

September 30, 2021

Manager of Licensing
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Resource Management Officer, CIRNAC
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**RE: Water Licence 2AM-MRY1325 Monthly Surveillance Network Program (SNP) Report
August 2021**

The following is the monthly report for August 2021 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

During the month of August 2021, water samples were collected as part of the Surveillance Network Program (SNP).

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 Tables 2.1 through 2.36. 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 August 2021.

Monitoring Program Results

Water Sampling and Analysis Results

Tables 2.1 through 2.36 provide the analytical results related to the SNP sampling requirements for August 2021. Observed exceedances of applicable water quality criteria for August 2021 are as follows:

- At the Milne Port Snowdump Facility effluent monitoring station (MP-04A), total lead was observed to be 0.00403 mg/L on August 2, 2021, exceeding the monitoring station's total lead grab sample criteria of 0.001 mg/L. Subsequently, on August 20, 2021, total suspended solids (TSS) was observed to be 19.8 mg/L, which exceeded the monitoring station's TSS grab sample criteria of 15 mg/L.
- At the Milne Port surface water monitoring station MP-Q1-02, TSS was observed to be 36.5 mg/L on August 24, 2021, exceeding the monitoring station's TSS grab sample criteria of 30 mg/L. As a result of the TSS levels observed on August 15 (21.7 mg/L) and 24, 2021 at MP-Q1-02, the permitted monthly

average TSS criteria of 15 mg/L was also exceeded at MP-Q1-02 for August 2021, with a monthly average TSS value of 17.5 mg/L.

- At the Mine Site Exploration Camp Bulk Fuel Storage Facility effluent monitoring station (MS-MRY-6), total lead was observed to be 0.0039 mg/L on August 24, 2021, exceeding the monitoring station's total lead grab sample criteria of 0.001 mg/L.
- At the Mine Site surface water monitoring station MS-C-F, TSS was observed to be 36.3 mg/L on August 22, 2021, exceeding the monitoring station's TSS grab sample criteria of 30 mg/L. As a result of the TSS levels observed on August 10 (29.4 mg/L) and 22, 2021 at MS-C-F, the permitted monthly average TSS criteria of 15 mg/L was also exceeded at MS-C-F for August 2021, with a monthly average TSS value of 22.3 mg/L.
- At the Mine Site surface water monitoring station MQ-C-B, TSS was observed to be 98.7 mg/L on August 11, 2021, exceeding the monitoring station's TSS grab sample criteria of 30 mg/L. As a result of the elevated TSS levels observed on August 11 at MQ-C-B, the permitted monthly average TSS criteria of 15 mg/L was also exceeded at MQ-C-B for August 2021, with a monthly average TSS value of 28.7 mg/L.

Upon becoming aware of the elevated levels of total lead and TSS observed on August 2 and August 20, 2021, respectively, discharge of effluent from the Milne Port Snowdump Facility (MP-04A) was halted immediately. Effluent discharge was only reinitiated once it had been confirmed that the effluent's water quality was compliant with the monitoring station's water quality criteria. Potential causes for the elevated total lead and TSS levels observed during August include sampling error and/or analytical error.

MP-Q1-02 is a monitoring station located within the drainage ditch that collects surface water runoff from the Q1 Quarry and is not located within a natural water body. Surface flows from the drainage ditch discharge north of the Q1 Quarry onto the tundra. In response to elevated TSS levels within the drainage ditch, corrective actions were implemented to settle out the sediment from the runoff, including the installation of sandbags and spring berms within the ditch system. Under the Licence, Milne Port surface water monitoring station MP-C-H is used to monitor water quality in the nearest receiving water body. TSS concentrations at MP-C-H were observed to be non-detect (<2.0 mg/L) during all sampling events in August, confirming minimal impact from the MP-Q1-02 surface water runoff. TSS levels observed in the subsequent sample taken at MP-Q1-02 on September 1, 2021 were non-detect (<2.0 mg/L), indicating that the elevated TSS levels observed on August 24, 2021 were transitory and that corrections taken were effective at reducing TSS levels below the applicable criteria.

At the Mine Site Exploration Camp Bulk Fuel Storage Facility effluent monitoring station (MS-MRY-6), total lead was observed to be 0.0039 mg/L on August 24, 2021. The last effluent discharge from the monitoring station during August occurred on August 1, and no additional discharges are planned for 2021. Prior to the resumption of effluent discharge from MS-MRY-6, Baffinland will confirm that the effluent's water quality is compliant with the monitoring station's water quality criteria.

MS-C-F is a surface water monitoring station located at the base of Deposit No. 1 and is positioned north of the Mine Site Mobile Maintenance Pad and Mine Haul Road. Surface flows from MS-C-F discharge northwest through a drainage route that is also monitored by surface monitoring stations MS-C-A and MS-C-B. Elevated TSS levels observed on August 10 and 22, 2021 were attributed to large rainfall events and upstream runoff from the Mine Haul Road. In response to elevated TSS levels, corrective actions were implemented to settle out sediment from the runoff, including the installation of additional sedimentation controls upstream of the MS-C-F monitoring station along the Mine Haul Road. TSS concentrations at MS-C-A and MS-C-B during August were observed to range between non-detect (<2.0 mg/L) and a maximum of 3.4 mg/L, confirming minimal impact from MS-C-F surface water runoff. TSS levels observed in the subsequent samples taken at MS-C-F on September 2 and 7, 2021 were 26.7 mg/L and 7.7 mg/L, respectively, indicating that the elevated TSS levels observed in August were transitory and that correction actions taken were effective at reducing TSS levels below the applicable criteria.

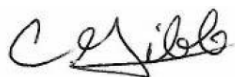
MQ-C-B is a surface water monitoring station located south of the Mine Site QMR2 Quarry. Elevated TSS levels observed on August 11, 2021 were attributed to large rainfall events coupled with dewatering activities at the QMR2 Quarry. In response to the elevated TSS levels, corrective actions were implemented to modify the dewatering activities at the QMR2 Quarry to allow for suspended sediments to settle out before reaching surface water drainage routes near the QMR2 Quarry. TSS levels observed in the subsequent samples taken at MQ-C-B on August 17 and 22 were non-detect (<2.0 mg/L), indicating that the elevated TSS levels observed on August 11, 2021 were transitory and that correction actions taken were effective at reducing TSS levels below the applicable criteria.

Flow and Volume Measurements

Table 3.1 provides a breakdown of volume measurements for August 2021 as required by Part I, Item 9 of the Licence. There were no exceedances of the source specific daily volume withdrawal limits in August 2021.

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.

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Attachments

Attachments – Monthly Water Sampling Results: Table 1.1, Tables 2.1 – 2.36, Table 3.1

Attachments

Monthly Water Sampling Results

Table 1.1: Monitoring Program Water Sampling Summary for August 2021

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
Milne Port			
MP-01 (Sewage Treatment Facility)	2021-08-03	L2622710-1	Discharge volume recorded daily; August 1 – 31.
MP-01A (Polishing Waste Stabilization Pond)	2021-08-26	L2632384-1	Discharge volume recorded daily; August 26 – 31.
MP-01B (Sewage Treatment Facility)	2021-08-03	L2622708-1	Discharge volume recorded daily. August 1 – 31.
MP-MRY-2 (Freshwater Intake at Phillips Creek)	N/A	N/A	No water withdrawal.
MP-MRY-3 (Freshwater Intake from Km 32 Lake)	N/A	N/A	Withdrawal volume recorded daily; August 1 – 31.
MP-02 (Milne Port Maintenance Shop)	N/A	N/A	No discharge.
MP-03 (Bulk Fuel Storage Facility Stormwater)	2021-08-23	L2631106-1	Discharge volume recorded daily; August 24 – 28.
MP-04 (Treated Oily Water from Milne Port Landfarm Facility to Tundra)	2021-08-26	L2612836-1	Discharge volume recorded daily; August 26 - 31.
MP-04A (Treated Oily Water from Milne Port Snowdump Facility to Tundra)	2021-08-02 2021-08-20	L2622824-1 L2629905-1	Discharge volume recorded daily; August 2 - 21.
MP-05 Ore Stockpile Sedimentation Pond (East)	2021-08-02	L2622832-1	Discharge volume recorded daily; August 2 - 28.
MP-0501 (Field Duplicate of MP-05)	2021-08-02	L2622832-2	-
MP-06 Ore Stockpile Sedimentation Pond (West)	2021-08-02	L2622828-1	Discharge volume recorded daily; August 2 - 31.
MP-C-A (Downstream of Construction Area)	N/A	N/A	No flow.
MP-C-B (Downstream of Construction Area)	2021-08-03 2021-08-10 2021-08-15 2021-08-24	L2623229-8 L2626311-7 L2627807-2 L2630604-5	-
MP-C-B (Field Duplicate of MP-C-B)	2021-08-15	L2627807-3	-

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MP-C-C (Downstream of Construction Area)	N/A	N/A	No flow.
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)	2021-08-03 2021-08-10 2021-08-15 2021-08-24	L2623229-5 L2626311-6 L2627807-1 L2630604-1	-
MP-C-H01 (Field Duplicate of MP-C-H)	2021-08-24	L2630604-2	-
MP-C-J (Downstream of Construction Area)	2021-08-03 2021-08-10 2021-08-15 2021-08-24	L2623229-6 L2626311-1 L2627807-5 L2630604-3	-
MP-C-J01 (Field Duplicate of MP-C-J)	2021-08-10	L2626311-2	-
MP-C-K (Downstream of Construction Area)	2021-08-03 2021-08-10 2021-08-15 2021-08-24	L2623229-7 L2626311-3 L2627807-4 L2630604-4	-
MP-Q1-01 (Downstream of Q1 Quarry)	2021-08-03 2021-08-10 2021-08-15	L2623229-3 L2626311-5 L2627807-6	-
MP-Q1-0101 (Field Duplicate of MP-Q1-01)	2021-08-03	L2623229-4	-
MP-Q1-02 (Downstream of Q1 Quarry)	2021-08-03 2021-08-10 2021-08-15 2021-08-24	L2623229-1 L2626311-4 L2627807-7 L2630604-6	-
Mary River Mine Site			
MS-01 (Sewage Treatment Facility)	2021-08-04	L2623232-1	Discharge volume recorded daily; August 1 – 31.
MS-01A (Mine Site Polishing Waste Stabilization Pond)	N/A	N/A	Facility not constructed.
MS-01B (Sewage Treatment Facility)	2021-08-04	L2623234-1	Discharge volume recorded daily; August 1 – 31.

