

October 30, 2023

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

Resource Management Officer, CIRNAC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

**RE: Water Licence 2AM-MRY1325 Monthly Surveillance Network Program (SNP) Report
September 2023**

The following is the monthly report for September 2023 as required under Part I, Item 21 of the Type 'A' Water Licence 2AM-MRY1325 (the Licence) which 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

Table 1.1 presents a list of samples/monitoring required under the Licence and the details concerning which water quality samples were collected along with sample dates and laboratory identification numbers, as appropriate. Analytical water quality testing results are presented in Table 2. Table 3.1 presents water volumes consumed for domestic and industrial water purposes as well as select volumes of effluent and waste discharged and/or disposed at the Mary River Mine Site and Milne Port during September 2023.

Monitoring Program Results

Water Sampling and Analysis Results

Table 2 provides the analytical results related to the Sewage Treatment Plant (STP) facilities and SNP sampling requirements. There were no exceedances of applicable water quality criteria observed at STP monitoring stations in September 2023. There were four (4) exceedances of applicable water quality criteria observed at SNP monitoring stations in September 2023. Additional context is provided below.

On September 5, a controlled discharge from the MP-04A contaminated snow facility exceeded water license criteria for TSS and total lead. Following internal water quality analysis indicating compliant results for pH, ammonia (NH₃), TSS and TOG, discharge from the MP-04A contaminated snow facility was initiated on September 5. Laboratory results for the discharge sample collected on September 5 showed a TSS concentration of 141 mg/L and a total lead concentration of 0.014 mg/L, exceeding water license criteria of 15 mg/L and 0.001 mg/L respectively, for parameter grab sample concentrations. The exceedances were observed in laboratory results on September 9, and the MP-04A contaminated snow

facility discharge was stopped. Note that the total volume discharged as reported in Table 3 was very low. Corrective actions identified through the incident investigation currently in progress will be summarized in the 2023 QIA and NWB Annual Report.

Analytical results of the September 3, 2023 sample collected at MS-08 indicated a TSS concentration of 33.3 mg/L; exceeding the maximum grab sample limit of 30 mg/L. Subsequent resampling could not be attempted, as September 3 was also the final day of discharge for the year due to freezing conditions. Because this was the only sample collected for the month, the maximum average concentration of 15 mg/L was also exceeded for September. An investigation into the cause of this exceedance is ongoing.

As a result of the ongoing seepage at KM105 Surface Water Management Pond, samples continue to be collected at water quality monitoring station KM105-SWMP-SEEP-02 when there is flowing water present and a representative sample can be collected. Analytical results are provided in Table 2, while estimated discharge volumes are provided in Table 3.1.

Due to the ongoing seepage event at the KM105 Surface Water Management Pond (KM105 Pond), an elevated TSS concentration of 62.4 mg/L occurred in a monthly SNP sample collected at surface water monitoring station KM105-SWMP-SEEP-02 on September 5. A second monthly SNP resample collected on September 19, however, showed TSS concentrations of 10.5 mg/L; below applicable water licence criteria.

A geotube filtration system has been installed as a mitigation measure at the KM105 Pond and briefly tested prior to winter conditions for pump operations. Geotechnical drilling initiated on August 31 for the KM105 Pond geotechnical investigation continued in September to collect permeability data needed to design a remediation strategy. The development and implementation of long term remedial measures at the KM105 stormwater pond is ongoing. Currently, construction of the permanent water treatment (WTP) facility at the KM105 Pond is in progress; a Construction Summary Report (CSR) will be submitted following completion of the work. Corrective and remedial actions associated with the KM105 Pond will be fully summarized in the 2023 QIA and NWB Annual Report.

Flow and Volume Measurements

Table 3.1 provides a breakdown of volume measurements for September 2023 as required by Part I, Item 9 of the Licence. There were no exceedances of the source specific daily volume withdrawal limits in September 2023.

We trust that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact the undersigned.

Prepared by:

A handwritten signature in black ink, appearing to read "Dale Kristoff".

Dale Kristoff
Environmental Specialist

Reviewed by:

A handwritten signature in black ink, appearing to read "Todd Swenson".

Todd Swenson
Environmental Superintendent

cc: Jeremy Fraser, Omer Pasalic, Sean Noble-Nowdluk (CIRNAC)
Conor Goddard, Chris Spencer (QIA)
Tim Sewell, Megan Lord-Hoyle, Lou Kamermans, Francois Gaudreau, Martin Beausejour, Connor Devereaux,
Katie Babin, Allison Parker, Elisabeth Luther (Baffinland)

Attachments

Attachments – Table 1, Table 2, Table 3

**Table 1.1: Monitoring Program
Water Sampling Summary**

Location	Location Description	Sample Date	Sample Type	Lab Sample ID
MP-01	Sewage Treatment Facility	2023-09-05	P	WT2328180-001
MP-01B	Sewage Treatment Facility	2023-09-05	P	WT2328178-001
MP-03	Bulk Fuel Storage Facility Stormwater	2023-09-05	P	WT2328478-001
MP-04	Treated Oily Water from Milne Port Landfarm Facility to Tundra	2023-09-03	P	BF2300255-001
MP-04A	Treated Oily Water from Milne Port Snow dump Facility to Tundra	2023-09-05	FD	WT2328476-002
MP-04A	Treated Oily Water from Milne Port Snow dump Facility to Tundra	2023-09-05	P	WT2328476-001
MP-05	Ore Stockpile Sedimentation Pond (East)	2023-09-09	P	BF2300271-001
MP-06	Ore Stockpile Sedimentation Pond (West)	2023-09-09	P	BF2300272-001
MP-C-B	Downstream of Construction Area	2023-09-03	P	BF2300253-003
MP-C-B	Downstream of Construction Area	2023-09-10	P	BF2300285-005
MP-C-B	Downstream of Construction Area	2023-09-24	P	BF2300313-006
MP-C-H	Downstream of Construction Area	2023-09-03	P	BF2300253-002
MP-C-H	Downstream of Construction Area	2023-09-10	P	BF2300285-006
MP-C-H	Downstream of Construction Area	2023-09-10	FD	BF2300285-001
MP-C-H	Downstream of Construction Area	2023-09-17	P	BF2300300-001
MP-C-H	Downstream of Construction Area	2023-09-24	P	BF2300313-001
MP-C-H	Downstream of Construction Area	2023-09-24	FD	BF2300313-002
MP-C-J	Downstream of Construction Area	2023-09-03	P	BF2300253-006
MP-C-J	Downstream of Construction Area	2023-09-10	P	BF2300285-003
MP-C-J	Downstream of Construction Area	2023-09-17	P	BF2300300-004
MP-C-J	Downstream of Construction Area	2023-09-24	P	BF2300313-004
MP-C-K	Downstream of Construction Area	2023-09-03	P	BF2300253-004
MP-C-K	Downstream of Construction Area	2023-09-03	FD	BF2300253-005
MP-C-K	Downstream of Construction Area	2023-09-10	P	BF2300285-004
MP-C-K	Downstream of Construction Area	2023-09-17	P	BF2300300-002
MP-C-K	Downstream of Construction Area	2023-09-17	TB	BF2300300-003
MP-C-K	Downstream of Construction Area	2023-09-24	P	BF2300313-005
MP-Q1-02	Downstream of Q1 Quarry	2023-09-03	P	BF2300253-001
MP-Q1-02	Downstream of Q1 Quarry	2023-09-10	P	BF2300285-002
MP-Q1-02	Downstream of Q1 Quarry	2023-09-24	P	BF2300313-003
MS-01B	Sewage Treatment Facility	2023-09-05	P	WT2328442-001
MS-01B	Sewage Treatment Facility	2023-09-05	TB	WT2328442-003
MS-03B	Mine Site Bulk Fuel Storage Facility Stormwater	2023-09-26	P	BF2300310-001
MS-MRY-06	Exploration Camp Bulk Fuel Storage Facility Stormwater	2023-09-05	P	BF2300264-001
MS-06	Ore Stockpile Pond Stormwater	2023-09-05	P	BF2300262-001
MS-07	Run of Mine Ore Stockpile Pond Stormwater	2023-09-08	P	BF2300270-AA
MS-08	Mine Waste Rock Stockpile Pond	2023-09-03	P	BF2300259-001
MS-MRY-09	Deposit 1 Surface Water Drainage	2023-09-03	P	BF2300258-012
MS-MRY-09	Deposit 1 Surface Water Drainage	2023-09-14	P	BF2300291-001
MS-MRY-09	Deposit 1 Surface Water Drainage	2023-09-20	P	BF2300309-001
MS-MRY-09	Deposit 1 Surface Water Drainage	2023-09-25	P	BF2300312-008
MS-MRY-13B	Downstream Non-Hazardous Landfill	2023-09-03	P	BF2300258-013
MS-MRY-13B	Downstream Non-Hazardous Landfill	2023-09-10	P	BF2300317-002
MS-MRY-13B	Downstream Non-Hazardous Landfill	2023-09-25	P	BF2300312-005
MS-C-A	Downstream of Construction and Borrow Areas	2023-09-04	P	BF2300258-004
MS-C-A	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-004
MS-C-A	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300276-006
MS-C-A	Downstream of Construction and Borrow Areas	2023-09-25	P	BF2300312-006
MS-C-A	Downstream of Construction and Borrow Areas	2023-09-25	FD	BF2300312-007
MS-C-B	Downstream of Construction and Borrow Areas	2023-09-04	P	BF2300258-005
MS-C-B	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-005
MS-C-B	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300296-007
MS-C-B	Downstream of Construction and Borrow Areas	2023-09-25	P	BF2300312-009
MS-C-C	Downstream of Construction and Borrow Areas	2023-09-04	P	BF2300258-006
MS-C-C	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-006

Notes:

