



**Meliadine Gold Mine
NWB 2AM-MEL1631
May 2023 Monthly Report**

Prepared for:
Nunavut Water Board

Prepared by:
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SECTION 1 • BACKGROUND

As required under Part I, Item 9 of amended Type A Water License 2AM-MEL1631, this report documents the water management and monitoring activities at the mine site and provides a summary of spills/actions for the month of May 2023.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Table 2.1 details monthly water usage approved under Water License 2AM-MEL1631.

Table 2.1: Summary of the monthly water usage in May 2023

Usage	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2023 Total
MEL-11 ¹	m ³	36,021	37,240	43,452	40,082	44,346	-	-	-	-	-	-	-	201,141
Dust suppression ²	m ³	0	0	0	0	0	-	-	-	-	-	-	-	0
Dust suppression (CP1) ³	m ³	0	0	0	0	0	-	-	-	-	-	-	-	0

2.2 DEWATERING ACTIVITIES

No dewatering activities took place during the month.

2.3 WATER DISCHARGE

Table 2.3 details monthly water discharge, including:

- discharge from the EWTP to Meliadine Lake via the Final Discharge Point (MEL-14);
- discharge of treated saline effluent to Melvin Bay via the Final Discharge Point (MEL-26), and
- discharge from the Itivia fuel containment facility (MEL-25).

¹ Camp, Mill, Dust suppression

² Water obtained along AWAR/Meliadine River

³ Reclaim water obtained from CP1 and used for dust suppression on site

Table 2.3: Summary of the monthly water discharge in May 2023

Location	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2023 Total
MEL-14	m ³	0	0	0	0	0	-	-	-	-	-	-	-	0
MEL-26	m ³	0	0	0	0	0	-	-	-	-	-	-	-	0
MEL-25	m ³	0	0	0	0	2,060	-	-	-	-	-	-	-	0

Discharge from the Itivia Fuel Containment Facility (MEL-25) was initiated on May 31st.

2.4 SEEPAGE AND RUNOFF FROM THE LANDFILL AND LANDFARM

The 2AM-MEL1631 landfill and landfarm were commissioned in November 2017. No seepage or runoff was observed during the month.

2.5 SEWAGE TREATMENT PLANT

Table 2.5 details monthly discharge from the Sewage Treatment Plant (STP), including the treated wastewater discharge to CP1 and sludge removed and disposed of in the WRSF.

Table 2.5: Summary of the monthly disposal/discharge from the STP in May 2023

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2023 Total
Wastewater Discharge (m ³)		5,141	4,305	4,522	4,519	4,764	-	-	-	-	-	-	-	23,251
Sewage Sludge	Amount (m ³)	17	7	20.5	18	21	-	-	-	-	-	-	-	83.5
	Disposal Location	WRSF1	WRSF3	WRSF3	WRSF3	WRSF3	-	-	-	-	-	-	-	NA

2.6 MONITORING ANALYTICAL DATA

Fourteen (14) samples related to the Water Licence were taken during the month. The analytical results are presented in Appendix. No exceedances occurred in May 2023.

On May 7th, 2023, surface runoff was observed at monitoring station MEL-SR-1, located at the south end of the Itivia site. Field turbidity measurements indicated a potential exceedance of the TSS effluent quality limits listed under Part D Item 18 of the 2AM-MEL1631 Water Licence, which was reported as due diligence to the NT-NU 24h spill report line. Samples were collected at MEL-SR-1 and sent to an external laboratory for analysis. Analytical

results reported a concentration of 48 mg/L TSS, below the allowable TSS effluent quality limits listed under Part D Item 18 of the 2AM-MEL1631 Water Licence.

SECTION 3 • MATERIAL MANAGEMENT

3.1 LANDFILL / LANDFARM

Table 3.1 details quarterly Landfill and Landfarm survey results, as well as the amount of material placed in the Landfarm every month.

Table 3.1: Summary of the monthly disposal in the Landfarm and quarterly survey volumes of Landfill and Landfarm

Location	Unit	Q1			Q2			Q3			Q4			2023 Total
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Landfill (Survey)	m ³	25,666			23,663			-			-			-
Landfarm (Survey)	m ³	-			143			-			-			-
Landfarm ⁴	m ³	0	41.5	3	5.5	46	-	-	-	-	-	-	-	96.1

⁴ Amount of contaminated solid material (soil) placed in the Landfarm or lined sorting area.

