	mg/L	0.0005	0.5	<0.00050
Potassium (K)-Total	mg/L	0.05	-	2.39
Selenium (Se)-Total	mg/L	0.00005	-	0.000106
Sodium (Na)-Total	mg/L	0.05	-	0.832
Thallium (Tl)-Total	mg/L	0.00001	-	0.000012
Uranium (U)-Total	mg/L	0.00001	-	0.00855
Zinc (Zn)-Total	mg/L	0.003	0.5	<0.0030
Aluminum (Al)-Dissolved	mg/L	0.005	-	0.0074
Arsenic (As)-Dissolved	mg/L	0.0001	-	<0.00010
Cadmium (Cd)-Dissolved	mg/L	0.00001	-	<0.000010
Calcium (Ca)-Dissolved	mg/L	0.05	-	16.9
Copper (Cu)-Dissolved	mg/L	0.0002	-	0.00213
Iron (Fe)-Dissolved	mg/L	0.01	-	<0.010
Lead (Pb)-Dissolved	mg/L	0.00005	-	<0.000050
Magnesium (Mg)-Dissolved	mg/L	0.05	-	11
Manganese (Mn)-Dissolved	mg/L	0.0005	-	<0.00050
Mercury (Hg)-Dissolved	mg/L	0.00001	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00145
Nickel (Ni)-Dissolved	mg/L	0.0005	-	<0.00050
Potassium (K)-Dissolved	mg/L	0.05	-	2.24
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.000136
Sodium (Na)-Dissolved	mg/L	0.5	-	0.76
Thallium (Tl)-Dissolved	mg/L	0.00001	-	0.000013
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00782
Zinc (Zn)-Dissolved	mg/L	0.001	-	<0.0010

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds

TABLE 2.13 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-MRY-13B

Analyte	Sample ID			MS-MRY-13B
	ALS Laboratory Sample ID			L2359622-8
	Sample Date & Time			10/3/2019 9:30:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	1430
pH	pH units	0.1	6.0 - 9.5	8.08
Total Suspended Solids	mg/L	2	15	<2.0
Total Dissolved Solids	mg/L	10	-	899
Turbidity	NTU	0.1	-	0.18
Alkalinity, Total (as CaCO3)	mg/L	10	-	234
Dissolved Organic Carbon	mg/L	0.005	-	6.09
Total Organic Carbon	mg/L	0.0001	-	7.45
Aluminum (Al)-Total	mg/L	0.0001	-	<0.050
Antimony (Sb)-Total	mg/L	0.0002	-	<0.0010
Arsenic (As)-Total	mg/L	0.0001	0.5	<0.0010
Barium (Ba)-Total	mg/L	0.00005	-	0.0894
Beryllium (Be)-Total	mg/L	0.01	-	<0.0010
Bismuth (Bi)-Total	mg/L	0.00001	-	<0.00050
Boron (B)-Total	mg/L	0.5	-	2.69
Cadmium (Cd)-Total	mg/L	0.0005	-	<0.000050
Calcium (Ca)-Total	mg/L	0.0001	-	152
Chromium (Cr)-Total	mg/L	0.001	-	<0.0050
Cobalt (Co)-Total	mg/L	0.05	-	<0.0010
Copper (Cu)-Total	mg/L	0.00005	0.3	<0.010
Iron (Fe)-Total	mg/L	0.001	-	<0.10
Lead (Pb)-Total	mg/L	0.05	0.2	<0.00050
Lithium (Li)-Total	mg/L	0.0005	-	0.034
Magnesium (Mg)-Total	mg/L	0.00001	-	58.3
Manganese (Mn)-Total	mg/L	0.00005	-	<0.0050
Mercury (Hg)-Total	mg/L	0.0005	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.05	-	0.00074
Nickel (Ni)-Total	mg/L	0.00005	0.5	0.013
Potassium (K)-Total	mg/L	0.1	-	4.21
Selenium (Se)-Total	mg/L	0.00005	-	<0.00050
Silicon (Si)-Total	mg/L	0.5	-	5
Silver (Ag)-Total	mg/L	0.001	-	<0.00050
Sodium (Na)-Total	mg/L	0.00001	-	30.9
Strontium (Sr)-Total	mg/L	0.0001	-	0.319
Thallium (Tl)-Total	mg/L	0.0003	-	<0.00010
Tin (Sn)-Total	mg/L	0.0001	-	<0.0010
Titanium (Ti)-Total	mg/L	0.00001	-	<0.0030
Tungsten (W)-Total	mg/L	0.0005	-	<0.0010
Uranium (U)-Total	mg/L	0.003	-	0.0195
Vanadium (V)-Total	mg/L	0.0003	-	<0.0050
Zinc (Zn)-Total	mg/L	2	0.5	<0.030
Zirconium (Zr)-Total	mg/L	0.001	-	<0.0020
Oil and Grease, Total	ug/L	100	No Visible Sheen	<2.0
Phenols (4AAP)	ug/L	250	-	0.0032
F1 (C6-C10)	ug/L	100	-	<100
F2 (C10-C16)	ug/L	100	-	<100
F3 (C16-C34)	ug/L	250	-	<250
F4 (C34-C50)	ug/L	250	-	<250
Total Hydrocarbons (C6-C50)	ug/L	380	-	<380
Chrom. to baseline at nC50	-	n/a	-	YES
2-Bromobenzotrifluoride	%	Surrogate	-	82.7
3,4-Dichlorotoluene	%	Surrogate	-	92