Sample Types:
P - Permitted Sample
FB - Field Blank
FD - Field Duplicate
TB - Trip Blank
NST - No Sample Taken

**Table 1.1: Monitoring Program
Water Sampling Summary**

Location	Location Description	Sample Date	Sample Type	Lab Sample ID
MS-C-C	Downstream of Construction and Borrow Areas	2023-09-26	P	BF2300312-013
MS-C-D	Downstream of Construction and Borrow Areas	2023-09-03	P	BF2300258-007
MS-C-D	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-007
MS-C-D	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300296-005
MS-C-D	Downstream of Construction and Borrow Areas	2023-09-26	P	BF2300312-010
MS-C-E	Downstream of Construction and Borrow Areas	2023-09-03	P	BF2300258-008
MS-C-E	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-008
MS-C-E	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300296-003
MS-C-E	Downstream of Construction and Borrow Areas	2023-09-26	P	BF2300312-012
MS-C-F	Downstream of Construction and Borrow Areas	2023-09-04	P	BF2300258-009
MS-C-F	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-009
MS-C-F	Downstream of Construction and Borrow Areas	2023-09-10	FB	BF2300317-003
MS-C-F	Downstream of Construction and Borrow Areas	2023-09-26	P	BF2300312-011
MS-C-G	Downstream of Construction and Borrow Areas	2023-09-03	P	BF2300258-010
MS-C-G	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300276-010
MS-C-G	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300294-007
MS-C-G	Downstream of Construction and Borrow Areas	2023-09-25	P	BF2300312-003
MS-C-H	Downstream of Construction and Borrow Areas	2023-09-03	P	BF2300258-011
MS-C-H	Downstream of Construction and Borrow Areas	2023-09-10	P	BF2300317-001
MS-C-H	Downstream of Construction and Borrow Areas	2023-09-10	FD	BF2300317-004
MS-C-H	Downstream of Construction and Borrow Areas	2023-09-17	P	BF2300296-001
MS-C-H	Downstream of Construction and Borrow Areas	2023-09-25	P	BF2300312-004
MQ-C-A	Downstream of QMR2 Quarry	2023-09-04	P	BF2300258-001
MQ-C-A	Downstream of QMR2 Quarry	2023-09-10	P	BF2300276-001
MQ-C-A	Downstream of QMR2 Quarry	2023-09-17	P	BF2300296-008
MQ-C-A	Downstream of QMR2 Quarry	2023-09-25	P	BF2300312-001
MQ-C-B	Downstream of QMR2 Quarry	2023-09-04	P	BF2300258-002
MQ-C-B	Downstream of QMR2 Quarry	2023-09-10	P	BF2300276-002
MQ-C-B	Downstream of QMR2 Quarry	2023-09-17	P	BF2300296-010
MQ-C-B	Downstream of QMR2 Quarry	2023-09-26	P	BF2300312-014
MQ-C-D	Downstream of QMR2 Quarry	2023-09-04	P	BF2300258-003
MQ-C-D	Downstream of QMR2 Quarry	2023-09-10	P	BF2300276-003
MQ-C-D	Downstream of QMR2 Quarry	2023-09-13	P	BF2300283-001
MQ-C-D	Downstream of QMR2 Quarry	2023-09-17	P	BF2300296-009
MQ-C-D	Downstream of QMR2 Quarry	2023-09-25	P	BF2300312-002
KM105-SWMP-SEEP-02	KM105 Pond Stormwater	2023-09-05	P	BF2300263-001
KM105-SWMP-SEEP-02	KM105 Pond Stormwater	2023-09-19	P	BF2300305-001

Notes:

Sample Types:
P - Permitted Sample
FB - Field Blank
FD - Field Duplicate
TB - Trip Blank
NST - No Sample Taken

Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-01

Location Name			MP-01
Field Sample ID			MP-01_2023-09-05
ALS Laboratory Work Order			WT2328180
Sample Date			2023-09-05
Sample Type			P
Analyte	Units	Table 5 Criteria	
pH, Lab	pH units	9.5	7.83
Total Suspended Solids	mg/L	120	1.7
Total Dissolved Solids	mg/L		806
Turbidity	NTU		0.67
Alkalinity, Total	mg/L		81.8
Ammonia, Total (as N)	mg/L		0.0484
Total Kjeldahl Nitrogen	mg/L		1.28
Fecal Coliforms	CFU/100mL	10000	< 1
BOD	mg/L	100	< 2.0
Oil and Grease, Total	mg/L		< 5.0
Phosphorus, Nutrient	mg/L		9.72

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-01B**

		Location Name	MP-01B
		Field Sample ID	MP-01B_2023-09-05
		ALS Laboratory Work Order	WT2328178
		Sample Date	2023-09-05
		Sample Type	P
Analyte	Units	Table 5 Criteria	
pH, Lab	pH units	9.5	7.65
Total Suspended Solids	mg/L	120	< 1.5
Total Dissolved Solids	mg/L		647
Turbidity	NTU		< 0.10
Alkalinity, Total	mg/L		62.5
Ammonia, Total (as N)	mg/L		0.0937
Total Kjeldahl Nitrogen	mg/L		4.37
Fecal Coliforms	CFU/100mL	10000	< 10
BOD	mg/L	100	< 2.0
Oil and Grease, Total	mg/L		< 5.0
Phosphorus, Nutrient	mg/L		7.44

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-03**

		Location Name	MP-03
		Field Sample ID	MP-03_2023-09-05
		ALS Laboratory Work Order	WT2328478
		Sample Date	2023-09-05
		Sample Type	P
Analyte	Units	Table 11 Criteria	
pH, Lab	pH units		8.46
Total Suspended Solids	mg/L		5.4
Total Dissolved Solids	mg/L		495
Turbidity	NTU		12.3
Ammonia, Total (as N)	mg/L		0.317
Arsenic - Total	mg/L		0.00101
Copper - Total	mg/L		< 0.00500
Lead - Total	mg/L	0.001	0.001
Nickel - Total	mg/L		< 0.00500
Zinc - Total	mg/L		< 0.0300
Oil and Grease, Total	mg/L	15	< 5.0
Visible Sheen (100=Yes, 0=No)	None	99	0
Benzene	ug/L	370	< 0.50
Ethylbenzene	ug/L	90	< 0.50
Toluene	ug/L	2.0	< 0.50
F1-BTEX	ug/L		< 25
F1 (C6-C10)	ug/L		< 25
F2 (C10-C16)	ug/L		120
F3 (C16-C34)	ug/L		< 250
F4 (C34-C50)	ug/L		< 250
Total Petroleum Hydrocarbons (C6-C50)	ug/L		< 370
Phosphorus, Nutrient	mg/L		0.0188

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank



Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-04

		Location Name	MP-04
		Field Sample ID	MP-04_2023-09-03
		ALS Laboratory Work Order	BF2300255
		Sample Date	2023-09-03
		Sample Type	P
Analyte	Units	Table 7 Criteria	
pH, Lab	pH units	9.5	7.99
Total Suspended Solids	mg/L	15	1.5
Total Dissolved Solids	mg/L		500
Turbidity	NTU		6.73
Lead - Total	mg/L	0.001	0.0005
Oil and Grease, Total	mg/L	15	< 5.0
Visible Sheen (100=Yes, 0=No)	None	99	0
Benzene	ug/L		< 0.50
Ethylbenzene	ug/L	90	< 0.50
Toluene	ug/L	2.0	< 0.50
F1-BTEX	ug/L		< 25
F1 (C6-C10)	ug/L		< 25
F2 (C10-C16)	ug/L		130
F3 (C16-C34)	ug/L		< 250
F4 (C34-C50)	ug/L		< 250
Total Petroleum Hydrocarbons (C6-C50)	ug/L		< 370

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-04A**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-04A	MP-04A
			MP-04A_2023-09-05	QP-CC1_2023-09-05
			WT2328476	WT2328476
			2023-09-05	2023-09-05
			P	FD
Analyte	Units	Table 7 Criteria		
pH, Lab	pH units	9.5	7.51	7.53
Total Suspended Solids	mg/L	15	141	131
Total Dissolved Solids	mg/L		2430	2440
Turbidity	NTU		48.5	49.5
Lead - Total	mg/L	0.001	0.014	0.013
Oil and Grease, Total	mg/L	15	< 5.0	< 5.0
Visible Sheen (100=Yes, 0=No)	None	99	0	-
Benzene	ug/L		< 0.50	< 0.50
Ethylbenzene	ug/L	90	< 0.50	< 0.50
Toluene	ug/L	2.0	< 0.50	< 0.50
F1-BTEX	ug/L		< 25	< 25
F1 (C6-C10)	ug/L		< 25	< 25
F2 (C10-C16)	ug/L		< 100	< 100
F3 (C16-C34)	ug/L		1030	1060
F4 (C34-C50)	ug/L		< 250	< 250
Total Petroleum Hydrocarbons (C6-C50)	ug/L		1030	1060