3.2 ORE, WASTE ROCK STORAGE FACILITY, TAILINGS

Table 3.2 details monthly material management, including processed ore, waste rock, and tailings.

Table 3.2: Summary of the monthly material management in May 2023

Material (tonnes)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative 2023
Processed Ore		155,514	150,876	171,369	149,029	172,955	-	-	-	-	-	-	-	799,743
Waste Rock	Removed from open pit mining	50,606	42,866	114,885	159,630	287,354	-	-	-	-	-	-	-	655,341
	Removed from underground mining	67,109	51,780	70,674	73,390	81,439	-	-	-	-	-	-	-	344,392
	Used as underground dry rockfill	51,834	48,024	35,017	18,200	44,224	-	-	-	-	-	-	-	197,299
Tailings	Send to TSF	133,227	121,499	132,300	110,473	125,285	-	-	-	-	-	-	-	624,784
	Used as paste underground backfill	22,287	29,377	39,069	38,556	45,670	-	-	-	-	-	-	-	174,959

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

Spills reported internally (15) are listed in the table 4.1 and were managed according to Agnico Eagle's Spill Contingency Plan. Spills were contained and cleaned up, contaminated material was disposed of in an appropriate manner, and the clean-up actions were monitored closely by the Environment Department. Four (4) reportable spills occurred during the month (Refer to the gray shading in Table 4.1).

Table 4.1: Summary of Agnico Eagle's Spill Reports in May 2023

Date and time of occurrence	Contaminant	Estimated quantity	Unit	Exact location of incident	Description of incident	Describe immediate corrective actions
Thursday, May 04, 2023 11:00:00 PM	Sewage	10	L	Fusion pad	An estimated 10 L of sewage was spilled onto the fusion pad by the fusion pad wash car due to a fracture in the sewage line. No water bodies were impacted by this spill.	The sewage-impacted gravel and ice was excavated and brought to Landfarm A.
Friday, May 05, 2023 1:30:00 AM	Hydraulic Oil	10	L	TIR01	A hydraulic hose on a drill failed while operating causing an approximately 10L spill of hydraulic oil. The rupture was caused by wear on the hose.	The operator stopped the equipment immediately. Absorbent pads were used and disposed of as hazmat.

Friday, May 05, 2023 2:00:00 PM	Hydraulic Oil	5	L	North Side of Process Plant	Hydraulic oil was noticed in the snow. No vehicles were parked around the area; the cause of the spill is unknown.	Contaminated material was removed with an excavator and brought to the Landfarm A.
Saturday, May 06, 2023 11:30:00 AM	Hydraulic Oil	2.5	L	KCG laydown	After filling the primary jaw crusher with a hydraulic oil, a metal part kept the lid from closing properly. When the equipment was used after, approximately 2.5L of hydraulic oil was spilled.	The equipment was stopped. Absorbent pads were used and disposed of as hazmat.
Wednesday, May 10, 2023 8:00:00 AM	Hydraulic Oil	90	L	West vent raise	A hydraulic oil line failed resulting in a 90 L hydraulic oil spill onto the industrial pad on the west side of vent raise.	Approximately 30m ³ of contaminated material was recovered and moved to the Landfarm A sorting area.
Sunday, May 14, 2023 11:00:00 AM	Hydraulic Oil	10	L	West vent raise	A hydraulic line on a compressor failed, resulting in a 10 L hydraulic oil spill onto the industrial pad at the west vent raise.	The equipment was stopped. Absorbent pads were used and disposed as hazmat. Contaminated material was collected and approximately 1 m ³ of material was brought to the Landfarm A sorting area.