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-02 (Mine Site Maintenance Shop)	N/A	N/A	No discharge.
MS-MRY-1 (Freshwater Intake Camp Lake)	N/A	N/A	Withdrawal volume recorded daily; August 1 – 31.
MS-MRY-04A (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-MRY-04B (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-MRY-04C (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-03 (Mine Site Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No discharge.
MS-03B (Mine Site Bulk Fuel Storage Facility Stormwater)	2021-08-07 2021-08-15	L2625152-1 L2627334-1	Discharge volume recorded daily; August 8 – 19.
MS-04 (Mine Site Fuel Unloading Station Stormwater)	N/A	N/A	No discharge.
MS-05 (Mine Site Landfarm Facility)	N/A	N/A	Facility not constructed.
MS-06 (Ore Stockpile Pond Stormwater)	2021-08-04 2021-08-08	L2622149-1 L2624310-1	Discharge volume recorded daily; August 3 – 23.
MS-07 (Run of Mine Ore Stockpile Pond Stormwater)	2021-08-17	L2628143-1	Discharge volume recorded daily; August 16 – 31.
MS-08 (Mine Waste Rock Stockpile Pond)	2021-08-03 2021-08-08	L2621962-1 L2624309-1	Discharge volume recorded daily; August 2 – 31.
MS-09 (Waste Rock Stockpile East Pond)	N/A	N/A	Facility not constructed.
MS-MRY-6 (Exploration Camp Bulk Fuel Storage Facility Stormwater)	2021-08-24	L2631178-1	Discharge volume recorded daily; August 1.
MS-MRY-09 (Deposit 1 Surface Water Drainage)	2021-08-02 2021-08-12 2021-08-24	L2621381-16 L2627735-1 L2631125-1	-
MS-MRY-10 (Deposit 1 Surface Water Drainage)	2021-08-03 2021-08-14 2021-08-16 2021-08-22	L2621963-1 L2627333-1 L2627332-15 L2630140-8	-

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-MRY-13A (Downstream Non-Hazardous Landfill)	2021-08-02 2021-08-10 2021-08-16	L2621381-5 L2624988-5 L2627332-5	-
MS-MRY-13B (Downstream Non-Hazardous Landfill)	2021-08-02 2021-08-10 2021-08-16 2021-08-22	L2621381-6 L2624988-4 L2627332-3 L2630140-5	-
MS-C-A (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-11 2021-08-16 2021-08-22	L2621381-4 L2626309-5 L2627332-9 L2630140-13	-
MS-C-B (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-11 2021-08-16 2021-08-22	L2621381-3 L2626309-6 L2627332-10 L2630140-14	-
MS-C-B01 (Field Duplicate of MS-C-B)	2021-08-11	L2626309-7	-
MS-C-C (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-11 2021-08-16 2021-08-22	L2621381-12 L2626309-3 L2627332-13 L2630140-11	-
MS-C-D (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-11 2021-08-16 2021-08-22	L2621381-10 L2626309-2 L2627332-7 L2630140-10	-
MS-C-E (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-11 2021-08-16 2021-08-22	L2621381-11 L2626309-4 L2627332-6 L2630140-9	-
MS-C-F (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-10 2021-08-16 2021-08-22	L2621381-1 L2624988-8 L2627332-8 L2630140-12	-
MS-C-F01 (Field Duplicate of MS-C-F)	2021-08-02	L2621381-2	-
MS-C-G (Downstream of Construction and Borrow Areas)	2021-08-02 2021-08-10 2021-08-16 2021-08-22	L2621381-13 L2624988-1 L2627332-14 L2630140-6	-
MS-C-G01 (Field Duplicate of MS-C-G)	2021-08-22	L2630140-15	-

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-C-H (Downstream of Construction and Borrow Areas)	2021-08-02	L2621381-14	-
	2021-08-10	L2624988-3	
	2021-08-16	L2627332-11	
	2021-08-22	L2630140-7	
MS-C-H01 (Field Duplicate of MS-C-H)	2021-08-16	L2627332-12	-
MQ-C-A (Downstream of QMR2 Quarry)	2021-08-02	L2621381-9	-
	2021-08-10	L2624988-6	
	2021-08-16	L2627332-1	
	2021-08-22	L2630140-1	
MQ-C-B (Downstream of QMR2 Quarry)	2021-08-02	L2621381-8	-
	2021-08-11	L2626309-1	
	2021-08-17	L2628128-1	
	2021-08-22	L2630140-3	
MQ-C-B01 (Field Duplicate of MQ-C-B)	2021-08-22	L2630140-4	-
MQ-C-D (Downstream of QMR2 Quarry)	2021-08-02	L2621381-7	-
	2021-08-10	L2624988-7	
	2021-08-16	L2627332-2	
	2021-08-22	L2630140-2	
Steensby Port			
Steensby Exploration Camp is presently inactive.	N/A	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			L2622710-1
	Sample Date & Time			2021-08-03 13:00
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	7.63
Total Suspended Solids	mg/L	1.0	120	1.1
Ammonia, Total (as N)	mg/L	0.010	-	0.025
Total Kjeldahl Nitrogen	mg/L	0.50	-	5.30
Phosphorus, Total	mg/L	0.060	-	14.9
Fecal Coliforms	CFU/100 mL	0	10,000	0
BOD	mg/L	2.0	100	<2.0
Oil and Grease, Total	mg/L	2.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-

Notes:

Bold highlight indicates result that exceeded the applicable water quality criteria.

¹ Type 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-01A

Analyte	Sample ID			MP-01A
	ALS Laboratory Sample ID			L2632384-1
	Sample Date & Time			2021-08-26 11:10
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	7.83
Total Suspended Solids	mg/L	1.0	120	11.5
Total Dissolved Solids	mg/L	20	-	587
Turbidity	NTU	0.10	-	2.39
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	273
Ammonia, Total (as N)	mg/L	1.0	-	6.1
Total Kjeldahl Nitrogen	mg/L	0.10	-	11.5
Phosphorus, Total	mg/L	0.0030	-	0.186
Fecal Coliforms	CFU/100mL	0	10,000	0
BOD	mg/L	3.0	100	<3.0
COD	mg/L	10	-	122
Oil and Grease, Total	mg/L	5.0	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen
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 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean.

Table 2.3: Water Quality Results for Water Licence Monitoring Location - MP-01B

Analyte	Sample ID			MP-01B
	ALS Laboratory Sample ID			L2622708-1
	Sample Date & Time			2021-08-03 12:30
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	7.98
Total Suspended Solids	mg/L	1.0	120	<1.0
Ammonia, Total (as N)	mg/L	0.50	-	<0.50
Total Kjeldahl Nitrogen	mg/L	0.50	-	3.90
Phosphorus, Total	mg/L	0.030	-	8.81
Fecal Coliforms	CFU/100 mL	0	10,000	0
BOD	mg/L	2.0	100	<2.0
Oil and Grease, Total	mg/L	2.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-

Notes:

Bold highlight indicates result that exceeded the applicable water quality criteria.

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

Table 2.4: Water Quality Results for Water Licence Monitoring Location - MP-03

Analyte	Sample ID			MP-03
	ALS Laboratory Sample ID			L2631106-1
	Sample Date & Time			2021-08-23 7:10
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	8.47
Total Suspended Solids	mg/L	2.0	-	<2.0
Total Dissolved Solids	mg/L	10	-	343
Turbidity	NTU	0.10	-	1.88
Total Ammonia (as N)	mg/L	0.010		0.162
Total Phosphorus	mg/L	0.0030		0.0068
Arsenic (As)-Total	mg/L	0.00010		0.00046
Copper (Cu)-Total	mg/L	0.0010		0.0023
Lead (Pb)-Total	mg/L	0.000050	0.001	0.000347
Nickel (Ni)-Total	mg/L	0.00050		0.00058
Zinc (Zn)-Total	mg/L	0.0030		<0.0030
Benzene	mg/L	0.00050	0.370	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050
F1 (C6-C10)	mg/L	0.0250	-	<0.0250
F2 (C10-C16)	mg/L	0.100	-	<0.100
F3 (C16-C34)	mg/L	0.250	-	<0.250
F4 (C34-C50)	mg/L	0.250	-	<0.250
Total Hydrocarbons (C6-C50)	mg/L	0.370	-	<0.370
Oil and Grease, Total	mg/L	5.0	15.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen

Notes:

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

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8: Effluent Quality Discharge Limits for the Bulk Fuel Storage Facilities

Table 2.5: Water Quality Results for Water Licence Monitoring Location - MP-04

Analyte	Sample ID			MP-04
	ALS Laboratory Sample ID			L2632383-1
	Sample Date & Time			2021-08-26 8:50
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	7.83
Total Suspended Solids	mg/L	1.0	15	1.6
Total Dissolved Solids	mg/L	20	-	902
Turbidity	NTU	0.10	-	4.66
Lead (Pb)-Total	mg/L	0.000050	0.001	0.000285
Benzene	mg/L	0.00050	0.370	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050
F1 (C6-C10)	mg/L	0.0250	-	<0.0250
F2 (C10-C16)	mg/L	0.100	-	0.360
F3 (C16-C34)	mg/L	0.250	-	<0.250
F4 (C34-C50)	mg/L	0.250	-	<0.250
Total Hydrocarbons (C6-C50)	mg/L	0.370	-	<0.370
Oil and Grease, Total	mg/L	5.0	15.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen

Notes:

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

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 9: Effluent Quality Discharge Limits for Landfarm Facilities

Table 2.6: Water Quality Results for Water Licence Monitoring Location - MP-04A

Analyte	Sample ID			MP-04A	MP-04A
	ALS Laboratory Sample ID			L2622824-1	L2629905-1
	Sample Date & Time			2021-08-02 8:15	2021-08-20 14:30
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
pH	pH	0.10	6.0 - 9.0	6.58	7.12
Total Suspended Solids	mg/L	2.0	15	8.2	19.8
Total Dissolved Solids	mg/L	10/20	-	1,990	1170
Turbidity	NTU	0.10	-	4.81	4.75
Lead (Pb)-Total	mg/L	0.00050/0.00050	0.001	0.00403	0.000237
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050
Toluene	mg/L	0.00050/0.00045	0.002	<0.00050	<0.00045
F1 (C6-C10)	mg/L	0.250/0.10	-	<0.0250	<0.10
F2 (C10-C16)	mg/L	0.100/0.10	-	<0.100	<0.10
F3 (C16-C34)	mg/L	0.250/0.25	-	0.300	<0.25
F4 (C34-C50)	mg/L	0.250/0.25	-	<0.250	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.370/0.38	-	<0.370	<0.38
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

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

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 9: Effluent Quality Discharge Limits for the Landfarm Facilities

Table 2.7: Water Quality Results for Water Licence Monitoring Location - MP-05

Analyte	Sample ID			MP-05	MP-05
	ALS Laboratory Sample ID			L2622832-1	L2622832-2
	Sample Date & Time			2021-08-02 14:30	2021-08-02 14:30
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Criteria ¹		
Hardness (as CaCO3)	mg/L	1.3	-	434	437
pH	pH units	0.10	6.0 - 9.5	8.36	8.33
Total Suspended Solids	mg/L	1.0	15	1.7	1.7
Total Dissolved Solids	mg/L	20	-	658	659
Turbidity	NTU	0.10	-	4.24	4.68
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	179	179
Ammonia, Total (as N)	mg/L	0.010	-	0.049	0.049
Chloride (Cl)	mg/L	0.50	-	120	120
Fluoride (F)	mg/L	0.020	-	0.190	0.188
Nitrate (as N)	mg/L	0.020	-	3.77	3.77
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.490	0.770
Phosphorus, Total	mg/L	0.0030	-	0.0073	0.0052
Sulfate (SO4)	mg/L	0.30	-	180	180
Dissolved Organic Carbon	mg/L	0.50	-	5.99	4.77
Total Organic Carbon	mg/L	0.50	-	5.10	4.51
Aluminum (Al)-Total	mg/L	0.050	-	0.097	0.077
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010	<0.0010
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L	0.50	-	78.4	79.8
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050	<0.0050
Iron (Fe)-Total	mg/L	0.10	-	<0.10	0.11
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050	<0.00050
Magnesium (Mg)-Total	mg/L	0.050	-	57.8	56.6
Manganese (Mn)-Total	mg/L	0.0050	-	0.0977	0.0955
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00050	-	0.00388	0.00384
Nickel (Ni)-Total	mg/L	0.0050	0.50	<0.0050	<0.0050
Potassium (K)-Total	mg/L	0.50	-	8.53	8.35
Selenium (Se)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.50	-	57.4	56.0
Thallium (Tl)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.00010	-	0.116	0.115
Zinc (Zn)-Total	mg/L	0.030	0.50	<0.030	<0.030
Aluminum (Al)-Dissolved	mg/L	0.050	-	<0.050	<0.050
Arsenic (As)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.50	-	78.4	79.3
Copper (Cu)-Dissolved	mg/L	0.0020	-	<0.0020	<0.0020
Iron (Fe)-Dissolved	mg/L	0.10	-	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.050	-	57.8	58.1
Manganese (Mn)-Dissolved	mg/L	0.0050	-	0.0789	0.0814
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00050	-	0.00402	0.00403
Nickel (Ni)-Dissolved	mg/L	0.0050	-	<0.0050	<0.0050
Potassium (K)-Dissolved	mg/L	0.50	-	8.58	8.43
Selenium (Se)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.50	-	57.5	57.2
Thallium (Tl)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.00010	-	0.116	0.115
Zinc (Zn)-Dissolved	mg/L	0.010	-	<0.010	<0.010
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	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 2.8: Water Quality Results for Water Licence Monitoring Location - MP-06