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-05**

		Location Name	MP-05
		Field Sample ID	MP-05_2023-09-09
		ALS Laboratory Work Order	BF2300271
		Sample Date	2023-09-09
		Sample Type	P
Analyte	Units	Table 6 Criteria	
Hardness	mg/L		442
pH, Lab	pH units	9.5	8.14
Total Suspended Solids	mg/L	15	1.8
Total Dissolved Solids	mg/L		585
Turbidity	NTU		5.14
Alkalinity, Total	mg/L		210
Ammonia, Total (as N)	mg/L		0.0676
Chloride	mg/L		184
Fluoride	mg/L		0.175
Nitrate	mg/L		6.70
Total Kjeldahl Nitrogen	mg/L		0.544
Sulfate	mg/L		96.7
Dissolved Organic Carbon	mg/L		5.32
Total Organic Carbon	mg/L		5.84
Aluminum - Total	mg/L		0.0394
Antimony - Total	mg/L		0.00012
Arsenic - Total	mg/L	0.50	0.00025
Barium - Total	mg/L		0.0177
Cadmium - Total	mg/L		< 0.0000050
Calcium - Total	mg/L		95.4
Chromium - Total	mg/L		< 0.00050
Cobalt - Total	mg/L		0.00034
Copper - Total	mg/L	0.30	0.00207
Iron - Total	mg/L		0.113
Lead - Total	mg/L	0.20	0.0001
Lithium - Total	mg/L		0.0181
Magnesium - Total	mg/L		49.5
Manganese - Total	mg/L		0.0349
Mercury - Total	mg/L		< 0.0000050
Molybdenum - Total	mg/L		0.00380
Nickel - Total	mg/L	0.50	0.00132
Phosphorus, Total	mg/L		< 0.050
Potassium - Total	mg/L		9.60
Selenium - Total	mg/L		0.000118
Sodium - Total	mg/L		73.1
Strontium - Total	mg/L		0.273
Thallium - Total	mg/L		0.000014
Tin - Total	mg/L		< 0.00010
Titanium - Total	mg/L		< 0.00200
Uranium - Total	mg/L		0.0892
Vanadium - Total	mg/L		< 0.00050
Zinc - Total	mg/L	0.50	0.0112
Aluminum - Dissolved	mg/L		0.0068
Arsenic - Dissolved	mg/L		0.00027
Cadmium - Dissolved	mg/L		< 0.0000050
Calcium - Dissolved	mg/L		97.4
Copper - Dissolved	mg/L		0.00207
Iron - Dissolved	mg/L		0.020
Lead - Dissolved	mg/L		< 0.000050
Magnesium - Dissolved	mg/L		50.8
Manganese - Dissolved	mg/L		0.0332
Mercury - Dissolved	mg/L		< 0.0000050
Molybdenum - Dissolved	mg/L		0.00411
Nickel - Dissolved	mg/L		0.00130
Potassium - Dissolved	mg/L		9.74
Selenium - Dissolved	mg/L		0.000174
Sodium - Dissolved	mg/L		77.5
Thallium - Dissolved	mg/L		0.000014
Uranium - Dissolved	mg/L		0.0854
Zinc - Dissolved	mg/L		0.0103
Visible Sheen (100=Yes, 0=No)	None	99	0
Phenols	ug/L		< 1.0
Phosphorus, Nutrient	mg/L		0.0031

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-06**

			Location Name
			Field Sample ID
			ALS Laboratory Work Order
			Sample Date
			Sample Type
Analyte	Units	Table 6 Criteria	
Hardness	mg/L		829
pH, Lab	pH units	9.5	7.85
Total Suspended Solids	mg/L	15	2.2
Total Dissolved Solids	mg/L		1180
Turbidity	NTU		11.1
Alkalinity, Total	mg/L		131
Ammonia, Total (as N)	mg/L		2.46
Chloride	mg/L		116
Fluoride	mg/L		0.322
Nitrate	mg/L		17.2
Total Kjeldahl Nitrogen	mg/L		2.32
Sulfate	mg/L		554
Dissolved Organic Carbon	mg/L		3.26
Total Organic Carbon	mg/L		3.17
Aluminum - Total	mg/L		0.0503
Antimony - Total	mg/L		0.00011
Arsenic - Total	mg/L	0.50	0.00044
Barium - Total	mg/L		0.0252
Cadmium - Total	mg/L		0.0000089
Calcium - Total	mg/L		149
Chromium - Total	mg/L		< 0.00050
Cobalt - Total	mg/L		0.00081
Copper - Total	mg/L	0.30	0.00071
Iron - Total	mg/L		0.078
Lead - Total	mg/L	0.20	0.0001
Lithium - Total	mg/L		0.0224
Magnesium - Total	mg/L		111
Manganese - Total	mg/L		0.0387
Mercury - Total	mg/L		< 0.0000050
Molybdenum - Total	mg/L		0.00920
Nickel - Total	mg/L	0.50	0.00095
Phosphorus, Total	mg/L		< 0.050
Potassium - Total	mg/L		13.1
Selenium - Total	mg/L		0.00116
Sodium - Total	mg/L		75.0
Strontium - Total	mg/L		0.481
Thallium - Total	mg/L		0.000068
Tin - Total	mg/L		< 0.00010
Titanium - Total	mg/L		0.00051
Uranium - Total	mg/L		0.760
Vanadium - Total	mg/L		< 0.00050
Zinc - Total	mg/L	0.50	< 0.0030
Aluminum - Dissolved	mg/L		0.0108
Arsenic - Dissolved	mg/L		< 0.00100
Cadmium - Dissolved	mg/L		< 0.0000500
Calcium - Dissolved	mg/L		139
Copper - Dissolved	mg/L		< 0.00200
Iron - Dissolved	mg/L		< 0.100
Lead - Dissolved	mg/L		< 0.000500
Magnesium - Dissolved	mg/L		102
Manganese - Dissolved	mg/L		0.0219
Mercury - Dissolved	mg/L		< 0.0000050
Molybdenum - Dissolved	mg/L		0.00880
Nickel - Dissolved	mg/L		< 0.00500
Potassium - Dissolved	mg/L		13.0
Selenium - Dissolved	mg/L		0.00106
Sodium - Dissolved	mg/L		71.9
Thallium - Dissolved	mg/L		< 0.000100
Uranium - Dissolved	mg/L		0.753
Zinc - Dissolved	mg/L		< 0.0100
Visible Sheen (100=Yes, 0=No)	None	99	0
Phenols	ug/L		< 1.0
Phosphorus, Nutrient	mg/L		0.0060

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-C-B**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-C-B	MP-C-B	MP-C-B
			MP-C-B_2023-09-03	MP-C-B_2023-09-10	MP-C-B_2023-09-24
			BF2300253	BF2300285	BF2300313
			2023-09-03	2023-09-10	2023-09-24
			P	P	P
Analyte	Units	Table 9 Criteria			
Conductivity	umhos/cm		661	-	-
pH, Lab	pH units	9.5	8.19	8.21	8.03
Total Suspended Solids	mg/L	30	< 1.2	< 1.0	2.7
Total Dissolved Solids	mg/L		382	408	439
Turbidity	NTU		2.51	1.68	6.98
Ammonia, Total (as N)	mg/L		0.0760	-	-
Nitrate	mg/L		5.22	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank



Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-C-H

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H
			MP-C-H_2023-09-03	MP-C-H_2023-09-10	QP-CC2_2023-09-10	MP-C-H_2023-09-17	MP-C-H_2023-09-24	QP-CC2_2023-09-24
			BF2300253	BF2300285	BF2300285	BF2300300	BF2300313	BF2300313
			2023-09-03	2023-09-10	2023-09-10	2023-09-17	2023-09-24	2023-09-24
			P	P	FD	P	P	FD
Analyte	Units	Table 9 Criteria						
Conductivity	umhos/cm		304	-	-	-	-	-
pH, Lab	pH units	9.5	8.13	8.13	8.14	8.05	8.15	8.16
Total Suspended Solids	mg/L	30	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0
Total Dissolved Solids	mg/L		174	177	165	186	195	182
Turbidity	NTU		0.15	0.18	0.48	< 0.10	0.42	0.42
Ammonia, Total (as N)	mg/L		0.0093	-	-	-	-	-
Nitrate	mg/L		0.152	-	-	-	-	-
Oil and Grease, Total	mg/L		5.2	-	-	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	-	0	0	-

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank



Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-C-J

			Location Name	MP-C-J	MP-C-J	MP-C-J	MP-C-J
			Field Sample ID	MP-C-J_2023-09-03	MP-C-J_2023-09-10	MP-C-J_2023-09-17	MP-C-J_2023-09-24
			ALS Laboratory Work Order	BF2300253	BF2300285	BF2300300	BF2300313
			Sample Date	2023-09-03	2023-09-10	2023-09-17	2023-09-24
			Sample Type	P	P	P	P
Analyte	Units	Table 9 Criteria					
Conductivity	umhos/cm		463	-	-	-	-
pH, Lab	pH units	9.5	7.79	7.95	7.77	7.85	
Total Suspended Solids	mg/L	30	< 1.0	< 1.0	< 1.4	< 1.0	
Total Dissolved Solids	mg/L		260	250	267	256	
Turbidity	NTU		0.35	2.07	< 0.10	< 0.10	
Ammonia, Total (as N)	mg/L		< 0.0050	-	-	-	
Nitrate	mg/L		0.062	-	-	-	
Oil and Grease, Total	mg/L		< 5.0	-	-	-	
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0	

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-C-K

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K
			MP-C-K_2023-09-03	QP-CC2_2023-09-03	MP-C-K_2023-09-10	MP-C-K_2023-09-17	QP-BT2_2023-09-17	MP-C-K_2023-09-24
			BF2300253	BF2300253	BF2300285	BF2300300	BF2300300	BF2300313
			2023-09-03	2023-09-03	2023-09-10	2023-09-17	2023-09-17	2023-09-24
			P	FD	P	P	TB	P
Analyte	Units	Table 9 Criteria						
Conductivity	umhos/cm		898	899	-	-	-	-
pH, Lab	pH units	9.5	8.09	8.12	8.10	7.96	6.05	8.04
Total Suspended Solids	mg/L	30	< 1.0	< 1.0	< 1.0	10.4	< 1.0	1.7
Total Dissolved Solids	mg/L		565	546	558	674	< 20	543
Turbidity	NTU		0.58	0.53	2.79	0.78	< 0.10	0.82
Ammonia, Total (as N)	mg/L		0.0496	0.0585	-	-	-	-
Nitrate	mg/L		0.838	0.812	-	-	-	-
Oil and Grease, Total	mg/L		< 5.0	< 5.0	-	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	-	0	0	-	0