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Effluent Quality Discharge Limits for the Landfill Facilities

TABLE 2.14 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-A

Analyte	Sample ID			MS-C-A
	ALS Laboratory Sample ID			L2359622-9
	Sample Date & Time			10/3/2019 10:30:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	233
pH	pH units	0.1	6.0 - 9.5	8.04
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	144
Turbidity	NTU	0.1	-	0.36
Ammonia, Total (as N)	mg/L	0.02	-	<0.010
Nitrate (as N)	mg/L	0.02	-	0.29
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.15 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-B

Analyte	Sample ID			MS-C-B
	ALS Laboratory Sample ID			L2359622-10
	Sample Date & Time			10/3/2019 11:30:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	240
pH	pH units	0.1	6.0 - 9.5	7.72
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	139
Turbidity	NTU	0.1	-	0.47
Ammonia, Total (as N)	mg/L	0.02	-	<0.010
Nitrate (as N)	mg/L	0.02	-	0.334
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.16 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-C

Analyte	Sample ID			MS-C-C
	ALS Laboratory Sample ID			L2359622-7
	Sample Date & Time			10/3/2019 1:25:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	1410
pH	pH units	0.1	6.0 - 9.5	8.03
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	4.5
Total Dissolved Solids	mg/L	10	-	1020
Turbidity	NTU	0.1	-	3.7
Ammonia, Total (as N)	mg/L	0.02	-	<0.010
Nitrate (as N)	mg/L	0.02	-	14.7
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.17 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-D

Analyte	Sample ID			MS-C-D
	ALS Laboratory Sample ID			L2359622-6
	Sample Date & Time			10/3/2019 1:10:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	1160
pH	pH units	0.1	6.0 - 9.5	8.17
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	812
Turbidity	NTU	0.1	-	3.35
Ammonia, Total (as N)	mg/L	0.02	-	0.018
Nitrate (as N)	mg/L	0.02	-	11.7
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.18 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-E

Analyte	Sample ID			MS-C-E
	ALS Laboratory Sample ID			L2359622-5
	Sample Date & Time			10/3/2019 12:55:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	1290
pH	pH units	0.1	6.0 - 9.5	7.95
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	972
Turbidity	NTU	0.1	-	0.41
Ammonia, Total (as N)	mg/L	0.02	-	0.013
Nitrate (as N)	mg/L	0.02	-	11.2
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.19 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-F

Analyte	Sample ID			MS-C-F	MS-C-F01
	ALS Laboratory Sample ID			L2359622-4	L2359622-15
	Sample Date & Time			10/3/2019 12:20:00 PM	10/3/2019 12:20:00 PM
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	236	236
pH	pH units	0.1	6.0 - 9.5	7.96	7.99
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	140	138
Turbidity	NTU	0.1	-	0.84	0.88
Ammonia, Total (as N)	mg/L	0.02	-	<0.010	<0.010
Nitrate (as N)	mg/L	0.02	-	0.326	0.345
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.20 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-G

Analyte	Sample ID			MS-C-G
	ALS Laboratory Sample ID			L2359622-3
	Sample Date & Time			10/3/2019 8:15:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	246
pH	pH units	0.1	6.0 - 9.5	7.89
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	137
Turbidity	NTU	0.1	-	0.31
Ammonia, Total (as N)	mg/L	0.02	-	0.227
Nitrate (as N)	mg/L	0.02	-	3.06
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.21 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-C-H

Analyte	Sample ID			MS-C-H
	ALS Laboratory Sample ID			L2359622-2
	Sample Date & Time			10/3/2019 8:55:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	262
pH	pH units	0.1	6.0 - 9.5	8.21
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	146
Turbidity	NTU	0.1	-	0.3
Ammonia, Total (as N)	mg/L	0.02	-	<0.010
Nitrate (as N)	mg/L	0.02	-	0.044
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.22 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MQ-C-A