Analyte	Sample ID			MP-06
	ALS Laboratory Sample ID			L2622828-1
	Sample Date & Time			2021-08-02 14:30
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
Hardness (as CaCO ₃)	mg/L	1.3	-	378
pH	pH units	0.10	6.0 - 9.5	8.10
Total Suspended Solids	mg/L	1.0	15	2.7
Total Dissolved Solids	mg/L	20	-	699
Turbidity	NTU	0.10	-	2.35
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	103
Ammonia, Total (as N)	mg/L	0.010	-	0.028
Chloride (Cl)	mg/L	0.50	-	115
Fluoride (F)	mg/L	0.020	-	0.334
Nitrate (as N)	mg/L	0.020	-	4.06
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.800
Phosphorus, Total	mg/L	0.0030	-	0.0042
Sulfate (SO ₄)	mg/L	0.30	-	238
Dissolved Organic Carbon	mg/L	0.50	-	12.6
Total Organic Carbon	mg/L	0.50	-	12.8
Aluminum (Al)-Total	mg/L	0.050	-	0.087
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050
Calcium (Ca)-Total	mg/L	0.50	-	67.9
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050
Iron (Fe)-Total	mg/L	0.10	-	0.18
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050
Magnesium (Mg)-Total	mg/L	0.050	-	50.5
Manganese (Mn)-Total	mg/L	0.0050	-	0.0189
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00050	-	0.00581
Nickel (Ni)-Total	mg/L	0.0050	0.50	<0.0050
Potassium (K)-Total	mg/L	0.50	-	10.6
Selenium (Se)-Total	mg/L	0.00050	-	<0.00050
Sodium (Na)-Total	mg/L	0.50	-	71.8
Thallium (Tl)-Total	mg/L	0.00010	-	<0.00010
Uranium (U)-Total	mg/L	0.00010	-	0.444
Zinc (Zn)-Total	mg/L	0.030	0.50	<0.030
Aluminum (Al)-Dissolved	mg/L	0.050	-	<0.050
Arsenic (As)-Dissolved	mg/L	0.0010	-	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.000050	-	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.50	-	67.8
Copper (Cu)-Dissolved	mg/L	0.0020	-	<0.0020
Iron (Fe)-Dissolved	mg/L	0.10	-	<0.10
Lead (Pb)-Dissolved	mg/L	0.00050	-	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.050	-	50.7
Manganese (Mn)-Dissolved	mg/L	0.0050	-	0.0100
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00050	-	0.00642
Nickel (Ni)-Dissolved	mg/L	0.0050	-	<0.0050
Potassium (K)-Dissolved	mg/L	0.50	-	10.6
Selenium (Se)-Dissolved	mg/L	0.00050	-	0.00060
Sodium (Na)-Dissolved	mg/L	0.50	-	72.7
Thallium (Tl)-Dissolved	mg/L	0.00010	-	<0.00010
Uranium (U)-Dissolved	mg/L	0.00010	-	0.450
Zinc (Zn)-Dissolved	mg/L	0.010	-	<0.010
Oil and Grease, Total	mg/L	-	-	-
	-	-	No Visible Sheen	No Visible Sheen
Toxicity	-	-	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 2.9: Water Quality Results for Water Licence Monitoring Location - MP-C-B

Analyte	Sample ID			MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B
	ALS Laboratory Sample ID			L2623229-8	L2626311-7	L2627807-2	L2627807-3	L2630604-5
	Sample Date & Time			2021-08-03 13:45	2021-08-10 6:40	2021-08-15 9:55	2021-08-15 9:55	2021-08-24 8:15
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	592	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.29	8.28	8.33	8.32	8.37
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	2.9	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	354	394	351	354	343
Turbidity	NTU	0.10	-	1.68	7.76	4.30	4.27	3.07
Ammonia, Total (as N)	mg/L	0.010	-	0.019	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	3.50	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicates result 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 2.10: Water Quality Results for Water Licence Monitoring Location - MP-C-H

Analyte	Sample ID			MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H
	ALS Laboratory Sample ID			L2623229-5	L2626311-6	L2627807-1	L2630604-1	L2630604-2
	Sample Date & Time			2021-08-03 11:20	2021-08-10 11:00	2021-08-15 9:10	2021-08-24 6:50	2021-08-24 6:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	392	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.26	8.18	8.32	8.32	8.33
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	204	161	207	179	174
Turbidity	NTU	0.10	-	0.38	0.29	0.41	0.23	0.25
Ammonia, Total (as N)	mg/L	0.010	-	0.073	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.988	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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

Analyte	Sample ID			MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J
	ALS Laboratory Sample ID			L2623229-6	L2626311-1	L2626311-2	L2627807-5	L2630604-3
	Sample Date & Time			2021-08-03 12:15	2021-08-10 8:35	2021-08-10 8:35	2021-08-15 10:35	2021-08-24 7:30
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	452	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.07	8.06	8.06	8.15	8.00
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	244	172	235	242	249
Turbidity	NTU	0.10	-	0.19	0.33	0.39	0.35	0.27
Ammonia, Total (as N)	mg/L	0.010	-	0.011	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.048	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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

Analyte	Sample ID			MP-C-K	MP-C-K	MP-C-K	MP-C-K
	ALS Laboratory Sample ID			L2623229-7	L2626311-3	L2627807-4	L2630604-4
	Sample Date & Time			2021-08-03 13:00	2021-08-10 9:00	2021-08-15 10:20	2021-08-24 8:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	783	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.16	8.15	8.26	8.29
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	543	531	547	513
Turbidity	NTU	0.10	-	0.42	1.39	0.72	0.50
Ammonia, Total (as N)	mg/L	0.010	-	0.053	-	-	-
Nitrate (as N)	mg/L	0.020	-	1.95	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicates result 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 2.13: Water Quality Results for Water Licence Monitoring Location - MP-Q1-01

Analyte	Sample ID			MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-01
	ALS Laboratory Sample ID			L2623229-3	L2623229-4	L2626311-5	L2627807-6
	Sample Date & Time			2021-08-03 10:35	2021-08-03 10:35	2021-08-10 10:20	2021-08-15 11:10
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	195	196	-	-
pH	pH units	0.10	6.0 - 9.5	7.97	8.00	7.97	8.02
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<1.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	72	71	112	109
Turbidity	NTU	0.10	-	1.96	2.11	4.81	4.08
Ammonia, Total (as N)	mg/L	0.010	-	0.012	0.010	-	-
Nitrate (as N)	mg/L	0.020	-	0.544	0.547	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	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 2.14: Water Quality Results for Water Licence Monitoring Location - MP-Q1-02

Analyte	Sample ID			MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02
	ALS Laboratory Sample ID			L2623229-1	L2626311-4	L2627807-7	L2630604-6
	Sample Date & Time			2021-08-03 9:30	2021-08-10 9:45	2021-08-15 8:15	2021-08-24 8:35
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	514	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.02	8.04	8.02	8.12
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	8.2	3.4	21.7	36.5
Total Dissolved Solids	mg/L	10/20	-	336	320	406	292
Turbidity	NTU	0.10	-	9.00	6.39	19.2	22.7
Ammonia, Total (as N)	mg/L	0.01/0.05	-	0.967	-	-	-
Nitrate (as N)	mg/L	0.020	-	13.1	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
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 2.15: Water Quality Results for Water Licence Monitoring Location - MS-01

Analyte	Sample ID			MS-01	MS-01
	ALS Laboratory Sample ID			L2623232-1	L2623232-3
	Sample Date & Time			2021-08-04 14:45	2021-08-04 14:45
	QA/QC Sample Type			N/A	Field Blank
	Units	LOR	Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.63	5.50
Total Suspended Solids	mg/L	1.0/2.0	35	<2.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	4.0	0.099	0.021
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	4.10	<0.050
Phosphorus, Total	mg/L	0.0030/0.0060	4.0	1.08	0.0064
Fecal Coliforms	CFU/100 mL	0	1,000	0	0
BOD	mg/L	2.0	30	<2.0	<2.0
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	-
Toxicity	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicates result that exceeded the applicable water quality criteria.

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

Table 2.16: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B
	ALS Laboratory Sample ID			L2623234-1	L2623234-3
	Sample Date & Time			2021-08-04 15:00	2021-08-04 15:00
	QA/QC Sample Type			N/A	Field Blank
	Units	LOR	Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.98	6.54
Total Suspended Solids	mg/L	1.0	35	6.3	<1.0
Ammonia, Total (as N)	mg/L	0.010	4.0	0.374	<0.010
Total Kjeldahl Nitrogen	mg/L	0.050	-	1.80	<0.050
Phosphorus, Total	mg/L	0.0090/0.0030	4.0	2.38	0.0098
Fecal Coliforms	CFU/100 mL	10/0	1,000	30	0
BOD	mg/L	2.0	30	2.5	<2.0
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicates result that exceeded the applicable water quality criteria.