Sunday, May 21, 2023 4:00:00 PM	Non-contaminated water	400	L	Under the Kitchen	When working at the kitchen, employees found the drain line of the steam tables cracked and leaking water under the kitchen. Inspection determined that the drain line could only release water.	No cleanup required (only non-contaminated water was spilled and the ice will melt with time). Ongoing investigation is conducted to establish the cause of the spill.
Sunday, May 21, 2023 4:30:00 PM	Hydraulic Oil	4	L	Verti Mill	A hydraulic valve on a cement truck failed resulting in a 4 L hydraulic oil spill onto the industrial pad, south of the process plant.	Absorbent pads were used and disposed as hazmat. The contaminated material was recovered and placed in a quatrex bag.
Monday, May 22, 2023 12:30:00 AM	Sewage	200	L	MSB Main Lift Station	An estimated 200L of sewage was spilled to the industrial pad due to faulty levels indicator at the MSB lift station causing it to overflow. A worker discovered the spill occurring and notified his supervisor.	The Energy and Infrastructure Maintenance Supervisor was notified that the spill was occurring and immediately sent a plumber to stop the spill and troubleshoot the issue. The impacted area was cleaned up using a vacuum truck. Free liquid was recovered and returned in the Sewage Treatment Plant. The contaminated solid material was excavated and placed in the Landfarm A sorting area.

Monday, May 22, 2023 7:30:00 AM	Sewage	15	L	Power Plant south side	An estimated 15 L of sewage was spilled onto the industrial pad by the temporary power plant wash car due to a connection failure. No water bodies were impacted by this spill.	The sewage-impacted gravel and ice was excavated and brought to Landfarm A.
Monday, May 22, 2023 6:30:00 PM	Diesel	35	L	Esker pad	E&I operation was dismantling a bus with the excavator when the operator noticed fuel coming out of the fuel tank of the bus. Approximately 35 L of diesel was spilled onto the Esker pad.	The equipment was stopped. Contaminated material was collected. Contaminated wood was disposed of at the burn pad and 1m ³ of contaminated soil was brought to Landfarm A.
Tuesday, May 23, 2023 10:30:00 AM	Grey water	1,000	L	Kitchen Grease Trap	An estimated 1m ³ of kitchen grey water was spilled to the industrial pad due to a pipe failure. A worker identified the spill during a walk around the kitchen area and notified his supervisor.	The Energy and Infrastructure Maintenance Supervisor was notified of the spill and immediately shut off the water supply to the kitchen to prevent further leakage. Health and safety concerns limited equipment and personnel access to the spill location and prevented the Maintenance Team from recovering the spilled material. Due to the topography of the area and the freezing conditions at the time of the spill, the spill did not migrate from the footprint of the building, and will be reclaimed when the infrastructure is dismantled.

Tuesday, May 23, 2023 11:00:00 AM	Hydraulic Oil	80	L	E&I parking lot	An employee was carrying out the post-maintenance road test before returning a loader to service, when a malfunction occurred in the hydraulic system, causing a valve to rupture and spill approximately 80 L of oil onto the ground.	The equipment was stopped. Absorbent Pads were used, contaminated materials were disposed of as hazmat.
Tuesday, May 23, 2023 1:00:00 PM	Hydraulic Oil	50	L	WRSF3 Crushing muck pad	The operator of an excavator was retrieving material from the bottom of a muck pile. As he reached for a stone, he struck the crusher feeder boom, damaging a valve box and spilling around 50L of hydraulic oil.	The equipment was stopped. Contaminated material was collected and brought to Landfarm A.
Monday, May 29, 2023 12:30:00 PM	Diesel	1,500	L	Itivia Tank farm	During a fuel transfer at the Itivia Tank farm, the AEM fuel Tanker overflowed by the back and the top vent resulting in an approximately 1500 L spill of diesel. The spill occurred inside the refueling area which is a contained, lined area.	The employee stopped the fuel transfer immediately and all valves were closed on the fuel tanker. The spill will be collected using the sucker truck and brought back to Meliadine site to existing water treatment infrastructure.

Appendix – Monitoring Analytical Data

Sample date		5/2/2023
Sample name		MEL-11
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.25
Turbidity	NTU	0.1
Specific conductivity	umhos/cm	160
Hardness, as CaCO ₃	mg/L	46.0
Total alkalinity, as CaCO ₃	mg/L	30
Carbonate, as CaCO ₃	mg/L	< 1.0
Bicarbonate, as CaCO ₃	mg/L	30
TDS	mg/L	80
TDS, calculated	mg/L	77
TSS	mg/L	< 1
Total organic carbon	mg/L	4.4
Dissolved organic carbon	mg/L	4.4
WQ03- Major Ions		
Chloride	mg/L	20
Cyanide	mg/L	< 0.00050
Cyanide (free)	mg/L	< 0.0020
Cyanide (WAD)	mg/L	< 0.00050
Silica	mg/L	0.94
Sulfate	mg/L	9.3
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	< 0.050
Nitrate (as N)	mg/L	0.13
Nitrite (as N)	mg/L	< 0.010
Total Kjeldahl nitrogen	mg/L	0.20
Total phosphorus	mg/L	< 0.020
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00073
Barium	mg/L	0.0153
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	0.0012
Copper	mg/L	0.00120