Analyte	Sample ID			MQ-C-A	MQ-C-A01
	ALS Laboratory Sample ID			L2359622-13	L2359622-14
	Sample Date & Time			10/3/2019 8:35:00 AM	10/3/2019 8:35:00 AM
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	390	392
pH	pH units	0.1	6.0 - 9.5	8.24	8.24
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	220	219
Turbidity	NTU	0.1	-	0.25	0.15
Ammonia, Total (as N)	mg/L	0.02	-	<0.010	<0.010
Nitrate (as N)	mg/L	0.02	-	0.027	0.026
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.23 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MQ-C-B

Analyte	Sample ID			MQ-C-B
	ALS Laboratory Sample ID			L2359622-11
	Sample Date & Time			10/3/2019 9:30:00 AM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	469
pH	pH units	0.1	6.0 - 9.5	8.14
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0
Total Dissolved Solids	mg/L	10	-	267
Turbidity	NTU	0.1	-	1.77
Ammonia, Total (as N)	mg/L	0.02	-	0.204
Nitrate (as N)	mg/L	0.02	-	3.15
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

TABLE 2.24 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MQ-C-D

Analyte	Sample ID			MQ-C-D
	ALS Laboratory Sample ID			L2359622-12
	Sample Date & Time			10/3/2019 3:40:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	488
pH	pH units	0.1	6.0 - 9.5	8.13
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	3.4
Total Dissolved Solids	mg/L	10	-	284
Turbidity	NTU	0.1	-	7.61
Ammonia, Total (as N)	mg/L	0.02	-	0.139
Nitrate (as N)	mg/L	0.02	-	4.02
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0
Acute Toxicity	-	-	Not Acutely Toxic	Not Acutely Toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11: Effluent Quality Discharge Limits for Contact Water during the Operations Phase and the Early Revenue Phase of the Project