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

Table 2.17: Water Quality Results for Water Licence Monitoring Location - MS-03B

Analyte	Sample ID			MS-03B	MS-03B
	ALS Laboratory Sample ID			L2625152-1	L2627334-1
	Sample Date & Time			2021-08-07 12:55	2021-08-15 9:50
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.94	8.20
Total Suspended Solids	mg/L	1.0	-	<1.0	<2.0
Total Dissolved Solids	mg/L	20	-	234	426
Turbidity	NTU	0.10	-	1.86	6.70
Lead (Pb)-Total	mg/L	0.00050	0.001	<0.00050	0.00062
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050	<0.00050
F1 (C6-C10)	ug/L	0.025	-	<0.025	<0.025
F2 (C10-C16)	ug/L	0.100	-	<0.100	<0.100
F3 (C16-C34)	ug/L	0.250	-	<0.250	<0.250
F4 (C34-C50)	ug/L	0.250	-	<0.250	<0.250
Total Hydrocarbons (C6-C50)	ug/L	0.370	-	<0.370	<0.370
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0
	-		No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

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

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8: Effluent Quality Discharge Limits for the Bulk Fuel Storage Facilities

Table 2.18: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID			MS-06	MS-06
	ALS Laboratory Sample ID			L2622149-1	L2624310-1
	Sample Date & Time			2021-08-04 11:10	2021-08-08 11:35
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
Hardness (as CaCO3)	mg/L	0.50	-	1,020	507
pH	pH units	0.10	6.0 - 9.5	7.54	7.69
Total Suspended Solids	mg/L	1.00	15	3.5	2.8
Total Dissolved Solids	mg/L	20	-	744	734
Turbidity	NTU	0.10	-	19.2	11
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	32	36.3
Ammonia, Total (as N)	mg/L	0.10	-	2.31	1.97
Chloride (Cl)	mg/L	0.50	-	24.9	25.4
Fluoride (F)	mg/L	0.020	-	0.071	0.07
Nitrate (as N)	mg/L	0.020	-	11.3	11.5
Total Kjeldahl Nitrogen	mg/L	0.050	-	2.310	2.61
Phosphorus, Total	mg/L	0.0030	-	0.0086	0.0031
Sulfate (SO4)	mg/L	0.30	-	412	420
Dissolved Organic Carbon	mg/L	0.50	-	5.16	3.72
Total Organic Carbon	mg/L	0.50	-	2.72	2.82
Aluminum (Al)-Total	mg/L	0.0050	-	0.026	0.0526
Antimony (Sb)-Total	mg/L	0.00010	-	<0.00010	0.00012
Arsenic (As)-Total	mg/L	0.00010	0.50	0.00014	0.00018
Barium (Ba)-Total	mg/L	0.00010	-	0.01310	0.0131
Beryllium (Be)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.00005	-	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.010	-	0.049	0.056
Cadmium (Cd)-Total	mg/L	0.0000050	-	0.000013	0.000006
Calcium (Ca)-Total	mg/L	0.050	-	45.2	49.1
Cesium (Cs)-Total	mg/L	0.000010	-	0.000038	0.000041
Chromium (Cr)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	-	0.00211	0.00203
Copper (Cu)-Total	mg/L	0.00050	0.30	0.00727	0.00055
Iron (Fe)-Total	mg/L	0.010	-	0.077	0.159
Lead (Pb)-Total	mg/L	0.000050	0.20	0.000553	0.000089
Lithium (Li)-Total	mg/L	0.0010	-	0.0217	0.0261
Magnesium (Mg)-Total	mg/L	0.0050	-	95.1	95.5
Manganese (Mn)-Total	mg/L	0.00050	-	1.30000	1.3
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.00266	0.00265
Nickel (Ni)-Total	mg/L	0.00050	0.50	0.0053	0.00496
Phosphorus (P)-Total	mg/L	0.050	-	<0.050	<0.050
Potassium (K)-Total	mg/L	0.050	-	9.9	10.1
Rubidium (Rb)-Total	mg/L	0.00020	-	0.0126	0.0135
Selenium (Se)-Total	mg/L	0.000050	-	0.001690	0.00179
Silicon (Si)-Total	mg/L	0.10	-	0.81	0.81
Silver (Ag)-Total	mg/L	0.000050	-	<0.000050	<0.000050
Sodium (Na)-Total	mg/L	0.05	-	11	10.6
Strontium (Sr)-Total	mg/L	0.0010	-	0.0997	0.104
Sulfur (S)-Total	mg/L	0.50	-	154	153
Tellurium (Te)-Total	mg/L	0.00020	-	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	-	0.000071	0.000071
Thorium (Th)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.0010/0.0003	-	0.00031	<0.0010
Tungsten (W)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.000010	-	0.00231	0.00241
Vanadium (V)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	0.50	0.0376	0.0198
Zirconium (Zr)-Total	mg/L	0.00020	-	<0.00020	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	<0.0050	0.0078
Antimony (Sb)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	-	0.00014	0.00015
Barium (Ba)-Dissolved	mg/L	0.00010	-	0.01260	0.0126
Beryllium (Be)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.010	-	0.048	0.053
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	0.0000089	0.0000052
Calcium (Ca)-Dissolved	mg/L	0.050	-	46.1	48.5
Cesium (Cs)-Dissolved	mg/L	0.000010	-	0.000039	0.000039
Chromium (Cr)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	0.00185	0.00162
Copper (Cu)-Dissolved	mg/L	0.00020	-	0.00047	0.00033
Iron (Fe)-Dissolved	mg/L	0.010	-	<0.010	<0.010

Table 2.18: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID			MS-06	MS-06
	ALS Laboratory Sample ID			L2622149-1	L2624310-1
	Sample Date & Time			2021-08-04 11:10	2021-08-08 11:35
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
Lead (Pb)-Dissolved	mg/L	0.000050	-	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0010	-	0.0237	0.0265
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	94.9	93.7
Manganese (Mn)-Dissolved	mg/L	0.00050	-	1.2600	1.21
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.00264	0.00271
Nickel (Ni)-Dissolved	mg/L	0.00050	-	0.00481	0.00448
Phosphorus (P)-Dissolved	mg/L	0.050	-	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.050	-	10.0	10
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	0.0125	0.013
Selenium (Se)-Dissolved	mg/L	0.000050	-	0.001700	0.00198
Silicon (Si)-Dissolved	mg/L	0.050	-	0.769	0.704
Silver (Ag)-Dissolved	mg/L	0.000050	-	<0.000050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.05	-	11	10.3
Strontium (Sr)-Dissolved	mg/L	0.0010	-	0.0994	0.105
Sulfur (S)-Dissolved	mg/L	0.50	-	153	153
Tellurium (Te)-Dissolved	mg/L	0.00020	-	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	0.000070	0.000071
Thorium (Th)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	-	<0.00030	<0.00030
Tungsten (W)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	-	0.00236	0.00231
Vanadium (V)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	0.0168	0.0197
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	<0.00020	<0.00020
Ra-226	Bq/L	0.0054/0.0031	-	<0.0054	0.0037
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
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 2.19: Water Quality Results for Water Licence Monitoring Location - MS-07

Analyte	Sample ID			MS-07
	ALS Laboratory Sample ID			L2628143-1
	Sample Date & Time			2021-08-17 14:10
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
Hardness (as CaCO3)	mg/L	0.50	-	282
pH	pH units	0.10	6.0 - 9.5	8.11
Total Suspended Solids	mg/L	2.0	15	6.3
Total Dissolved Solids	mg/L	10	-	402
Turbidity	NTU	0.10	-	3.72
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	67.8
Ammonia, Total (as N)	mg/L	0.010	-	0.082
Chloride (Cl)	mg/L	0.50	-	8.82
Fluoride (F)	mg/L	0.020	-	0.125
Nitrate (as N)	mg/L	0.020	-	12.2
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.630
Phosphorus, Total	mg/L	0.0030	-	0.0097
Sulfate (SO4)	mg/L	0.30	-	183
Dissolved Organic Carbon	mg/L	0.50	-	2.91
Total Organic Carbon	mg/L	0.50	-	3.93
Aluminum (Al)-Total	mg/L	0.0050	-	0.185
Antimony (Sb)-Total	mg/L	0.00010	-	<0.00010
Arsenic (As)-Total	mg/L	0.00010	0.50	0.00013
Barium (Ba)-Total	mg/L	0.00010	-	0.0219
Beryllium (Be)-Total	mg/L	0.00010	-	<0.00010
Bismuth (Bi)-Total	mg/L	0.000050	-	<0.000050
Boron (B)-Total	mg/L	0.010	-	0.026
Cadmium (Cd)-Total	mg/L	0.0000050	-	0.0000203
Calcium (Ca)-Total	mg/L	0.050	-	47.4
Cesium (Cs)-Total	mg/L	0.000010	-	0.000022
Chromium (Cr)-Total	mg/L	0.00050	-	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	-	0.00079
Copper (Cu)-Total	mg/L	0.00050	0.30	0.00128
Iron (Fe)-Total	mg/L	0.010	-	0.214
Lead (Pb)-Total	mg/L	0.000050	0.20	0.000234
Lithium (Li)-Total	mg/L	0.0010	-	0.006
Magnesium (Mg)-Total	mg/L	0.0050	-	39.7
Manganese (Mn)-Total	mg/L	0.00050	-	0.0319
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.00985
Nickel (Ni)-Total	mg/L	0.00050	0.50	0.00086
Phosphorus (P)-Total	mg/L	0.050	-	<0.050
Potassium (K)-Total	mg/L	0.050	-	11.7
Rubidium (Rb)-Total	mg/L	0.00020	-	0.00481
Selenium (Se)-Total	mg/L	0.000050	-	0.00149
Silicon (Si)-Total	mg/L	0.10	-	1.69
Silver (Ag)-Total	mg/L	0.000050	-	<0.000050
Sodium (Na)-Total	mg/L	0.050	-	4.64
Strontium (Sr)-Total	mg/L	0.0010	-	0.0816
Sulfur (S)-Total	mg/L	0.50	-	65.6
Tellurium (Te)-Total	mg/L	0.00020	-	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	-	<0.000010
Thorium (Th)-Total	mg/L	0.00010	-	<0.00010
Tin (Sn)-Total	mg/L	0.00010	-	<0.00010
Titanium (Ti)-Total	mg/L	0.00030	-	0.00745
Tungsten (W)-Total	mg/L	0.00010	-	0.00014
Uranium (U)-Total	mg/L	0.000010	-	0.00631
Vanadium (V)-Total	mg/L	0.00050	-	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	0.50	<0.0030
Zirconium (Zr)-Total	mg/L	0.00020	-	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	0.168
Antimony (Sb)-Dissolved	mg/L	0.00010	-	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	-	0.00013
Barium (Ba)-Dissolved	mg/L	0.00010	-	0.025
Beryllium (Be)-Dissolved	mg/L	0.00010	-	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	<0.000050
Boron (B)-Dissolved	mg/L	0.010	-	0.022
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	0.0000236
Calcium (Ca)-Dissolved	mg/L	0.050	-	46.3
Cesium (Cs)-Dissolved	mg/L	0.000010	-	0.000018
Chromium (Cr)-Dissolved	mg/L	0.00050	-	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	0.00077
Copper (Cu)-Dissolved	mg/L	0.00020	-	0.00143
Iron (Fe)-Dissolved	mg/L	0.010	-	0.141