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MP-Q1-02**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-Q1-02	MP-Q1-02	MP-Q1-02
			MP-Q1-02_2023-09-03	MP-Q1-02_2023-09-10	MP-Q1-02_2023-09-24
			BF2300253	BF2300285	BF2300313
			2023-09-03	2023-09-10	2023-09-24
			P	P	P
Analyte	Units	Table 9 Criteria (Quarry)			
Conductivity	umhos/cm		550	-	-
pH, Lab	pH units	9.5	7.70	8.00	8.01
Total Suspended Solids	mg/L	30	< 1.0	< 1.0	1.7
Total Dissolved Solids	mg/L		362	290	269
Turbidity	NTU		1.71	0.83	2.72
Ammonia, Total (as N)	mg/L		1.34	-	-
Nitrate	mg/L		18.9	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0
Mean Mortality to Daphnia magna	%	50	< 1.0	-	-
Mean Mortality to Rainbow Trout	%	50	10.0	-	-

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-01B**

			Location Name	MS-01B	MS-01B
			Field Sample ID	MS-01B 2023-09-05	QW-BT1 2023-09-05
			ALS Laboratory Work Order	WT2328442	WT2328442
			Sample Date	2023-09-05	2023-09-05
			Sample Type	P	TB
Analyte	Units	Table 4 Criteria			
pH, Lab	pH units	9.5	8.13	-	
pH, Lab	pH units	9.5	-	5.43	
Total Suspended Solids	mg/L	35	< 1.0	< 1.0	
Total Dissolved Solids	mg/L		663	14	
Turbidity	NTU		0.12	< 0.10	
Alkalinity, Total	mg/L		246	< 2.0	
Ammonia, Total (as N)	mg/L	4.0	0.0315	< 0.0050	
Total Kjeldahl Nitrogen	mg/L		1.41	< 0.050	
Fecal Coliforms	CFU/100mL	1000	< 1	< 1	
BOD	mg/L	30	< 2.0	< 2.0	
Oil and Grease, Total	mg/L		< 5.0	< 5.0	
Phosphorus, Nutrient	mg/L	4.0	2.37	0.0030	

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-03B

			Location Name	MS-03B
			Field Sample ID	MS-03B 2023-09-26
			ALS Laboratory Work Order	BF2300310
			Sample Date	2023-09-26
			Sample Type	P
Analyte	Units	Table 11 Criteria		
pH, Lab	pH units			7.79
Total Suspended Solids	mg/L			1.5
Total Dissolved Solids	mg/L			172
Turbidity	NTU			2.51
Lead - Total	mg/L	0.001		< 0.0005
Oil and Grease, Total	mg/L	15		< 5.0
Visible Sheen (100=Yes, 0=No)	None	99		0
Benzene	ug/L	370		< 0.50
Ethylbenzene	ug/L	90		< 0.50
Toluene	ug/L	2.0		< 0.50
F1-BTEX	ug/L			< 25
F1 (C6-C10)	ug/L			< 25
F2 (C10-C16)	ug/L			< 100
F3 (C16-C34)	ug/L			< 250
F4 (C34-C50)	ug/L			< 250
Total Petroleum Hydrocarbons (C6-C50)	ug/L			< 370

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-MRY-06

			Location Name	MS-MRY-06
			Field Sample ID	MS-MRY-06_2023-09-05
			ALS Laboratory Work Order	BF2300264
			Sample Date	2023-09-05
			Sample Type	P
Analyte	Units	Table 11 Criteria		
pH, Lab	pH units			7.84
Total Suspended Solids	mg/L			< 1.0
Total Dissolved Solids	mg/L			251
Turbidity	NTU			0.55
Lead - Total	mg/L	0.001		< 0.00005
Oil and Grease, Total	mg/L	15		< 5.0
Visible Sheen (100=Yes, 0=No)	None	99		0
Benzene	ug/L	370		< 0.50
Ethylbenzene	ug/L	90		< 0.50
Toluene	ug/L	2.0		< 0.50
F1-BTEX	ug/L			< 25
F1 (C6-C10)	ug/L			< 25
F2 (C10-C16)	ug/L			< 100
F3 (C16-C34)	ug/L			< 250
F4 (C34-C50)	ug/L			< 250
Total Petroleum Hydrocarbons (C6-C50)	ug/L			< 370

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-06**

Location Name			MS-06
Field Sample ID			MS-06_2023-09-05
ALS Laboratory Work Order			BF2300262
Sample Date			2023-09-05
Sample Type			P
Analyte	Units	Table 6 Criteria	
Hardness	mg/L		651
Conductivity	umhos/cm		1280
pH, Lab	pH units	9.5	7.71
Total Suspended Solids	mg/L	15	< 1.3
Total Dissolved Solids	mg/L		936
Turbidity	NTU		9.26
Alkalinity, Total	mg/L		57.2
Ammonia, Total (as N)	mg/L		0.0067
Chloride	mg/L		56.5
Fluoride	mg/L		< 0.100
Nitrate	mg/L		16.2
Total Kjeldahl Nitrogen	mg/L		0.444
Sulfate	mg/L		497
Dissolved Organic Carbon	mg/L		2.51
Total Organic Carbon	mg/L		2.20
Aluminum - Total	mg/L		0.0454
Antimony - Total	mg/L		< 0.00100
Arsenic - Total	mg/L	0.50	< 0.00100
Barium - Total	mg/L		0.0183
Cadmium - Total	mg/L		< 0.0000500
Calcium - Total	mg/L		71.4
Chromium - Total	mg/L		< 0.00500
Cobalt - Total	mg/L		< 0.00100
Copper - Total	mg/L	0.30	< 0.00500
Iron - Total	mg/L		< 0.100
Lead - Total	mg/L	0.20	< 0.0005
Lithium - Total	mg/L		0.0223
Magnesium - Total	mg/L		122
Manganese - Total	mg/L		0.0201
Mercury - Total	mg/L		< 0.0000050
Molybdenum - Total	mg/L		0.00224
Nickel - Total	mg/L	0.50	< 0.00500
Phosphorus, Total	mg/L		< 0.500
Potassium - Total	mg/L		15.1
Selenium - Total	mg/L		0.00158
Sodium - Total	mg/L		21.8
Strontium - Total	mg/L		0.163
Thallium - Total	mg/L		< 0.000100
Tin - Total	mg/L		< 0.00100
Titanium - Total	mg/L		< 0.00300
Uranium - Total	mg/L		0.00606
Vanadium - Total	mg/L		< 0.00500
Zinc - Total	mg/L	0.50	< 0.0300
Aluminum - Dissolved	mg/L		0.0077
Arsenic - Dissolved	mg/L		0.00024
Cadmium - Dissolved	mg/L		< 0.0000050
Calcium - Dissolved	mg/L		66.2
Copper - Dissolved	mg/L		0.00029
Iron - Dissolved	mg/L		0.020
Lead - Dissolved	mg/L		< 0.000050
Magnesium - Dissolved	mg/L		118
Manganese - Dissolved	mg/L		0.00595
Mercury - Dissolved	mg/L		< 0.0000050
Molybdenum - Dissolved	mg/L		0.00213
Nickel - Dissolved	mg/L		0.00081
Potassium - Dissolved	mg/L		15.4
Selenium - Dissolved	mg/L		0.00160
Sodium - Dissolved	mg/L		21.2
Thallium - Dissolved	mg/L		0.000073
Uranium - Dissolved	mg/L		0.00587
Zinc - Dissolved	mg/L		< 0.0010
Visible Sheen (100=Yes, 0=No)	None	99	0
Mean Mortality to Rainbow Trout	%	50	Invalid Result
Mean Mortality to Daphnia magna	%	50	< 1.0
Phosphorus, Nutrient	mg/L		0.0041

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-07**

ALS Laboratory Work Order			Location Name	MS-07
			Field Sample ID	MS-07_2023-09-08
			Sample Date	2023-09-08
			Sample Type	P
Analyte	Units	Table 6 Criteria		
Hardness	mg/L		326	
Conductivity	umhos/cm		676	
pH, Lab	pH units	9.5	7.75	
Total Suspended Solids	mg/L	15	< 1.2	
Total Dissolved Solids	mg/L		449	
Turbidity	NTU		3.97	
Alkalinity, Total	mg/L		59.3	
Ammonia, Total (as N)	mg/L		0.645	
Chloride	mg/L		25.6	
Fluoride	mg/L		0.077	
Nitrate	mg/L		8.22	
Total Kjeldahl Nitrogen	mg/L		0.860	
Sulfate	mg/L		207	
Dissolved Organic Carbon	mg/L		1.42	
Total Organic Carbon	mg/L		1.35	
Aluminum - Total	mg/L		0.0300	
Antimony - Total	mg/L		< 0.00010	
Arsenic - Total	mg/L	0.50	0.00013	
Barium - Total	mg/L		0.0178	
Cadmium - Total	mg/L		0.0000371	
Calcium - Total	mg/L		42.7	
Chromium - Total	mg/L		< 0.00050	
Cobalt - Total	mg/L		0.00273	
Copper - Total	mg/L	0.30	0.00102	
Iron - Total	mg/L		0.049	
Lead - Total	mg/L	0.20	0.0001	
Lithium - Total	mg/L		0.0088	
Magnesium - Total	mg/L		53.6	
Manganese - Total	mg/L		0.708	
Mercury - Total	mg/L		< 0.0000050	
Molybdenum - Total	mg/L		0.00534	
Nickel - Total	mg/L	0.50	0.00223	
Phosphorus, Total	mg/L		< 0.050	
Potassium - Total	mg/L		8.03	
Selenium - Total	mg/L		0.00140	
Sodium - Total	mg/L		7.08	
Strontium - Total	mg/L		0.0757	
Thallium - Total	mg/L		0.000033	
Tin - Total	mg/L		< 0.00010	
Titanium - Total	mg/L		0.00086	
Uranium - Total	mg/L		0.00439	
Vanadium - Total	mg/L		< 0.00050	
Zinc - Total	mg/L	0.50	< 0.0030	
Aluminum - Dissolved	mg/L		0.0045	
Arsenic - Dissolved	mg/L		0.00010	
Cadmium - Dissolved	mg/L		0.0000378	
Calcium - Dissolved	mg/L		42.0	
Copper - Dissolved	mg/L		0.00063	
Iron - Dissolved	mg/L		< 0.010	
Lead - Dissolved	mg/L		< 0.000050	
Magnesium - Dissolved	mg/L		53.8	
Manganese - Dissolved	mg/L		0.639	
Mercury - Dissolved	mg/L		< 0.0000050	
Molybdenum - Dissolved	mg/L		0.00564	
Nickel - Dissolved	mg/L		0.00214	
Potassium - Dissolved	mg/L		8.06	
Selenium - Dissolved	mg/L		0.00150	
Sodium - Dissolved	mg/L		7.28	
Thallium - Dissolved	mg/L		0.000034	
Uranium - Dissolved	mg/L		0.00452	
Zinc - Dissolved	mg/L		0.0011	
Visible Sheen (100=Yes, 0=No)	None	99	0	
Mean Mortality to Rainbow Trout	%	50	Invalid Result	
Mean Mortality to Daphnia magna	%	50	< 1.0	
Phosphorus, Nutrient	mg/L		< 0.0020	