Table 3: Flow and Volume Measurements-Part I Item 11 - October 2019

DATE	Camp Lake Freshwater for Domestic Use - Daily Water (m³) MS-MRY-1	Camp Lake Freshwater for Industrial Use - Daily Water (m³) MS-MRY-1	Treated Sewage Effluent (m³) from MS-01 to Discharge Location #1	Treated Sewage Effluent (m³) from MS-01B to Discharge Location #1	Sewage Sludge Removed (m³) from Mine Site WWTPs to Incinerator	Sewage Sludge Removed (m³) from Mine Site WWTP to PWSP at Mine Site	Km 32 Lake Milne Port Camp Daily Water (m³) MP-MRY-3	Km 32 Lake Milne Port Camp Fresh Water Use for Industrial Purposes (m³) MP-MRY-3	Treated Sewage Effluent (m³) from MP-01 to Milne Port	Treated Sewage Effluent (m³) from MP-01B to Milne Port	Sewage Sludge Removed (m³) from Milne Port WWTP to Mine Site WWTP	Sewage Sludge Removed (m³) from Milne Port WWTP to Incinerator	Sewage Sludge Removed (m³) from Milne Port WWTP to PWSP at Milne Port	Effluent Discharge (m³) from Mine Site Waste Rock Stockpile Pond (MS-08)	Effluent Discharge (m³) from Milne Port Ore Stockpile Sedimentation Pond (East) to Milne Port (MP-05)	Effluent Discharge (m³) from Milne Port Ore Stockpile Sedimentation Pond (West) to Milne Port (MP-06)
1-Oct-19	136.7	2.2	39.0	124.0	2.3	0.0	123.9	14.2	63.0	44.6	0.0	0.5	0.0	713.6	0.0	272.5
2-Oct-19	139.1	5.2	41.0	131.9	2.0	0.0	86.5	9.6	46.0	36.7	0.0	0.4	0.0	520.0	15.3	953.9
3-Oct-19	70.2	0.0	41.0	128.0	1.7	0.0	115.5	8.6	74.0	33.8	0.0	0.5	0.0	0.0	0.0	1499.0
4-Oct-19	136.4	7.2	39.0	125.9	2.0	0.0	88.8	1.9	74.0	29.1	0.0	0.5	0.0	0.0	0.0	0.0
5-Oct-19	138.3	0.0	39.0	92.1	1.8	0.0	101.5	6.9	73.0	37.1	0.0	0.3	0.0	0.0	0.0	0.0
6-Oct-19	120.2	0.0	35.0	71.7	2.2	0.0	104.5	1.9	73.0	45.4	0.0	0.5	0.0	0.0	0.0	0.0
7-Oct-19	133.6	25.4	36.0	88.2	1.9	0.0	124.1	7.5	64.0	45.9	0.0	0.3	0.0	0.0	0.0	0.0
8-Oct-19	167.2	0.0	36.0	109.3	1.8	0.0	135.9	1.9	71.0	36.3	0.0	0.0	5.0	0.0	0.0	0.0
9-Oct-19	100.4	26.3	39.0	113.5	1.6	0.0	129.9	18.6	71.0	41.1	0.0	0.5	0.0	0.0	0.0	0.0
10-Oct-19	142.7	0.0	40.0	109.8	2.0	0.0	128.9	2.9	65.0	50.3	0.0	0.0	0.0	0.0	0.0	0.0
11-Oct-19	184.5	6.0	32.0	96.7	2.2	0.0	115.2	1.9	67.0	46.1	0.0	0.3	0.0	0.0	0.0	0.0
12-Oct-19	197.0	0.0	33.0	134.2	2.0	0.0	109.2	6.9	66.0	46.2	0.0	0.3	6.0	0.0	0.0	0.0
13-Oct-19	137.8	7.2	31.0	121.5	1.6	0.0	116.4	15.9	64.0	32.6	0.0	0.3	6.0	0.0	0.0	0.0
14-Oct-19	171.3	0.0	43.0	122.2	1.6	0.0	112.2	1.9	64.0	44.1	2.0	0.5	0.0	0.0	0.0	0.0
15-Oct-19	159.0	0.0	41.0	121.5	1.6	0.0	125.4	9.4	66.0	45.5	0.0	0.7	0.0	0.0	0.0	0.0
16-Oct-19	156.4	9.7	40.0	131.6	1.7	0.0	116.2	18.6	68.0	36.6	0.0	0.3	0.0	0.0	0.0	0.0
17-Oct-19	169.5	19.1	39.0	152.5	1.7	0.0	132.2	3.6	69.0	51.0	0.0	0.5	0.0	0.0	0.0	0.0
18-Oct-19	178.5	9.9	39.0	120.3	1.7	0.0	101.5	1.9	70.0	40.7	0.0	0.5	0.0	0.0	0.0	0.0
19-Oct-19	159.5	6.8	38.0	96.5	1.6	0.0	128.9	1.9	64.0	38.9	0.0	0.3	33.4	0.0	0.0	0.0
20-Oct-19	124.3	4.9	38.0	104.4	1.8	0.0	98.8	1.9	64.0	50.5	0.0	0.2	0.0	0.0	0.0	0.0
21-Oct-19	187.1	0.0	38.0	140.3	1.6	0.0	106.1	1.9	68.0	42.9	0.0	0.3	3.0	0.0	0.0	0.0
22-Oct-19	132.9	0.0	38.0	90.3	1.6	0.0	88.3	14.5	68.0	40.2	0.0	0.3	6.0	0.0	0.0	0.0
23-Oct-19	143.7	0.0	38.0	92.6	1.6	0.0	123.7	6.1	63.0	39.9	0.0	0.0	0.0	0.0	0.0	0.0
24-Oct-19	165.4	0.0	41.0	125.2	2.0	26.0	108.5	10.3	64.0	43.1	2.0	0.6	0.0	0.0	0.0	0.0
25-Oct-19	96.4	0.0	39.0	88.6	1.9	26.0	112.2	1.9	70.0	39.9	0.0	0.6	0.0	0.0	0.0	0.0
26-Oct-19	139.3	3.0	28.0	100.5	1.9	0.0	107.1	1.9	69.0	34.8	0.0	1.0	0.0	0.0	0.0	0.0
27-Oct-19	188.6	0.0	36.0	119.5	2.1	0.0	100.1	8.9	67.0	34.9	2.0	0.7	0.0	0.0	0.0	0.0
28-Oct-19	191.7	0.0	38.0	126.2	2.1	0.0	106.1	1.9	68.0	37.2	0.0	0.9	0.0	0.0	0.0	0.0
29-Oct-19	147.6	8.6	38.0	119.4	2.0	0.0	85.1	22.4	67.0	35.7	1.0	0.9	0.0	0.0	0.0	0.0
30-Oct-19	155.6	0.0	38.0	122.0	2.3	0.0	106.1	16.9	63.0	43.8	1.5	0.0	0.0	0.0	0.0	0.0
31-Oct-19	128.0	0.0	34.0	116.3	2.1	0.0	104.1	1.9	66.0	40.6	1.0	0.3	0.0	0.0	0.0	0.0
Total	4598.9	141.6	1165.0	3536.7	57.8	52.0	3443.1	226.3	2069.0	1265.2	9.5	13.0	59.4	1233.6	15.3	2725.5

Notes:
WWTP - Waste Water Treatment Plant
PWSP - Polishing Waste Stabilization Pond