Table 2.19: Water Quality Results for Water Licence Monitoring Location - MS-07

Analyte	Sample ID			MS-07
	ALS Laboratory Sample ID			L2628143-1
	Sample Date & Time			2021-08-17 14:10
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
Lead (Pb)-Dissolved	mg/L	0.000050	-	0.000232
Lithium (Li)-Dissolved	mg/L	0.0010	-	0.0057
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	40.4
Manganese (Mn)-Dissolved	mg/L	0.00050	-	0.0331
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.00967
Nickel (Ni)-Dissolved	mg/L	0.00050	-	0.00082
Phosphorus (P)-Dissolved	mg/L	0.050	-	<0.050
Potassium (K)-Dissolved	mg/L	0.050	-	12.1
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	0.0049
Selenium (Se)-Dissolved	mg/L	0.000050	-	0.00132
Silicon (Si)-Dissolved	mg/L	0.050	-	1.53
Silver (Ag)-Dissolved	mg/L	0.000050	-	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	-	4.71
Strontium (Sr)-Dissolved	mg/L	0.0010	-	0.0832
Sulfur (S)-Dissolved	mg/L	0.50	-	59.9
Tellurium (Te)-Dissolved	mg/L	0.00020	-	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	0.000010
Thorium (Th)-Dissolved	mg/L	0.00010	-	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	-	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	-	0.00595
Tungsten (W)-Dissolved	mg/L	0.00010	-	0.00013
Uranium (U)-Dissolved	mg/L	0.000010	-	0.00616
Vanadium (V)-Dissolved	mg/L	0.00050	-	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	0.0010
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	<0.00020
Oil and Grease, Total	mg/L	-	-	-
Oil and Grease	-	-	No Visible Sheen	No Visible Sheen
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 2.20: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-08	MS-08
	ALS Laboratory Sample ID			L2621962-1	L2624309-1
	Sample Date & Time			2021-08-03 13:20	2021-08-08 19:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
Hardness (as CaCO3)	mg/L	1.3		1,600	1,610
pH	pH units	0.10	6.0 - 9.5	8.58	7.49
Total Suspended Solids	mg/L	2.0	15	8.0	10.3
Total Dissolved Solids	mg/L	10	-	2,190	2,510
Turbidity	NTU	0.10	-	6.43	14.1
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	10.1	8.4
Ammonia, Total (as N)	mg/L	0.20/0.10	-	3.35	4.26
Chloride (Cl)	mg/L	2.5	-	9.9	10.3
Fluoride (F)	mg/L	0.10	-	<0.10	<0.10
Nitrate (as N)	mg/L	0.10	-	18.8	19.2
Total Kjeldahl Nitrogen	mg/L	0.050	-	3.87	4.41
Phosphorus, Total	mg/L	0.0030	-	0.0058	0.0037
Sulfate (SO4)	mg/L	1.5	-	1,370	1,350
Dissolved Organic Carbon	mg/L	0.50	-	2.91	2.11
Total Organic Carbon	mg/L	0.50	-	2.29	2.14
Aluminum (Al)-Total	mg/L	0.050	-	0.059	0.097
Antimony (Sb)-Total	mg/L	0.0010	-	<0.0010	<0.0010
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010	<0.0010
Barium (Ba)-Total	mg/L	0.0010	-	0.0191	0.0155
Beryllium (Be)-Total	mg/L	0.0010	-	<0.0010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Boron (B)-Total	mg/L	0.10	-	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L	0.50	-	137	139
Cesium (Cs)-Total	mg/L	0.00010	-	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	0.0050	-	<0.0050	<0.0050
Cobalt (Co)-Total	mg/L	0.0010	-	0.0181	0.033
Copper (Cu)-Total	mg/L	0.0050	0.30	0.0162	0.0149
Iron (Fe)-Total	mg/L	0.10	-	2.28	4.45
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	0.010	-	0.033	0.037
Magnesium (Mg)-Total	mg/L	0.050	-	316	339
Manganese (Mn)-Total	mg/L	0.0050	-	3.77	4.6
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Nickel (Ni)-Total	mg/L	0.0050	0.50	0.0187	0.0322
Phosphorus (P)-Total	mg/L	0.50	-	<0.50	<0.50
Potassium (K)-Total	mg/L	0.50	-	6.78	7.76
Rubidium (Rb)-Total	mg/L	0.0020	-	0.0085	0.0099
Selenium (Se)-Total	mg/L	0.00050	-	0.00586	0.00607
Silicon (Si)-Total	mg/L	1.0	-	<1.0	<1.0
Silver (Ag)-Total	mg/L	0.00050	-	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.50	-	4.23	4.37
Strontium (Sr)-Total	mg/L	0.010	-	0.319	0.334
Sulfur (S)-Total	mg/L	5.0	-	543	555
Tellurium (Te)-Total	mg/L	0.0020	-	<0.0020	<0.0020
Thallium (Tl)-Total	mg/L	0.00010	-	0.00012	0.00012
Thorium (Th)-Total	mg/L	0.0010	-	<0.0010	<0.0010
Tin (Sn)-Total	mg/L	0.0010	-	<0.0010	<0.0010
Titanium (Ti)-Total	mg/L	0.0030	-	<0.0030	<0.0030
Tungsten (W)-Total	mg/L	0.0010	-	<0.0010	<0.0010
Uranium (U)-Total	mg/L	0.00010/0.000010	-	0.000256	0.00037
Vanadium (V)-Total	mg/L	0.0050	-	<0.0050	<0.0050
Zinc (Zn)-Total	mg/L	0.030	0.50	<0.030	<0.030
Zirconium (Zr)-Total	mg/L	0.0020	-	<0.0020	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.050	-	<0.050 *	<0.050
Antimony (Sb)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Arsenic (As)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Barium (Ba)-Dissolved	mg/L	0.0010	-	0.0184	0.0141
Beryllium (Be)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Bismuth (Bi)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L	0.10	-	<0.10	<0.10
Cadmium (Cd)-Dissolved	mg/L	0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.50	-	133	131
Cesium (Cs)-Dissolved	mg/L	0.00010	-	<0.00010	<0.00010
Chromium (Cr)-Dissolved	mg/L	0.0050	-	<0.0050	<0.0050
Cobalt (Co)-Dissolved	mg/L	0.0010	-	0.0097	0.0221
Copper (Cu)-Dissolved	mg/L	0.0020	-	0.0153	0.0119
Iron (Fe)-Dissolved	mg/L	0.10	-	<0.10	<0.10

Table 2.20: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-08	MS-08
	ALS Laboratory Sample ID			L2621962-1	L2624309-1
	Sample Date & Time			2021-08-03 13:20	2021-08-08 19:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Criteria ¹		
Lead (Pb)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Lithium (Li)-Dissolved	mg/L	0.010	-	0.031	0.033
Magnesium (Mg)-Dissolved	mg/L	0.050	-	307	311
Manganese (Mn)-Dissolved	mg/L	0.0050	-	3.48	4.06
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Nickel (Ni)-Dissolved	mg/L	0.0050	-	0.0114	0.0204
Phosphorus (P)-Dissolved	mg/L	0.50	-	<0.50	<0.50
Potassium (K)-Dissolved	mg/L	0.50	-	6.65	7.27
Rubidium (Rb)-Dissolved	mg/L	0.0020	-	0.0079	0.0092
Selenium (Se)-Dissolved	mg/L	0.00050	-	0.00566	0.00564
Silicon (Si)-Dissolved	mg/L	0.50	-	<0.50	<0.50
Silver (Ag)-Dissolved	mg/L	0.00050	-	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.50	-	3.82	4.03
Strontium (Sr)-Dissolved	mg/L	0.010	-	0.299	0.325
Sulfur (S)-Dissolved	mg/L	5.0	-	533	520
Tellurium (Te)-Dissolved	mg/L	0.0020	-	<0.0020	<0.0020
Thallium (Tl)-Dissolved	mg/L	0.00010	-	0.00012	0.00012
Thorium (Th)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Tin (Sn)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Titanium (Ti)-Dissolved	mg/L	0.0030	-	<0.0030	<0.0030
Tungsten (W)-Dissolved	mg/L	0.0010	-	<0.0010	<0.0010
Uranium (U)-Dissolved	mg/L	0.00010	-	0.0001	<0.00010
Vanadium (V)-Dissolved	mg/L	0.0050	-	<0.0050	<0.0050
Zinc (Zn)-Dissolved	mg/L	0.010	-	<0.010	<0.010
Zirconium (Zr)-Dissolved	mg/L	0.0020	-	<0.0020	<0.0020
Ra-226	Bq/L	0.0049/0.0047	-	0.0047	0.0070
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
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 2.21: Water Quality Results for Water Licence Monitoring Location - MS-MRY-6

Analyte	Sample ID			MS-MRY-6
	ALS Laboratory Sample ID			L2631178-1
	Sample Date & Time			2021-08-24 13:40
	QA/QC Sample Type			N/A
	Units	LOR	Criteria ¹	
pH	pH units	0.10	-	8.34
Total Suspended Solids	mg/L	2.0	-	67.7
Lead (Pb)-Total	mg/L	0.00050	0.001	0.00390
Oil and Grease, Total	mg/L	5.0	15.0	7.0
	-	-	No Visible Sheen	No Visible Sheen
Benzene	mg/L	0.00050	0.370	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050
F1 (C6-C10)	mg/L	0.025	-	<0.025
F2 (C10-C16)	mg/L	0.100	-	0.510
F3 (C16-C34)	mg/L	0.250	-	1.760
F4 (C34-C50)	mg/L	0.250	-	0.270
Total Petroleum Hydrocarbons (TPH)	mg/L	0.370	-	2.550

Notes:

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

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8: Effluent Quality Discharge Limits for the Bulk Fuel Storage Facilities

Table 2.22: Water Quality Results for Water Licence Monitoring Location - MS-MRY-09

Analyte	Sample ID			MS-MRY-09	MS-MRY-09	MS-MRY-09
	ALS Laboratory Sample ID			L2621381-16	L2627735-1	L2631125-1
	Sample Date & Time			2021-08-02 14:20	2021-08-12 13:35	2021-08-24 8:45
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Criteria ¹			
Hardness (as CaCO3)	mg/L	0.50	-	65.7	-	-
pH	pH units	0.10	6.0 - 9.5	8.00	8.19	8.11
Total Suspended Solids	mg/L	2.0	15	2.9	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	84	25	83
Turbidity	NTU	0.10	-	0.83	0.40	0.33
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	58.6	-	-
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	-	-
Chloride (Cl)	mg/L	0.50	-	1.16	-	-
Fluoride (F)	mg/L	0.020	-	<0.020	-	-
Nitrate (as N)	mg/L	0.020	-	<0.020	-	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.060	-	-
Phosphorus, Total	mg/L	0.0030	-	0.0100	-	-
Sulfate (SO4)	mg/L	0.30	-	2.49	-	-
Dissolved Organic Carbon	mg/L	0.50	-	2.58	-	-
Total Organic Carbon	mg/L	0.50	-	2.94	-	-
Aluminum (Al)-Total	mg/L	0.0050	-	0.136	-	-
Arsenic (As)-Total	mg/L	0.00010	0.50	<0.00010	-	-
Cadmium (Cd)-Total	mg/L	0.0000050	-	<0.0000050	-	-
Calcium (Ca)-Total	mg/L	0.050	-	12.2	-	-
Copper (Cu)-Total	mg/L	0.00050	0.30	0.00174	-	-
Iron (Fe)-Total	mg/L	0.010	-	0.174	-	-
Lead (Pb)-Total	mg/L	0.000050	0.20	0.000133	-	-
Magnesium (Mg)-Total	mg/L	0.0050	-	8.38	-	-
Manganese (Mn)-Total	mg/L	0.00050	-	0.00267	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.000434	-	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	0.00063	-	-
Potassium (K)-Total	mg/L	0.050	-	1.46	-	-
Selenium (Se)-Total	mg/L	0.000050	-	<0.000050	-	-
Sodium (Na)-Total	mg/L	0.050	-	0.653	-	-
Thallium (Tl)-Total	mg/L	0.000010	-	0.000011	-	-
Uranium (U)-Total	mg/L	0.000010	-	0.00196	-	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	<0.0030	-	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	0.0076	-	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	<0.00010	-	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	<0.0000050	-	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	12.6	-	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	0.00143	-	-
Iron (Fe)-Dissolved	mg/L	0.010	-	<0.010	-	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	<0.000050	-	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	8.32	-	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	<0.00050	-	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.000401	-	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	<0.00050	-	-
Potassium (K)-Dissolved	mg/L	0.050	-	1.42	-	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	<0.000050	-	-
Sodium (Na)-Dissolved	mg/L	0.050	-	0.647	-	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	<0.000010	-	-
Uranium (U)-Dissolved	mg/L	0.000010	-	0.00192	-	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	<0.0010	-	-
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	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 2.23: Water Quality Results for Water Licence Monitoring Location - MS-MRY-10