Notes:
 Highlight indicate result exceeded applicable criteria.
 Half value used in monthly average when value is less than detection limit.
 pH criteria is a range;6.0-9.5.
 Sample Type:
 P-Permitted
 FD-Field Duplicate
 FB-Field Blank
 TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-08**

		Location Name	MS-08
		Field Sample ID	MS-08_2023-09-03
		ALS Laboratory Work Order	BF2300259
		Sample Date	2023-09-03
		Sample Type	P
Analyte	Units	Table 6 Criteria	
Hardness	mg/L		1630
Conductivity	umhos/cm		2400
pH, Lab	pH units	9.5	7.88
Total Suspended Solids	mg/L	15	33.3
Total Dissolved Solids	mg/L		2200
Turbidity	NTU		44.8
Alkalinity, Total	mg/L		11.3
Ammonia, Total (as N)	mg/L		2.08
Chloride	mg/L		20.7
Fluoride	mg/L		0.167
Nitrate	mg/L		18.2
Total Kjeldahl Nitrogen	mg/L		2.36
Sulfate	mg/L		1390
Dissolved Organic Carbon	mg/L		3.53
Total Organic Carbon	mg/L		1.54
Aluminum - Total	mg/L		0.315
Antimony - Total	mg/L		< 0.00100
Arsenic - Total	mg/L	0.50	< 0.00100
Barium - Total	mg/L		0.0309
Cadmium - Total	mg/L		0.000252
Calcium - Total	mg/L		113
Chromium - Total	mg/L		< 0.00500
Cobalt - Total	mg/L		0.117
Copper - Total	mg/L	0.30	0.0226
Iron - Total	mg/L		9.50
Lead - Total	mg/L	0.20	< 0.0005
Lithium - Total	mg/L		0.0392
Magnesium - Total	mg/L		340
Manganese - Total	mg/L		11.9
Mercury - Total	mg/L		< 0.0000050
Molybdenum - Total	mg/L		0.000698
Nickel - Total	mg/L	0.50	0.124
Phosphorus, Total	mg/L		< 0.500
Potassium - Total	mg/L		8.01
Selenium - Total	mg/L		0.00801
Sodium - Total	mg/L		4.26
Strontium - Total	mg/L		0.233
Thallium - Total	mg/L		0.000156
Tin - Total	mg/L		< 0.00100
Titanium - Total	mg/L		< 0.00300
Uranium - Total	mg/L		0.00124
Vanadium - Total	mg/L		< 0.00500
Zinc - Total	mg/L	0.50	< 0.0300
Aluminum - Dissolved	mg/L		0.0110
Arsenic - Dissolved	mg/L		< 0.00100
Cadmium - Dissolved	mg/L		0.000116
Calcium - Dissolved	mg/L		112
Copper - Dissolved	mg/L		0.0139
Iron - Dissolved	mg/L		< 0.100
Lead - Dissolved	mg/L		< 0.000500
Magnesium - Dissolved	mg/L		329
Manganese - Dissolved	mg/L		11.1
Mercury - Dissolved	mg/L		< 0.0000050
Molybdenum - Dissolved	mg/L		0.000648
Nickel - Dissolved	mg/L		0.0860
Potassium - Dissolved	mg/L		7.29
Selenium - Dissolved	mg/L		0.00767
Sodium - Dissolved	mg/L		3.93
Thallium - Dissolved	mg/L		0.000140
Uranium - Dissolved	mg/L		0.000184
Zinc - Dissolved	mg/L		< 0.0100
Visible Sheen (100=Yes, 0=No)	None	99	0
Mean Mortality to Daphnia	%	50	< 1.0
Mean Mortality to Rainbow	%	50	< 1.0
Phosphorus, Nutrient	mg/L		0.0020

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-MRY-09**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09
			MS-MRY-09_2023-09-03	MS-MRY-09_2023-09-14	MS-MRY-09_2023-09-20	MS-MRY-09_2023-09-25
			BF2300258	BF2300291	BF2300309	BF2300312
			2023-09-03	2023-09-14	2023-09-20	2023-09-25
			P	P	P	P
Analyte	Units	Table 6 Criteria				
Hardness	mg/L		93.2	-	-	-
pH, Lab	pH units	9.5	7.89	7.60	7.84	7.97
Total Suspended Solids	mg/L	15	< 1.0	1.3	1.3	1.7
Total Dissolved Solids	mg/L		98	100	88	95
Turbidity	NTU		0.96	1.14	0.52	0.35
Alkalinity, Total	mg/L		79.8	-	-	-
Ammonia, Total (as N)	mg/L		< 0.0050	-	-	-
Chloride	mg/L		12.5	-	-	-
Fluoride	mg/L		< 0.020	-	-	-
Nitrate	mg/L		0.037	-	-	-
Total Kjeldahl Nitrogen	mg/L		0.086	-	-	-
Sulfate	mg/L		3.17	-	-	-
Dissolved Organic Carbon	mg/L		2.00	-	-	-
Total Organic Carbon	mg/L		1.84	-	-	-
Aluminum - Total	mg/L		0.0220	-	-	-
Antimony - Total	mg/L		< 0.00010	-	-	-
Arsenic - Total	mg/L	0.50	< 0.00010	-	-	-
Barium - Total	mg/L		0.0112	-	-	-
Cadmium - Total	mg/L		< 0.0000050	-	-	-
Calcium - Total	mg/L		17.7	-	-	-
Chromium - Total	mg/L		< 0.00050	-	-	-
Cobalt - Total	mg/L		< 0.00010	-	-	-
Copper - Total	mg/L	0.30	0.00235	-	-	-
Iron - Total	mg/L		0.026	-	-	-
Lead - Total	mg/L	0.20	< 0.00005	-	-	-
Lithium - Total	mg/L		< 0.0010	-	-	-
Magnesium - Total	mg/L		11.9	-	-	-
Manganese - Total	mg/L		0.00066	-	-	-
Mercury - Total	mg/L		< 0.0000050	-	-	-
Molybdenum - Total	mg/L		0.00111	-	-	-
Nickel - Total	mg/L	0.50	< 0.00050	-	-	-
Phosphorus, Total	mg/L		< 0.050	-	-	-
Potassium - Total	mg/L		2.45	-	-	-
Selenium - Total	mg/L		0.000053	-	-	-
Sodium - Total	mg/L		0.762	-	-	-
Strontium - Total	mg/L		0.0148	-	-	-
Thallium - Total	mg/L		0.000014	-	-	-
Tin - Total	mg/L		< 0.00010	-	-	-
Titanium - Total	mg/L		0.00094	-	-	-
Uranium - Total	mg/L		0.00534	-	-	-
Vanadium - Total	mg/L		0.00057	-	-	-
Zinc - Total	mg/L	0.50	< 0.0030	-	-	-
Aluminum - Dissolved	mg/L		0.0061	-	-	-
Arsenic - Dissolved	mg/L		< 0.00010	-	-	-
Cadmium - Dissolved	mg/L		< 0.0000050	-	-	-
Calcium - Dissolved	mg/L		16.3	-	-	-
Copper - Dissolved	mg/L		0.00200	-	-	-
Iron - Dissolved	mg/L		< 0.010	-	-	-
Lead - Dissolved	mg/L		< 0.000050	-	-	-
Magnesium - Dissolved	mg/L		10.8	-	-	-
Manganese - Dissolved	mg/L		0.00023	-	-	-
Mercury - Dissolved	mg/L		< 0.0000050	-	-	-
Molybdenum - Dissolved	mg/L		0.00110	-	-	-
Nickel - Dissolved	mg/L		< 0.00050	-	-	-
Potassium - Dissolved	mg/L		2.15	-	-	-
Selenium - Dissolved	mg/L		0.000097	-	-	-
Sodium - Dissolved	mg/L		0.671	-	-	-
Thallium - Dissolved	mg/L		0.000011	-	-	-
Uranium - Dissolved	mg/L		0.00488	-	-	-
Zinc - Dissolved	mg/L		< 0.0010	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0
Phenols	ug/L		< 1.0	-	-	-
Phosphorus, Nutrient	mg/L		0.0028	-	-	-