Analyte	Sample ID			MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2621963-1	L2627333-1	L2627332-15	L2630140-8
	Sample Date & Time			2021-08-03 14:40	2021-08-14 17:40	2021-08-16 9:50	2021-08-22 12:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Hardness (as CaCO3)	mg/L	0.50	-	140	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.35	8.34	8.37	8.45
Total Suspended Solids	mg/L	2.0	15	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	136	96	122	209
Turbidity	NTU	0.10	-	<0.10	0.14	0.15	<0.10
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	115	-	-	-
Ammonia, Total (as N)	mg/L	0.010	-	0.011	-	-	-
Chloride (Cl)	mg/L	0.50	-	8.99	-	-	-
Fluoride (F)	mg/L	0.020	-	0.032	-	-	-
Nitrate (as N)	mg/L	0.020	-	<0.020	-	-	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.120	-	-	-
Phosphorus, Total	mg/L	0.0030	-	0.0039	-	-	-
Sulfate (SO4)	mg/L	0.30	-	9.95	-	-	-
Dissolved Organic Carbon	mg/L	0.50	-	1.88	-	-	-
Total Organic Carbon	mg/L	0.50	-	2.68	-	-	-
Aluminum (Al)-Total	mg/L	0.0050	-	<0.0050	-	-	-
Antimony (Sb)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Arsenic (As)-Total	mg/L	0.00010	0.50	<0.00010	-	-	-
Barium (Ba)-Total	mg/L	0.00010	-	0.0153	-	-	-
Beryllium (Be)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Bismuth (Bi)-Total	mg/L	0.000050	-	<0.000050	-	-	-
Boron (B)-Total	mg/L	0.010	-	<0.010	-	-	-
Cadmium (Cd)-Total	mg/L	0.0000050	-	<0.0000050	-	-	-
Calcium (Ca)-Total	mg/L	0.050	-	26.8	-	-	-
Cesium (Cs)-Total	mg/L	0.000010	-	<0.000010	-	-	-
Chromium (Cr)-Total	mg/L	0.00050	-	<0.00050	-	-	-
Cobalt (Co)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Copper (Cu)-Total	mg/L	0.00050	0.30	0.00115	-	-	-
Iron (Fe)-Total	mg/L	0.010	-	<0.010	-	-	-
Lead (Pb)-Total	mg/L	0.000050	0.20	<0.000050	-	-	-
Lithium (Li)-Total	mg/L	0.0010	-	0.0010	-	-	-
Magnesium (Mg)-Total	mg/L	0.0050	-	17.4	-	-	-
Manganese (Mn)-Total	mg/L	0.00050	-	<0.00050	-	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.000313	-	-	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	<0.00050	-	-	-
Phosphorus (P)-Total	mg/L	0.050	-	<0.050	-	-	-
Potassium (K)-Total	mg/L	0.050	-	1.63	-	-	-
Rubidium (Rb)-Total	mg/L	0.00020	-	0.00134	-	-	-
Selenium (Se)-Total	mg/L	0.000050	-	<0.000050	-	-	-
Silicon (Si)-Total	mg/L	0.10	-	1.53	-	-	-
Silver (Ag)-Total	mg/L	0.000050	-	<0.000050	-	-	-
Sodium (Na)-Total	mg/L	0.050	-	2.81	-	-	-
Strontium (Sr)-Total	mg/L	0.0010	-	0.0162	-	-	-
Sulfur (S)-Total	mg/L	0.50	-	3.78	-	-	-
Tellurium (Te)-Total	mg/L	0.00020	-	<0.00020	-	-	-
Thallium (Tl)-Total	mg/L	0.000010	-	<0.000010	-	-	-
Thorium (Th)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Tin (Sn)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Titanium (Ti)-Total	mg/L	0.00030	-	<0.00030	-	-	-
Tungsten (W)-Total	mg/L	0.00010	-	<0.00010	-	-	-
Uranium (U)-Total	mg/L	0.000010	-	0.00159	-	-	-
Vanadium (V)-Total	mg/L	0.00050	-	<0.00050	-	-	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	<0.0030	-	-	-
Zirconium (Zr)-Total	mg/L	0.00020	-	<0.00020	-	-	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	<0.0050	-	-	-
Antimony (Sb)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Barium (Ba)-Dissolved	mg/L	0.00010	-	0.0155	-	-	-
Beryllium (Be)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	<0.000050	-	-	-
Boron (B)-Dissolved	mg/L	0.010	-	<0.010	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	<0.0000050	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	27.2	-	-	-
Cesium (Cs)-Dissolved	mg/L	0.000010	-	<0.000010	-	-	-
Chromium (Cr)-Dissolved	mg/L	0.00050	-	<0.00050	-	-	-
Cobalt (Co)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	0.00112	-	-	-
Iron (Fe)-Dissolved	mg/L	0.010	-	<0.010	-	-	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	<0.000050	-	-	-
Lithium (Li)-Dissolved	mg/L	0.0010	-	0.0012	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	17.5	-	-	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	<0.00050	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.000294	-	-	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	<0.00050	-	-	-

Table 2.23: Water Quality Results for Water Licence Monitoring Location - MS-MRY-10

Analyte	Sample ID			MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2621963-1	L2627333-1	L2627332-15	L2630140-8
	Sample Date & Time			2021-08-03 14:40	2021-08-14 17:40	2021-08-16 9:50	2021-08-22 12:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Phosphorus (P)-Dissolved	mg/L	0.050	-	<0.050	-	-	-
Potassium (K)-Dissolved	mg/L	0.050	-	1.63	-	-	-
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	0.00148	-	-	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	<0.000050	-	-	-
Silicon (Si)-Dissolved	mg/L	0.050	-	1.52	-	-	-
Silver (Ag)-Dissolved	mg/L	0.000050	-	<0.000050	-	-	-
Sodium (Na)-Dissolved	mg/L	0.050	-	2.83	-	-	-
Strontium (Sr)-Dissolved	mg/L	0.0010	-	0.0162	-	-	-
Sulfur (S)-Dissolved	mg/L	0.50	-	3.45	-	-	-
Tellurium (Te)-Dissolved	mg/L	0.00020	-	<0.00020	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	<0.000010	-	-	-
Thorium (Th)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Tin (Sn)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Titanium (Ti)-Dissolved	mg/L	0.00030	-	<0.00030	-	-	-
Tungsten (W)-Dissolved	mg/L	0.00010	-	<0.00010	-	-	-
Uranium (U)-Dissolved	mg/L	0.000010	-	0.00153	-	-	-
Vanadium (V)-Dissolved	mg/L	0.00050	-	<0.00050	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	<0.0010	-	-	-
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	<0.00020	-	-	-
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	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 2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2621381-5	L2624988-5	L2627332-5
	Sample Date & Time			2021-08-02 10:15	2021-08-10 14:15	2021-08-16 12:20
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Criteria ¹			
Conductivity	umhos/cm	1.0	-	874	-	-
pH	pH units	0.10	6.0 - 9.5	7.89	8.08	8.14
Total Suspended Solids	mg/L	2.0	15	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	588	700	794
Turbidity	NTU	0.10	-	0.24	0.22	0.21
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	149	-	-
Dissolved Organic Carbon	mg/L	0.50	-	6.13	-	-
Total Organic Carbon	mg/L	0.50	-	6.68	-	-
Aluminum (Al)-Total	mg/L	0.050	-	<0.050	-	-
Antimony (Sb)-Total	mg/L	0.0010	-	<0.0010	-	-
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010	-	-
Barium (Ba)-Total	mg/L	0.0010	-	0.0547	-	-
Beryllium (Be)-Total	mg/L	0.0010	-	<0.0010	-	-
Bismuth (Bi)-Total	mg/L	0.00050	-	<0.00050	-	-
Boron (B)-Total	mg/L	0.10	-	1.94	-	-
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050	-	-
Calcium (Ca)-Total	mg/L	0.50	-	82.8	-	-
Cesium (Cs)-Total	mg/L	0.00010	-	<0.00010	-	-
Chromium (Cr)-Total	mg/L	0.0050	-	<0.0050	-	-
Cobalt (Co)-Total	mg/L	0.0010	-	<0.0010	-	-
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050	-	-
Iron (Fe)-Total	mg/L	0.10	-	<0.10	-	-
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050	-	-
Lithium (Li)-Total	mg/L	0.010	-	0.030	-	-
Magnesium (Mg)-Total	mg/L	0.050	-	61.0	-	-
Manganese (Mn)-Total	mg/L	0.0050	-	<0.0050	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-
Molybdenum (Mo)-Total	mg/L	0.00050	-	0.00051	-	-
Nickel (Ni)-Total	mg/L	0.0050	0.50	0.0148	-	-
Phosphorus (P)-Total	mg/L	0.50	-	<0.50	-	-
Potassium (K)-Total	mg/L	0.50	-	3.97	-	-
Rubidium (Rb)-Total	mg/L	0.0020	-	0.0131	-	-
Selenium (Se)-Total	mg/L	0.00050	-	<0.00050	-	-
Silicon (Si)-Total	mg/L	1.0	-	3.8	-	-
Silver (Ag)-Total	mg/L	0.00050	-	<0.00050	-	-
Sodium (Na)-Total	mg/L	0.50	-	21.4	-	-
Strontium (Sr)-Total	mg/L	0.010	-	0.064	-	-
Sulfur (S)-Total	mg/L	5.0	-	73.6	-	-
Tellurium (Te)-Total	mg/L	0.0020	-	<0.0020	-	-
Thallium (Tl)-Total	mg/L	0.00010	-	<0.00010	-	-
Thorium (Th)-Total	mg/L	0.0010	-	<0.0010	-	-
Tin (Sn)-Total	mg/L	0.0010	-	<0.0010	-	-
Titanium (Ti)-Total	mg/L	0.0030	-	<0.0030	-	-
Tungsten (W)-Total	mg/L	0.0010	-	<0.0010	-	-

Table 2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2621381-5	L2624988-5	L2627332-5
	Sample Date & Time			2021-08-02 10:15	2021-08-10 14:15	2021-08-16 12:20
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Criteria ¹			
Uranium (U)-Total	mg/L	0.00010	-	0.00622	-	-
Vanadium (V)-Total	mg/L	0.0050	-	<0.0050	-	-
Zinc (Zn)-Total	mg/L	0.030	0.5	<0.030	-	-
Zirconium (Zr)-Total	mg/L	0.0020	-	<0.0020	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-
	-		No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.0010	-	<0.0010	-	-
F1 (C6-C10)	ug/L	25	-	<25	-	-
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	370	-	<370	-	-

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 2.25: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13B

Analyte	Sample ID			MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B
	ALS Laboratory Sample ID			L2621381-6	L2624988-4	L2627332-3	L2627332-4	L2630140-5
	Sample Date & Time			2021-08-02 9:30	2021-08-10 13:55	2021-08-16 12:00	2021-08-16 12:00	2021-08-22 10:40
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	815	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.99	8.10	8.15	5.97	8.11
Total Suspended Solids	mg/L	2.0	15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	658	832	649	<10	959
Turbidity	NTU	0.10	-	0.15	0.16	0.25	<0.10	<0.10
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	135	-	-	-	-
Dissolved Organic Carbon	mg/L	0.50	-	6.53	-	-	-	-
Total Organic Carbon	mg/L	0.50	-	6.97	-	-	-	-
Aluminum (Al)-Total	mg/L	0.050	-	<0.050	-	-	-	-
Antimony (Sb)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010	-	-	-	-
Barium (Ba)-Total	mg/L	0.0010	-	0.0419	-	-	-	-
Beryllium (Be)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-
Bismuth (Bi)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-
Boron (B)-Total	mg/L	0.10	-	2.25	-	-	-	-
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050	-	-	-	-
Calcium (Ca)-Total	mg/L	0.50	-	88.1	-	-	-	-
Chromium (Cr)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-
Cobalt (Co)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050	-	-	-	-
Iron (Fe)-Total	mg/L	0.10	-	<0.10	-	-	-	-
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050	-	-	-	-
Lithium (Li)-Total	mg/L	0.010	-	0.023	-	-	-	-
Magnesium (Mg)-Total	mg/L	0.050	-	51.7	-	-	-	-
Manganese (Mn)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-
Mercury (Hg)-Total	mg/L	0.000050	-	<0.000050	-	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-
Nickel (Ni)-Total	mg/L	0.0050	0.50	0.0123	-	-	-	-
Potassium (K)-Total	mg/L	0.50	-	3.07	-	-	-	-
Selenium (Se)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-
Silicon (Si)-Total	mg/L	1.0	-	3.5	-	-	-	-
Silver (Ag)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-
Sodium (Na)-Total	mg/L	0.50	-	18.0	-	-	-	-
Strontium (Sr)-Total	mg/L	0.010	-	0.108	-	-	-	-
Thallium (Tl)-Total	mg/L	0.00010	-	<0.00010	-	-	-	-
Tin (Sn)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-
Titanium (Ti)-Total	mg/L	0.0030	-	<0.0030	-	-	-	-
Tungsten (W)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-
Uranium (U)-Total	mg/L	0.00010	-	0.00551	-	-	-	-
Vanadium (V)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-
Zinc (Zn)-Total	mg/L	0.030	0.50	<0.030	-	-	-	-
Zirconium (Zr)-Total	mg/L	0.0020	-	<0.0020	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen
Phenols (4AAP)	ug/L	0.0010	-	0.0011	-	-	-	-
F1 (C6-C10)	ug/L	25	-	<25	-	-	-	-
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	370	-	<370	-	-	-	-

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

Analyte	Sample ID			MS-C-A	MS-C-A	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2621381-4	L2626309-5	L2627332-9	L2630140-13
	Sample Date & Time			2021-08-02 11:10	2021-08-11 10:20	2021-08-16 15:55	2021-08-22 14:35
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	250	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.89	8.05	8.09	8.06
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	2.4	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	134	135	137	170
Turbidity	NTU	0.10	-	4.47	14.6	11.2	8.15
Ammonia, Total (as N)	mg/L	0.010	-	0.053	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.344	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.27: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B	MS-C-B	MS-C-B	MS-C-B	MS-C-B
	ALS Laboratory Sample ID			L2621381-3	L2626309-6	L2626309-7	L2627332-10	L2630140-14
	Sample Date & Time			2021-08-02 11:45	2021-08-11 10:55	2021-08-11 10:55	2021-08-16 16:35	2021-08-22 15:00
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	253	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.85	8.03	8.03	8.11	8.00
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	2.9	<2.0	2.4	3.5
Total Dissolved Solids	mg/L	10	-	143	150	148	104	169
Turbidity	NTU	0.10	-	5.10	17.4	17.2	12.9	8.64
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.369	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

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

¹Type A Water Licence (ZAM-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 2.28: Water Quality Results for Water Licence Monitoring Location - MS-C-C

Analyte	Sample ID			MS-C-C	MS-C-C	MS-C-C	MS-C-C
	ALS Laboratory Sample ID			L2621381-12	L2626309-3	L2627332-13	L2630140-11
	Sample Date & Time			2021-08-02 14:00	2021-08-11 9:40	2021-08-16 15:05	2021-08-22 13:55
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	836	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.94	8.00	8.11	8.12
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	557	487	500	611
Turbidity	NTU	0.10	-	6.27	3.74	0.22	2.07
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	6.54	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.29: Water Quality Results for Water Licence Monitoring Location - MS-C-D

Analyte	Sample ID			MS-C-D	MS-C-D	MS-C-D	MS-C-D
	ALS Laboratory Sample ID			L2621381-10	L2626309-2	L2627332-7	L2630140-10
	Sample Date & Time			2021-08-02 13:35	2021-08-11 9:15	2021-08-16 14:55	2021-08-22 13:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	885	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.26	8.17	8.37	8.49
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	3.9	3.8	5.7	6.0
Total Dissolved Solids	mg/L	10	-	578	464	472	561
Turbidity	NTU	0.10	-	22.0	25.8	44.8	13.8
Ammonia, Total (as N)	mg/L	0.010	-	0.028	-	-	-
Nitrate (as N)	mg/L	0.020	-	5.41	-	-	-
Oil and Grease, Total	mg/L	2.0	-	<2.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.30: Water Quality Results for Water Licence Monitoring Location - MS-C-E

Analyte	Sample ID			MS-C-E	MS-C-E	MS-C-E	MS-C-E
	ALS Laboratory Sample ID			L2621381-11	L2626309-4	L2627332-6	L2630140-9
	Sample Date & Time			2021-08-02 12:55	2021-08-11 8:50	2021-08-16 14:25	2021-08-22 13:35
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	832	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.06	8.06	8.15	8.19
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	2.9	<2.0	<2.0	2.5
Total Dissolved Solids	mg/L	10	-	564	631	624	715
Turbidity	NTU	0.10	-	8.15	5.73	6.98	2.73
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	4.79	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.31: Water Quality Results for Water Licence Monitoring Location - MS-C-F

Analyte	Sample ID			MS-C-F	MS-C-F	MS-C-F	MS-C-F	MS-C-F
	ALS Laboratory Sample ID			L2621381-1	L2621381-2	L2624988-8	L2627332-8	L2630140-12
	Sample Date & Time			2021-08-02 12:50	2021-08-02 12:50	2021-08-10 16:55	2021-08-16 15:35	2021-08-22 14:15
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	266	267	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.02	8.03	8.01	8.08	8.03
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	5.8	6.3	29.4	15.7	36.3
Total Dissolved Solids	mg/L	10	-	139	145	200	151	206
Turbidity	NTU	0.10	-	15.4	16.0	94.7	48.8	68.3
Ammonia, Total (as N)	mg/L	0.010	-	0.019	0.023	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.460	0.445	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.32: Water Quality Results for Water Licence Monitoring Location - MS-C-G

Analyte	Sample ID			MS-C-G	MS-C-G	MS-C-G	MS-C-G	MS-C-G	MS-C-G
	ALS Laboratory Sample ID			L2621381-13	L2624988-1	L2624988-2	L2627332-14	L2630140-6	L2630140-15
	Sample Date & Time			2021-08-02 11:00	2021-08-10 12:40	2021-08-10 12:40	2021-08-16 12:55	2021-08-22 11:15	2021-08-22 11:15
	QA/QC Sample Type			N/A	N/A	Field Blank	N/A	N/A	Field Duplicate
	Units	LOR	Criteria ¹						
Conductivity	umhos/cm	1.0	-	243	-	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.71	7.99	6.26	7.97	7.73	7.75
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	3.3
Total Dissolved Solids	mg/L	10	-	146	153	<10	93	171	170
Turbidity	NTU	0.10	-	<0.10	0.18	<0.10	0.22	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	0.012	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	5.28	-	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

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 2.33: Water Quality Results for Water Licence Monitoring Location - MS-C-H

Analyte	Sample ID			MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H
	ALS Laboratory Sample ID			L2621381-14	L2624988-3	L2627332-11	L2627332-12	L2630140-7
	Sample Date & Time			2021-08-02 11:35	2021-08-10 13:15	2021-08-16 13:30	2021-08-16 13:30	2021-08-22 11:40
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Criteria ¹					
Conductivity	umhos/cm	1.0	-	234	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.20	8.21	8.29	8.28	8.36
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	128	120	87	88	155
Turbidity	NTU	0.10	-	0.12	0.30	0.27	0.13	0.13
Ammonia, Total (as N)	mg/L	0.010	-	0.022	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.221	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

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

Analyte	Sample ID			MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A
	ALS Laboratory Sample ID			L2621381-9	L2624988-6	L2627332-1	L2630140-1
	Sample Date & Time			2021-08-02 8:50	2021-08-10 15:20	2021-08-16 9:40	2021-08-22 8:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	321	-	327	-
pH	pH units	0.10	6.0 - 9.5	8.16	8.23	8.34	8.19
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	2.5
Total Dissolved Solids	mg/L	10	-	186	175	120	207
Turbidity	NTU	0.10	-	0.23	0.22	0.25	0.17
Ammonia, Total (as N)	mg/L	0.010	-	0.024	-	0.011	-
Nitrate (as N)	mg/L	0.020	-	<0.020	-	<0.020	-
Oil and Grease, Total	mg/L	2.0	-	<5.0	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
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 2.35: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B
	ALS Laboratory Sample ID			L2621381-8	L2621381-15	L2626309-1	L2628128-1	L2630140-3	L2630140-4
	Sample Date & Time			2021-08-02 9:50	2021-08-02 9:50	2021-08-11 12:35	2021-08-17 8:40	2021-08-22 9:50	2021-08-22 9:50
	QA/QC Sample Type			N/A	Field Blank	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Criteria ¹						
Conductivity	umhos/cm	1.0	-	341	<1.0	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.14	6.64	8.20	8.28	8.32	8.33
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	11.9	<2.0	98.7	<2.0	<2.0	3.0
Total Dissolved Solids	mg/L	10	-	196	15	288	174	224	222
Turbidity	NTU	0.10	-	23.5	<0.10	184	2.51	3.27	3.23
Ammonia, Total (as N)	mg/L	0.010	-	0.021	<0.010	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	1.44	<0.020	-	-	-	-
Oil and Grease, Total	mg/L	2.0	-	<5.0	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	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 2.36: Water Quality Results for Water Licence Monitoring Location - MQ-C-D

Analyte	Sample ID			MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D
	ALS Laboratory Sample ID			L2621381-7	L2624988-7	L2627332-2	L2630140-2
	Sample Date & Time			2021-08-02 9:10	2021-08-10 15:40	2021-08-16 10:15	2021-08-22 8:10
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Criteria ¹				
Conductivity	umhos/cm	1.0	-	313	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.09	8.23	8.13	8.21
Total Suspended Solids	mg/L	2.0	Grab 30, Average 15	4.6	7.1	8.1	3.5
Total Dissolved Solids	mg/L	10	-	153	127	139	218
Turbidity	NTU	0.10	-	14.8	25.5	26.0	13.3
Ammonia, Total (as N)	mg/L	0.010	-	0.026	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.968	-	-	-
Oil and Grease, Total	mg/L	2.0	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	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 3.1: Flow and Volume Measurements - Part I Item 11 - August 2021