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-MRY-13B**

			Location Name	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B
			Field Sample ID	MS-MRY-13B_2023-09-03	MS-MRY-13B_2023-09-10	MS-MRY-13B_2023-09-25
			ALS Laboratory Work Order	BF2300258	BF2300317	BF2300312
			Sample Date	2023-09-03	2023-09-10	2023-09-25
			Sample Type	P	P	P
Analyte	Units	Table 10 Criteria				
Conductivity	umhos/cm			1190	-	-
pH, Lab	pH units	9.5		7.79	7.90	7.71
Total Suspended Solids	mg/L	15		2.0	< 1.2	< 1.0
Total Dissolved Solids	mg/L			820	846	1100
Turbidity	NTU			0.56	0.18	4.72
Alkalinity, Total	mg/L			184	-	-
Dissolved Organic Carbon	mg/L			15.5	-	-
Total Organic Carbon	mg/L			6.51	-	-
Aluminum - Total	mg/L			< 0.0300	-	-
Antimony - Total	mg/L			< 0.00100	-	-
Arsenic - Total	mg/L	0.50		< 0.00100	-	-
Barium - Total	mg/L			0.0592	-	-
Cadmium - Total	mg/L			< 0.0000500	-	-
Calcium - Total	mg/L			127	-	-
Chromium - Total	mg/L			< 0.00500	-	-
Cobalt - Total	mg/L			< 0.00100	-	-
Copper - Total	mg/L	0.30		< 0.00500	-	-
Iron - Total	mg/L			< 0.100	-	-
Lead - Total	mg/L	0.20		< 0.0005	-	-
Lithium - Total	mg/L			0.193	-	-
Magnesium - Total	mg/L			57.9	-	-
Manganese - Total	mg/L			0.00228	-	-
Mercury - Total	mg/L			< 0.0000050	-	-
Molybdenum - Total	mg/L			< 0.000500	-	-
Nickel - Total	mg/L	0.50		0.0144	-	-
Phosphorus, Total	mg/L			< 0.500	-	-
Potassium - Total	mg/L			6.22	-	-
Selenium - Total	mg/L			< 0.000500	-	-
Sodium - Total	mg/L			33.2	-	-
Strontium - Total	mg/L			0.183	-	-
Thallium - Total	mg/L			< 0.000100	-	-
Tin - Total	mg/L			< 0.00100	-	-
Titanium - Total	mg/L			< 0.00300	-	-
Uranium - Total	mg/L			0.0136	-	-
Vanadium - Total	mg/L			< 0.00500	-	-
Zinc - Total	mg/L	0.50		< 0.0300	-	-
Oil and Grease, Total	mg/L			< 5.0	-	-
Visible Sheen (100=Yes, 0=No)	None	99		0	0	0
Phenols	ug/L			< 1.0	-	-
F1 (C6-C10)	ug/L			< 25	-	-
F2 (C10-C16)	ug/L			< 100	-	-
F3 (C16-C34)	ug/L			< 250	-	-
F4 (C34-C50)	ug/L			< 250	-	-
Total Petroleum Hydrocarbons (C6-C50)	ug/L			< 370	-	-

Notes:

Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-A

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A
			MS-C-A_2023-09-04	MS-C-A_2023-09-10	MS-C-A_2023-09-17	MS-C-A_2023-09-25	QD-CC2_2023-09-25
			BF2300258	BF2300276	BF2300296	BF2300312	BF2300312
			2023-09-04	2023-09-10	2023-09-17	2023-09-25	2023-09-25
			P	P	P	P	FD
Analyte	Units	Table 9 Criteria					
Conductivity	umhos/cm		545	-	-	-	-
pH, Lab	pH units	9.5	7.78	7.75	7.81	7.84	7.94
Total Suspended Solids	mg/L	30	1.6	< 1.0	< 1.0	1.7	< 1.0
Total Dissolved Solids	mg/L		319	360	293	265	249
Turbidity	NTU		4.81	1.45	0.90	0.99	2.10
Ammonia, Total (as N)	mg/L		< 0.0050	-	-	-	-
Nitrate	mg/L		2.82	-	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0	-

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-B**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-B	MS-C-B	MS-C-B	MS-C-B
			MS-C-B_2023-09-04	MS-C-B_2023-09-10	MS-C-B_2023-09-17	MS-C-B_2023-09-25
			BF2300258	BF2300276	BF2300296	BF2300312
			2023-09-04	2023-09-10	2023-09-17	2023-09-25
			P	P	P	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		556	-	-	-
pH, Lab	pH units	9.5	7.79	7.72	7.62	7.68
Total Suspended Solids	mg/L	30	1.7	28.3	< 1.0	< 1.0
Total Dissolved Solids	mg/L		327	360	310	279
Turbidity	NTU		4.84	4.76	0.77	0.67
Ammonia, Total (as N)	mg/L		< 0.0050	-	-	-
Nitrate	mg/L		2.89	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-C**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-C	MS-C-C	MS-C-C
			MS-C-C_2023-09-04	MS-C-C_2023-09-10	MS-C-C_2023-09-26
			BF2300258	BF2300276	BF2300312
			2023-09-04	2023-09-10	2023-09-26
			P	P	P
Analyte	Units	Table 9 Criteria			
Conductivity	umhos/cm		862	-	-
pH, Lab	pH units	9.5	7.91	7.99	8.06
Total Suspended Solids	mg/L	30	4.5	1.8	19.3
Total Dissolved Solids	mg/L		534	532	580
Turbidity	NTU		6.36	2.21	38.2
Ammonia, Total (as N)	mg/L		< 0.0050	-	-
Nitrate	mg/L		5.80	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-D**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-D	MS-C-D	MS-C-D	MS-C-D
			MS-C-D_2023-09-03	MS-C-D_2023-09-10	MS-C-D_2023-09-17	MS-C-D_2023-09-26
			BF2300258	BF2300276	BF2300296	BF2300312
			2023-09-03	2023-09-10	2023-09-17	2023-09-26
			P	P	P	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		799	-	-	-
pH, Lab	pH units	9.5	8.18	8.24	8.11	8.17
Total Suspended Solids	mg/L	30	3.3	1.8	2.0	10.2
Total Dissolved Solids	mg/L		505	490	562	512
Turbidity	NTU		23.9	3.78	2.59	27.4
Ammonia, Total (as N)	mg/L		0.0356	-	-	-
Nitrate	mg/L		4.46	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-E**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-E	MS-C-E	MS-C-E	MS-C-E
			MS-C-E_2023-09-03	MS-C-E_2023-09-10	MS-C-E_2023-09-17	MS-C-E_2023-09-26
			BF2300258	BF2300276	BF2300296	BF2300312
			2023-09-03	2023-09-10	2023-09-17	2023-09-26
			P	P	P	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		854	-	-	-
pH, Lab	pH units	9.5	7.98	8.00	7.72	8.00
Total Suspended Solids	mg/L	30	3.3	1.4	2.2	2.7
Total Dissolved Solids	mg/L		602	602	590	549
Turbidity	NTU		8.72	2.50	1.22	10.2
Ammonia, Total (as N)	mg/L		0.0065	-	-	-
Nitrate	mg/L		5.86	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-F**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-F	MS-C-F	MS-C-F	MS-C-F
			MS-C-F_2023-09-04	MS-C-F_2023-09-10	QD-BF1_2023-09-10	MS-C-F_2023-09-26
			BF2300258	BF2300276	BF2300317	BF2300312
			2023-09-04	2023-09-10	2023-09-10	2023-09-26
			P	P	FB	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		653	-	-	-
pH, Lab	pH units	9.5	7.88	7.90	6.21	7.82
Total Suspended Solids	mg/L	30	12.7	4.5	<1.3	9.9
Total Dissolved Solids	mg/L		396	450	<20	328
Turbidity	NTU		24.2	6.16	<0.10	11.2
Ammonia, Total (as N)	mg/L		0.0464	-	-	-
Nitrate	mg/L		3.50	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-G**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-G	MS-C-G	MS-C-G	MS-C-G
			MS-C-G_2023-09-03	MS-C-G_2023-09-10	MS-C-G_2023-09-17	MS-C-G_2023-09-25
			BF2300258	BF2300276	BF2300294	BF2300312
			2023-09-03	2023-09-10	2023-09-17	2023-09-25
			P	P	P	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		241	-	267	-
pH, Lab	pH units	9.5	7.65	7.71	7.53	7.61
Total Suspended Solids	mg/L	30	< 1.0	< 1.4	< 1.0	< 1.0
Total Dissolved Solids	mg/L		148	136	155	135
Turbidity	NTU		0.29	0.29	0.12	< 0.10
Ammonia, Total (as N)	mg/L		0.903	-	1.24	-
Nitrate	mg/L		7.82	-	8.26	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MS-C-H**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H
			MS-C-H_2023-09-03	MS-C-H_2023-09-10	QD-CC2_2023-09-10	MS-C-H_2023-09-17	MS-C-H_2023-09-25
			BF2300258	BF2300317	BF2300317	BF2300296	BF2300312
			2023-09-03	2023-09-10	2023-09-10	2023-09-17	2023-09-25
			P	P	FD	P	P
Analyte	Units	Table 9 Criteria					
Conductivity	umhos/cm		270	-	-	-	-
pH, Lab	pH units	9.5	8.11	7.98	8.03	8.12	8.10
Total Suspended Solids	mg/L	30	< 1.0	< 1.4	<1.3	< 1.4	< 1.0
Total Dissolved Solids	mg/L		161	140	135	150	150
Turbidity	NTU		0.28	0.23	0.18	0.41	2.38
Ammonia, Total (as N)	mg/L		0.0118	-	-	-	-
Nitrate	mg/L		2.06	-	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0	0

this column for 10.9.2023. is added as per ALS lab results and our COC, Equis is not showing it