DATE	Camp Lake Freshwater for Domestic Use - Daily Water MS- MRY-1 (m ³)	Camp Lake Freshwater for Industrial Use - Daily Water MS- MRY-1 (m ³)	Treated Sewage Effluent from MS-01 to Discharge Location #1 (m ³)	Treated Sewage Effluent from MS-01B to Discharge Location #1 (m ³)	Sewage Sludge Removed from Mine Site WWTPs to Incinerator or Disposal Offsite by Backhaul (m ³)	Sewage Sludge Removed from Mine Site WWTPs to PWSP at Mine Site (m ³)	Sewage Sludge Removed from Lift Stations to PWSP at Mine Site (m ³)	Km 32 Lake Milne Port Camp Daily Water Use for Domestic Purposes MP- MRY-3 (m ³)	Km 32 Lake Milne Port Camp Daily Water Use for Industrial Purposes MP- MRY-3 (m ³)	Treated Sewage Effluent from MP-01 to Milne Inlet (m ³)	Treated Sewage Effluent from MP-01B to Milne Inlet (m ³)	Sewage Sludge Removed from Milne Port WWTPs to Incinerator or Disposal Offsite by Backhaul (m ³)	Sewage Sludge Removed from Lift Stations to PWSP at Milne Port (m ³)	Sludge Removed from Milne Port WTPs to PWSP at Milne Port (m ³)	Water Use for Dust Suppression from Authorized Sources (m ³)
1-Aug-21	201.6	10.3	40.0	117.7	1.2	0.0	0.0	87.6	1.0	25.0	40.4	0.3	0.0	0.0	0.0
2-Aug-21	143.8	6.9	41.0	113.1	1.1	0.0	0.0	43.2	0.0	26.0	37.4	1.2	0.0	0.0	0.0
3-Aug-21	178.3	5.2	38.0	109.8	1.1	0.0	0.0	62.6	0.0	27.0	35.3	0.0	0.0	0.0	0.0
4-Aug-21	163.9	0.0	36.0	103.1	1.0	0.0	0.0	89.2	0.0	33.0	37.4	0.3	0.0	0.0	0.0
5-Aug-21	168.7	4.3	34.0	95.5	1.3	0.0	0.0	45.5	0.0	34.0	30.6	1.0	0.0	0.0	333.1
6-Aug-21	177.2	4.3	34.0	104.2	0.6	0.0	0.0	95.3	0.0	30.0	36.9	0.3	0.0	0.0	424.0
7-Aug-21	203.5	4.3	59.0	122.4	1.6	0.0	0.0	73.6	0.0	25.0	33.0	0.3	0.0	0.0	333.1
8-Aug-21	177.9	6.0	38.0	112.8	1.3	0.0	0.0	59.4	0.0	25.0	39.2	1.3	0.0	0.0	0.0
9-Aug-21	188.3	4.3	53.0	125.8	1.3	0.0	0.0	68.2	0.0	26.0	31.5	0.3	0.0	0.0	0.0
10-Aug-21	185.6	4.7	48.0	105.5	1.3	0.0	0.0	52.3	0.0	32.0	35.5	1.3	0.0	0.0	0.0
11-Aug-21	179.5	6.0	36.0	111.3	1.3	0.0	0.0	94.3	0.0	26.0	36.7	1.3	0.0	0.0	0.0
12-Aug-21	53.8	4.7	44.0	103.2	1.3	0.0	0.0	39.4	0.0	29.0	36.5	1.5	0.0	0.0	0.0
13-Aug-21	179.1	5.6	41.0	109.4	1.0	0.0	0.0	54.4	0.0	25.0	29.7	0.5	0.0	0.0	0.0
14-Aug-21	175.8	3.4	49.0	113.2	1.0	0.0	0.0	53.4	0.0	26.0	36.9	1.3	0.0	0.0	0.0
15-Aug-21	141.3	4.3	38.0	86.5	1.4	0.0	0.0	95.2	0.0	30.0	37.6	0.3	0.0	0.0	0.0
16-Aug-21	128.0	4.3	39.0	98.0	1.4	0.0	0.0	68.4	0.0	31.0	34.6	1.5	0.0	0.0	0.0
17-Aug-21	168.0	4.7	26.0	90.0	1.3	0.0	0.0	41.5	0.0	27.0	32.4	0.5	0.0	0.0	0.0
18-Aug-21	134.9	0.0	21.0	98.9	1.3	0.0	0.0	85.7	1.0	31.0	31.8	1.3	0.0	0.0	0.0
19-Aug-21	150.2	0.0	26.0	108.1	1.3	0.0	0.0	96.1	0.0	31.0	46.0	1.3	0.0	0.0	0.0
20-Aug-21	124.8	4.3	41.0	96.5	1.5	0.0	0.0	124.3	0.0	29.0	35.4	0.3	0.0	0.0	60.6
21-Aug-21	151.2	1.7	40.0	108.1	1.8	0.0	0.0	84.3	0.0	26.0	24.9	0.3	0.0	0.0	0.0
22-Aug-21	138.7	0.0	33.0	103.7	1.8	0.0	0.0	94.7	0.0	22.0	29.5	0.3	0.0	1.0	0.0
23-Aug-21	159.8	6.9	41.0	72.4	1.1	0.0	0.0	89.5	0.0	25.0	33.7	0.3	0.0	0.0	0.0
24-Aug-21	147.4	6.0	39.0	93.9	1.4	0.0	0.0	99.6	0.0	24.0	35.1	0.3	0.0	0.0	0.0
25-Aug-21	131.6	4.3	41.0	97.9	1.9	0.0	0.0	92.8	0.0	25.0	25.4	0.3	0.0	0.0	0.0
26-Aug-21	127.7	4.3	41.0	84.3	1.5	0.0	0.0	104.5	1.0	26.0	32.0	0.3	0.0	0.0	0.0
27-Aug-21	141.4	0.0	41.0	88.3	1.2	0.0	0.0	89.1	0.0	29.0	33.8	0.3	0.0	0.0	0.0
28-Aug-21	145.4	0.0	39.0	93.6	1.4	0.0	0.0	52.7	0.0	27.0	31.8	0.3	0.0	0.0	0.0
29-Aug-21	143.8	0.0	42.0	106.7	0.9	0.0	0.0	114.9	0.0	26.0	37.5	0.3	0.0	0.0	0.0
30-Aug-21	139.7	0.0	44.0	110.7	1.5	0.0	0.0	97.8	0.0	25.0	24.1	0.0	0.0	0.0	90.8
31-Aug-21	176.8	0.0	44.0	98.4	1.5	2.0	0.0	115.3	0.0	24.0	29.6	0.3	0.0	0.0	121.1
Total	4,828.1	110.9	1,227.0	3,183.0	40.4	2.0	0.0	2,464.9	3.0	847.0	1,051.9	18.5	0.0	1.0	1,362.7

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond

Table 3.1: Flow and Volume Measurements - Part I Item 11 - August 2021

DATE	Treated Sewage Effluent from PWSP MP-01A to Milne Inlet (MP-01A) (m ³)	Effluent Discharge from Mine Site Crusher Pad Sedimentation Pond (MS-06) (m ³)	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 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)	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)
1-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.4	0.0	0.0	0.0	0.0
2-Aug-21	0.0	0.0	0.0	882.0	664.8	711.8	0.0	0.0	20.4	0.0	0.0	0.0
3-Aug-21	0.0	0.5	0.0	2,527.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0
4-Aug-21	0.0	5.8	0.0	3,024.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0
5-Aug-21	0.0	0.0	0.0	3,628.0	0.0	0.0	0.0	0.0	20.1	0.0	0.0	0.0
6-Aug-21	0.0	0.0	0.0	3,738.0	0.0	0.0	0.0	0.0	22.3	0.0	0.0	0.0
7-Aug-21	0.0	0.0	0.0	3,108.0	0.0	0.0	0.0	0.0	17.8	0.0	0.0	0.0
8-Aug-21	0.0	29.4	0.0	858.0	1,102.1	609.5	0.0	0.0	21.2	0.0	0.0	0.0
9-Aug-21	0.0	0.0	0.0	2,564.0	3.4	0.0	0.0	0.0	17.0	0.0	0.0	0.0
10-Aug-21	0.0	0.0	0.0	3,142.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11-Aug-21	0.0	0.0	0.0	3,903.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-Aug-21	0.0	25.6	0.0	3,137.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Aug-21	0.0	22.8	0.0	3,888.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Aug-21	0.0	47.0	0.0	3,976.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-Aug-21	0.0	33.1	0.0	4,010.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-Aug-21	0.0	27.1	1,102.5	4,029.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-Aug-21	0.0	25.5	2,520.0	3,576.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-Aug-21	0.0	0.0	472.5	4,170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19-Aug-21	0.0	0.0	0.0	4,015.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-Aug-21	0.0	0.0	0.0	4,360.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0
21-Aug-21	0.0	0.0	0.0	2,692.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0
22-Aug-21	0.0	0.0	0.0	3,407.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23-Aug-21	0.0	38.4	0.0	1,419.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24-Aug-21	0.0	0.0	0.0	792.0	997.6	0.0	0.0	0.0	0.0	222.5	0.0	0.0
25-Aug-21	0.0	0.0	0.0	797.0	161.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26-Aug-21	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0
27-Aug-21	34.6	0.0	0.0	1,103.0	299.9	515.2	0.0	0.0	0.0	115.7	6.4	0.0
28-Aug-21	39.9	0.0	122.1	3,310.0	114.2	732.6	0.0	0.0	0.0	53.4	0.0	0.0
29-Aug-21	44.5	0.0	459.3	3,506.0	0.0	129.4	0.0	0.0	0.0	0.0	26.9	0.0
30-Aug-21	45.5	0.0	0.0	2,836.0	0.0	1472.2	0.0	0.0	0.0	0.0	26.1	0.0
31-Aug-21	44.2	0.0	695.2	3,664.0	0.0	357.0	0.0	0.0	0.0	0.0	29.1	0.0
Total	229.5	255.3	5,371.6	86,061	3,343.9	4,527.6	0.0	58.4	159.0	391.5	109.4	0.0

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond



Table 3.1: Flow and Volume Measurements - Part I Item 11 - August 2021

DATE	Effluent Discharge from Mine Site Bulk Fuel Storage Facility Stormwater (MS-03B) (m ³)
1-Aug-21	0.0
2-Aug-21	0.0
3-Aug-21	0.0
4-Aug-21	0.0
5-Aug-21	0.0
6-Aug-21	0.0
7-Aug-21	0.0
8-Aug-21	50.8
9-Aug-21	111.1
10-Aug-21	247.5
11-Aug-21	0.0
12-Aug-21	16.2
13-Aug-21	59.0
14-Aug-21	0.0
15-Aug-21	99.5
16-Aug-21	0.0
17-Aug-21	16.4
18-Aug-21	30.7
19-Aug-21	56.1
20-Aug-21	0.0
21-Aug-21	0.0
22-Aug-21	0.0
23-Aug-21	0.0
24-Aug-21	0.0
25-Aug-21	0.0
26-Aug-21	0.0
27-Aug-21	0.0
28-Aug-21	0.0
29-Aug-21	0.0
30-Aug-21	0.0
31-Aug-21	0.0
Total	687.4

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