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank



Table 2 : Water Quality Results for Water Licence
Monitoring Location - MQ-C-A

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A
			MQ-C-A_2023-09-04	MQ-C-A_2023-09-10	MQ-C-A_2023-09-17	MQ-C-A_2023-09-25
			BF2300258	BF2300276	BF2300296	BF2300312
			2023-09-04	2023-09-10	2023-09-17	2023-09-25
			P	P	P	P
Analyte	Units	Table 9 Criteria				
Conductivity	umhos/cm		340	-	-	-
pH, Lab	pH units	9.5	8.06	8.06	8.06	8.10
Total Suspended Solids	mg/L	30	< 1.0	< 1.4	< 1.0	< 1.0
Total Dissolved Solids	mg/L		180	172	185	193
Turbidity	NTU		0.24	0.10	< 0.10	0.10
Ammonia, Total (as N)	mg/L		< 0.0050	-	-	-
Nitrate	mg/L		< 0.020	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0

Notes:
Highlight indicate result exceeded applicable criteria.
Half value used in monthly average when value is less than detection limit.
pH criteria is a range;6.0-9.5.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MQ-C-B**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B
			MQ-C-B_2023-09-04	MQ-C-B_2023-09-10	MQ-C-B_2023-09-17	MQ-C-B_2023-09-26
			BF2300258	BF2300276	BF2300296	BF2300312
			2023-09-04	2023-09-10	2023-09-17	2023-09-26
			P	P	P	P
Analyte	Units	Table 9 Criteria (Quarry)				
Conductivity	umhos/cm		296	-	-	-
pH, Lab	pH units	9.5	8.09	8.04	7.92	8.11
Total Suspended Solids	mg/L	30	1.9	< 1.4	< 1.0	13.1
Total Dissolved Solids	mg/L		171	155	173	162
Turbidity	NTU		5.70	0.95	0.90	34.2
Ammonia, Total (as N)	mg/L		0.0073	-	-	-
Nitrate	mg/L		0.045	-	-	-
Oil and Grease, Total	mg/L		< 5.0	-	-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0
Mean Mortality to Rainbow Trout	%	50	Invalid Result	-	-	-
Mean Mortality to Daphnia magna	%	50	< 1.0	-	-	-

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - MQ-C-D**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D
			MQ-C-D_2023-09-04	MQ-C-D_2023-09-10	MQ-C-D_2023-09-13	MQ-C-D_2023-09-17	MQ-C-D_2023-09-25
			BF2300258	BF2300276	BF2300283	BF2300296	BF2300312
			2023-09-04	2023-09-10	2023-09-13	2023-09-17	2023-09-25
Table 9 Criteria (Quarry)			P	P	P	P	P
Analyte	Units						
Conductivity	umhos/cm		331	-	-	344	-
pH, Lab	pH units	9.5	8.06	8.00	7.89	7.76	7.95
Total Suspended Solids	mg/L	30	6.1	2.3	3.0	3.6	4.2
Total Dissolved Solids	mg/L		186	172	195	176	178
Turbidity	NTU		14.6	5.84	6.41	4.96	6.56
Ammonia, Total (as N)	mg/L		0.0152	-	-	0.0122	-
Nitrate	mg/L		0.602	-	-	0.642	-
Oil and Grease, Total	mg/L		< 5.0	-	-	< 5.0	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0	0	0	0
Mean Mortality to Rainbow Trout	%	50	-	-	-	< 1.0	-
Mean Mortality to Daphnia magna	%	50	-	-	-	< 1.0	-

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

**Table 2 : Water Quality Results for Water Licence
Monitoring Location - KM105-SWMP-SEEP-02**

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			KM105-SWMP-SEEP-02	KM105-SWMP-SEEP-02
			KM105-SWMP-SEEP-02_2023-09-05	KM105-SWMP-SEEP-02_2023-09-19
			BF2300263	BF2300305
			2023-09-05	2023-09-19
			P	P
Analyte	Units	Table 6 Criteria		
Hardness	mg/L		582	249
Conductivity	umhos/cm		1290	577
pH, Lab	pH units	9.5	7.69	7.75
Total Suspended Solids	mg/L	15	62.4	10.5
Total Dissolved Solids	mg/L		902	336
Turbidity	NTU		11.4	5.45
Alkalinity, Total	mg/L		105	118
Ammonia, Total (as N)	mg/L		0.0277	< 0.0050
Chloride	mg/L		254	46.8
Fluoride	mg/L		0.114	0.114
Nitrate	mg/L		4.00	2.23
Total Kjeldahl Nitrogen	mg/L		0.362	0.212
Sulfate	mg/L		144	90.0
Dissolved Organic Carbon	mg/L		2.39	1.56
Total Organic Carbon	mg/L		1.93	1.70
Aluminum - Total	mg/L		1.70	0.547
Antimony - Total	mg/L		< 0.00100	< 0.00010
Arsenic - Total	mg/L	0.50	< 0.00100	0.00013
Barium - Total	mg/L		0.0701	0.0289
Cadmium - Total	mg/L		0.000447	0.0000980
Calcium - Total	mg/L		149	53.8
Chromium - Total	mg/L		< 0.00500	0.00130
Cobalt - Total	mg/L		0.00213	0.00067
Copper - Total	mg/L	0.30	< 0.00500	0.00316
Iron - Total	mg/L		2.76	0.867
Lead - Total	mg/L	0.20	0.001	0.0005
Lithium - Total	mg/L		0.0650	0.0125
Magnesium - Total	mg/L		52.2	32.2
Manganese - Total	mg/L		0.335	0.0208
Mercury - Total	mg/L		< 0.0000050	< 0.0000050
Molybdenum - Total	mg/L		0.0126	0.0118
Nickel - Total	mg/L	0.50	< 0.00500	0.00188
Phosphorus, Total	mg/L		< 0.500	< 0.050
Potassium - Total	mg/L		8.87	7.56
Selenium - Total	mg/L		0.000690	0.000345
Sodium - Total	mg/L		10.6	6.19
Strontium - Total	mg/L		1.41	0.277
Thallium - Total	mg/L		< 0.000100	0.000024
Tin - Total	mg/L		< 0.00100	< 0.00010
Titanium - Total	mg/L		0.0910	0.0276
Uranium - Total	mg/L		0.0242	0.0224
Vanadium - Total	mg/L		< 0.00500	0.00108
Zinc - Total	mg/L	0.50	< 0.0300	< 0.0030
Aluminum - Dissolved	mg/L		0.0046	0.0049
Arsenic - Dissolved	mg/L		< 0.00010	< 0.00010
Cadmium - Dissolved	mg/L		0.000397	0.0000703
Calcium - Dissolved	mg/L		150	51.0
Copper - Dissolved	mg/L		0.00213	0.00202
Iron - Dissolved	mg/L		< 0.010	< 0.010
Lead - Dissolved	mg/L		< 0.000050	< 0.000050
Magnesium - Dissolved	mg/L		50.4	29.5
Manganese - Dissolved	mg/L		0.326	0.00870
Mercury - Dissolved	mg/L		< 0.0000050	< 0.0000050
Molybdenum - Dissolved	mg/L		0.0133	0.0123
Nickel - Dissolved	mg/L		0.00148	0.00086
Potassium - Dissolved	mg/L		8.99	7.26
Selenium - Dissolved	mg/L		0.000729	0.000726
Sodium - Dissolved	mg/L		11.0	5.64
Thallium - Dissolved	mg/L		0.000021	0.000016
Uranium - Dissolved	mg/L		0.0251	0.0201
Zinc - Dissolved	mg/L		< 0.0010	< 0.0010
Oil and Grease, Total	mg/L		-	-
Visible Sheen (100=Yes, 0=No)	None	99	0	0
Mean Mortality to Rainbow Trout	%	50	Invalid Result	< 1.0
Mean Mortality to Daphnia magna	%	50	< 1.0	< 1.0
Phosphorus, Nutrient	mg/L		0.0286	0.0099

Notes:

Highlight indicate result exceeded applicable criteria.

Half value used in monthly average when value is less than detection limit.

pH criteria is a range;6.0-9.5.

Sample Type:

P-Permitted

FD-Field Duplicate

FB-Field Blank

TB-Trip Blank

Table 3.1: Flow and Volume Measurements - Part I Item 11 - September 2023

DATE	Camp Lake Freshwater for Domestic Use - Daily Water MS-MRY-1 (m³)	Camp Lake Freshwater for Industrial Use - Daily Water MS-MRY-1 (m³)	Treated Sewage Effluent from MS-01 to Discharge Location #1 (m³)	Treated Sewage Effluent from MS-01B to Discharge Location #1 (m³)	Sewage Sludge Removed from Mine Site WWTPs to Incinerator or Disposal Offsite by Backhaul (m³)	Sewage Sludge/Off-Spec Effluent Removed from Mine Site WWTPs to PWSP at Mine Site (m³)	Sewage Sludge Removed from Lift Stations to PWSP at Mine Site (m³)	Km 32 Lake Milne Port Camp Daily Water Use for Domestic Purposes MP- MRY-3 (m³)	Km 32 Lake Milne Port Camp Daily Water Use for Industrial Purposes MP- MRY-3 (m³)	Treated Sewage Effluent from MP-01 to Milne Inlet (m³)	Treated Sewage Effluent from MP-01B to Milne Inlet (m³)	Sewage Sludge Removed from Milne Port WWTPs to Incinerator or Disposal Offsite by Backhaul (m³)	Sewage Sludge Removed from Lift Stations to PWSP at Milne Port (m³)	Sludge Removed from Milne Port WWTPs/WTPs to PWSP at Milne Port (m³)	Water Use for Dust Suppression from Authorized Sources (m³)	Treated Sewage Effluent from PWSP MP-01A to Milne Inlet (MP-01A) (m³)	Effluent Discharge from Mine Site Crusher Pad Sedimentation Pond (MS-06) (m³)
1-Sep-23	101.2	0.0	0.0	136.3	1.4	0.0	0.0	57.5	0.0	24.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0
2-Sep-23	137.6	3.2	0.0	132.4	1.5	0.0	0.0	78.7	0.0	26.0	39.9	0.2	0.0	0.0	60.6	0.0	0.0
3-Sep-23	113.7	2.8	0.0	130.4	2.2	0.0	0.0	62.6	0.0	25.0	36.1	0.5	0.0	0.0	484.5	0.0	0.0
4-Sep-23	113.2	8.7	0.0	119.1	1.5	0.0	0.0	67.7	0.0	31.0	38.2	0.2	0.0	0.0	696.4	0.0	0.0
5-Sep-23	119.3	9.1	0.0	131.8	1.5	0.0	0.0	76.1	0.0	26.0	39.2	0.3	0.0	0.0	423.9	0.0	89.6
6-Sep-23	114.1	2.0	0.0	116.7	1.5	0.0	0.0	71.7	0.0	23.0	43.1	0.3	0.0	0.0	302.8	0.0	66.5
7-Sep-23	105.5	28.8	0.0	120.1	1.8	0.0	0.0	78.3	0.0	31.0	39.4	0.3	0.0	0.0	575.3	0.0	0.0
8-Sep-23	132.3	12.3	0.0	125.2	1.8	0.0	0.0	53.9	0.0	25.0	44.5	0.3	0.0	0.0	484.5	0.0	0.0
9-Sep-23	114.7	5.2	0.0	133.3	2.1	0.0	0.0	86.3	0.0	24.0	44.5	0.3	0.0	0.0	0.0	0.0	0.0
10-Sep-23	137.7	6.6	0.0	79.6	1.8	22.0	0.0	52.3	0.0	23.0	34.4	0.0	0.0	0.0	0.0	0.0	0.0
11-Sep-23	112.7	0.0	0.0	111.1	2.1	0.0	0.0	49.6	0.0	23.0	38.1	0.3	0.0	0.0	0.0	0.0	0.0
12-Sep-23	134.0	13.1	0.0	72.9	1.5	22.0	0.0	82.6	0.0	23.0	44.6	0.8	0.0	0.0	0.0	0.0	0.0
13-Sep-23	112.0	8.3	0.0	127.1	1.5	0.0	0.0	60.7	0.0	21.0	38.7	0.0	0.0	0.0	0.0	0.0	0.0
14-Sep-23	112.1	8.4	0.0	134.4	1.5	0.0	0.0	56.8	0.0	18.0	46.6	0.5	0.0	0.0	0.0	0.0	0.0
15-Sep-23	129.6	11.7	0.0	62.8	1.8	0.0	0.0	38.2	0.0	21.0	39.1	0.0	0.0	11.4	0.0	0.0	0.0
16-Sep-23	108.3	8.9	0.0	131.8	1.8	0.0	0.0	61.2	0.0	24.0	36.8	0.3	0.0	0.0	0.0	0.0	0.0
17-Sep-23	102.0	10.9	0.0	105.6	1.8	0.0	0.0	67.0	0.0	24.0	36.5	0.3	0.0	0.0	0.0	0.0	0.0
18-Sep-23	116.1	10.9	0.0	98.2	1.6	0.0	0.0	57.6	0.0	22.0	36.7	0.1	0.0	0.0	0.0	0.0	0.0
19-Sep-23	118.8	12.4	0.0	131.0	1.5	0.0	0.0	77.8	0.0	21.0	44.2	0.5	0.0	0.0	0.0	0.0	0.0
20-Sep-23	107.8	4.3	0.0	138.4	1.5	0.0	0.0	64.7	0.0	24.0	32.8	0.0	0.0	0.0	0.0	0.0	0.0
21-Sep-23	109.9	16.0	0.0	139.8	1.5	0.0	0.0	71.4	0.0	20.0	45.4	0.0	0.0	0.0	0.0	0.0	0.0
22-Sep-23	100.0	4.9	0.0	138.1	1.4	0.0	0.0	71.0	0.0	21.0	46.3	0.5	0.0	0.0	0.0	0.0	0.0
23-Sep-23	89.6	5.8	0.0	126.3	1.4	0.0	0.0	63.2	0.0	22.0	36.3	0.3	0.0	11.4	0.0	0.0	0.0
24-Sep-23	103.3	9.6	0.0	123.1	1.7	0.0	0.0	49.2	2.0	32.0	15.1	0.6	0.0	0.0	0.0	0.0	0.0
25-Sep-23	100.1	9.1	0.0	130.3	1.5	0.0	0.0	66.1	0.0	24.0	34.1	0.9	0.0	0.0	0.0	0.0	0.0
26-Sep-23	112.1	8.3	0.0	147.6	0.9	0.0	0.0	46.5	0.0	24.0	33.3	0.8	0.0	0.0	0.0	0.0	0.0
27-Sep-23	117.6	9.0	0.0	143.9	0.0	0.0	0.0	57.2	0.0	24.0	37.5	0.5	0.0	0.0	0.0	0.0	0.0
28-Sep-23	104.9	5.8	0.0	125.5	0.0	0.0	0.0	66.3	0.0	24.0	40.7	0.6	0.0	0.0	0.0	0.0	0.0
29-Sep-23	114.7	6.0	0.0	128.8	0.2	0.0	0.0	56.1	0.0	24.0	35.3	0.6	0.0	0.0	0.0	0.0	0.0
30-Sep-23	84.3	4.5	0.0	135.7	0.2	0.0	0.0	57.6	0.0	24.0	30.4	0.6	0.0	0.0	0.0	0.0	0.0
Total	3,379.1	246.3	0.0	3,677.3	42.4	44.0	0.0	1,905.6	2.0	718.0	1,150.3	10.6	0.0	22.7	3,028.0	0.0	156.1

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond

MS-11 Volume Estimated from Hydrology Station at MS-C-A/B (Installed June 22)

Table 3.1: Flow and Volume Measurements - Part I Item 11 - September 2023

DATE	Effluent Discharge from Mine Site Run of Mine Ore Stockpile Pond Stormwater (MS-07) (m ³)	Effluent Discharge from Mine Site Waste Rock Stockpile Pond (MS-08) (m ³)	Effluent Discharge from KM105 Surface Water Management Pond (MS-11) (m ³)	Effluent Discharge from Milne Port Ore Stockpile Sedimentation Pond (East) to Milne Inlet (MP-05) (m ³)	Effluent Discharge from Milne Port Ore Stockpile Sedimentation Pond (West) to Milne Inlet (MP-06) (m ³)	Treated Sewage Effluent from PWSP to Sheardown Lake (MS-MRY-4B) (m ³)	Treated Oily Water from Exploration Camp Bulk Fuel Storage Facility to Tundra (MS-MRY-6) (m ³)	Effluent Discharge from Mine Site Landfarm Facility to Tundra (MS-05) (m ³)	Treated Oily Water from Milne Port Snowdump Facility to Tundra (MP-04A) (m ³)	Effluent Discharge from Milne Port Bulk Fuel Tank Farm Facility to Milne Inlet (MP-03) (m ³)	Effluent Discharge from Milne Port Landfarm Facility to Tundra (MP-04) (m ³)	Effluent Discharge from Mine Site Bulk Fuel Storage Facility Stormwater (MS-03) (m ³)	Effluent Discharge from Mine Site Bulk Fuel Storage Facility Stormwater (MS-03B) (m ³)
1-Sep-23	0.0	5,522.0	6,296.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
2-Sep-23	0.0	3,607.0	6,067.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-Sep-23	0.0	1,778.0	5,455.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
4-Sep-23	0.0	0.0	4,711.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.7	0.0	0.0
5-Sep-23	0.0	0.0	4,183.6	0.0	0.0	0.0	2.0	0.0	1.4	3.8	91.4	0.0	0.0
6-Sep-23	0.0	0.0	3,771.3	0.0	0.0	0.0	0.0	0.0	1.4	222.8	25.8	0.0	0.0
7-Sep-23	0.0	0.0	3,134.8	0.0	0.0	0.0	1.1	0.0	1.7	0.0	0.0	0.0	0.0
8-Sep-23	720.0	0.0	2,592.6	0.0	0.0	0.0	2.8	0.0	0.6	0.0	0.0	0.0	0.0
9-Sep-23	0.0	0.0	2,308.6	33.6	37.0	0.0	1.7	0.0	0.2	0.0	0.0	0.0	0.0
10-Sep-23	0.0	0.0	2,732.5	919.4	703.3	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
11-Sep-23	0.0	0.0	2,086.6	0.0	19.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
12-Sep-23	0.0	0.0	1,720.5	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Sep-23	0.0	0.0	1,645.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
14-Sep-23	0.0	0.0	1,570.9	1.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
15-Sep-23	0.0	0.0	1,496.1	229.4	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
16-Sep-23	0.0	0.0	1,421.3	2.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
17-Sep-23	0.0	0.0	1,346.5	101.7	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
18-Sep-23	0.0	0.0	1,271.7	319.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19-Sep-23	0.0	0.0	1,196.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-Sep-23	0.0	0.0	1,122.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-Sep-23	0.0	0.0	1,047.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22-Sep-23	0.0	0.0	972.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23-Sep-23	0.0	0.0	897.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24-Sep-23	0.0	0.0	822.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25-Sep-23	0.0	0.0	748.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2620.0
26-Sep-23	0.0	0.0	654.6	624.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2535.0
27-Sep-23	0.0	0.0	561.1	569.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2380.0
28-Sep-23	0.0	0.0	467.6	1667.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29-Sep-23	0.0	0.0	374.1	1815.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-Sep-23	0.0	0.0	280.5	276.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	720.0	10,907.0	62,959.0	6,558.8	759.7	0.0	24.5	0.0	5.3	226.6	199.3	0.0	7,535.0

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond

MS-11 Volume Estimated from Hydrology Station at MS-C-A/B (Installed June 22)