Iron	mg/L	0.028
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	0.0064
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0017
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0824
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00074
Barium	mg/L	0.0153
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Calcium (Dissolved)	mg/L	14.2
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00113
Iron	mg/L	0.0099
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium (Dissolved)	mg/L	2.52
Manganese	mg/L	< 0.0010
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0011
Potassium (Dissolved)	mg/L	1.57
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Sodium (Dissolved)	mg/L	10.6
Strontium	mg/L	0.0820
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050

Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ10- Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2
Reached baseline at C50	ug/L	YES
1,2-Dichloroethane-d4	mg/L	-
4-Bromofluorobenzene	mg/L	-
1,4-Difluorobenzene	mg/L	-
o-Terphenyl	mg/L	-
o-Xylene-d10	mg/L	-

Sample date		5/28/2023
Sample name		MEL-15
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.37
Turbidity	NTU	0.4
Specific conductivity	umhos/cm	58
Hardness, as CaCO ₃	mg/L	23.0
Total alkalinity, as CaCO ₃	mg/L	17
Carbonate, as CaCO ₃	mg/L	< 1.0
Bicarbonate, as CaCO ₃	mg/L	17
TDS	mg/L	30
TDS, calculated	mg/L	27
TSS	mg/L	< 1
Total organic carbon	mg/L	3.1
Dissolved organic carbon	mg/L	3.1
WQ03- Major Ions		
Chloride	mg/L	2.5
Cyanide	mg/L	< 0.00050
Cyanide (free)	mg/L	0.0037
Cyanide (WAD)	mg/L	< 0.00050
Silica	mg/L	66
Sulfate	mg/L	2.2
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	< 0.050
Nitrate (as N)	mg/L	0.24
Nitrite (as N)	mg/L	< 0.010
Total Kjeldahl nitrogen	mg/L	0.18
Total phosphorus	mg/L	< 0.020
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.0085
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00274
Barium	mg/L	0.0083
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00061
Iron	mg/L	0.082
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020

Manganese	mg/L	0.0142
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0376
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00207
Barium	mg/L	0.0077
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Calcium (Dissolved)	mg/L	7.39
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00060
Iron	mg/L	0.0407
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium (Dissolved)	mg/L	0.788
Manganese	mg/L	0.0116
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium (Dissolved)	mg/L	0.606
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Sodium (Dissolved)	mg/L	1.97
Strontium	mg/L	0.0361
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050

Sample date		5/28/2023
Sample name		MEL-16
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.37
Turbidity	NTU	0.7
Specific conductivity	umhos/cm	84
Hardness, as CaCO ₃	mg/L	27.8
Total alkalinity, as CaCO ₃	mg/L	22
Carbonate, as CaCO ₃	mg/L	< 1.0
Bicarbonate, as CaCO ₃	mg/L	22
TDS	mg/L	50
TDS, calculated	mg/L	39
TSS	mg/L	< 1
Total organic carbon	mg/L	3.0
Dissolved organic carbon	mg/L	3.0
WQ03- Major Ions		
Chloride	mg/L	8.2
Cyanide	mg/L	0.00066
Cyanide (free)	mg/L	0.0058
Cyanide (WAD)	mg/L	< 0.00050
Silica	mg/L	0.15
Sulfate	mg/L	2.3
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	0.081
Nitrate (as N)	mg/L	< 0.10
Nitrite (as N)	mg/L	< 0.010
Total Kjeldahl nitrogen	mg/L	0.26
Total phosphorus	mg/L	< 0.020
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.0165
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.0157
Barium	mg/L	0.0158
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00084
Iron	mg/L	0.119
Lead	mg/L	0.00066
Lithium	mg/L	< 0.0020
Manganese	mg/L	0.0284

Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0457
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Aluminum	mg/L	0.0076
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.0133
Barium	mg/L	0.0163
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	0.000018
Calcium (Dissolved)	mg/L	9.94
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00088
Iron	mg/L	0.0520
Lead	mg/L	0.00029
Lithium	mg/L	< 0.0020
Magnesium (Dissolved)	mg/L	1.26
Manganese	mg/L	0.0295
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium (Dissolved)	mg/L	0.851
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Sodium (Dissolved)	mg/L	2.84
Strontium	mg/L	0.0487
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050

Sample date		5/28/2023
Sample name		MEL-17
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.55
Turbidity	NTU	0.6
Specific conductivity	umhos/cm	190
Hardness, as CaCO ₃	mg/L	65.5
Total alkalinity, as CaCO ₃	mg/L	29
Carbonate, as CaCO ₃	mg/L	< 1.0
Bicarbonate, as CaCO ₃	mg/L	29
TDS	mg/L	105
TDS, calculated	mg/L	98
TSS	mg/L	2
Total organic carbon	mg/L	4.9
Dissolved organic carbon	mg/L	4.9
WQ03- Major Ions		
Chloride	mg/L	20
Cyanide	mg/L	0.00073
Cyanide (free)	mg/L	0.0045
Cyanide (WAD)	mg/L	< 0.00050
Silica	mg/L	0.90
Sulfate	mg/L	26
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	0.15
Nitrate (as N)	mg/L	0.10
Nitrite (as N)	mg/L	< 0.010
Total Kjeldahl nitrogen	mg/L	0.40
Total phosphorus	mg/L	< 0.020
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.0079
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00110
Barium	mg/L	0.0256
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00092
Iron	mg/L	0.198
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0030

Manganese	mg/L	0.110
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0018
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.144
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00097
Barium	mg/L	0.0250
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Calcium (Dissolved)	mg/L	21.2
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00072
Iron	mg/L	0.112
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0030
Magnesium (Dissolved)	mg/L	2.75
Manganese	mg/L	0.0961
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0015
Potassium (Dissolved)	mg/L	1.56
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Sodium (Dissolved)	mg/L	8.58
Strontium	mg/L	0.145
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050

Sample date		5/28/2023
Sample name		MEL-18
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.66
Turbidity	NTU	0.6
Specific conductivity	umhos/cm	190
Hardness, as CaCO ₃	mg/L	66.2
Total alkalinity, as CaCO ₃	mg/L	43
Carbonate, as CaCO ₃	mg/L	< 1.0
Bicarbonate, as CaCO ₃	mg/L	42
TDS	mg/L	120
TDS, calculated	mg/L	94
TSS	mg/L	1
Total organic carbon	mg/L	4.1
Dissolved organic carbon	mg/L	4.0
WQ03- Major Ions		
Chloride	mg/L	25
Cyanide	mg/L	0.00107
Cyanide (free)	mg/L	0.0026
Cyanide (WAD)	mg/L	< 0.00050
Silica	mg/L	1.1
Sulfate	mg/L	9.2
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	0.096
Nitrate (as N)	mg/L	< 0.10
Nitrite (as N)	mg/L	< 0.010
Total Kjeldahl nitrogen	mg/L	0.36
Total phosphorus	mg/L	0.021
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.0165
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00793
Barium	mg/L	0.0204
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00078
Iron	mg/L	0.128
Lead	mg/L	0.00062
Lithium	mg/L	0.0081

Manganese	mg/L	0.0442
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.166
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00571
Barium	mg/L	0.0217
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Calcium (Dissolved)	mg/L	23.8
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00082
Iron	mg/L	0.0450
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0089
Magnesium (Dissolved)	mg/L	2.88
Manganese	mg/L	0.0453
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium (Dissolved)	mg/L	1.48
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Sodium (Dissolved)	mg/L	6.44
Strontium	mg/L	0.173
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050

Sample date		5/28/2023
Sample name		MEL-19
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.66
Turbidity	NTU	10
Hardness, as CaCO ₃	mg/L	145
Total alkalinity, as CaCO ₃	mg/L	41
TDS	mg/L	395
TDS, calculated	mg/L	320
TSS	mg/L	35
WQ03- Major Ions		
Chloride	mg/L	86
Cyanide	mg/L	0.00378
Fluoride	mg/L	< 0.10
Silica	mg/L	0.40
Sulfate	mg/L	71
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	1.1
Nitrate (as N)	mg/L	1.72
Nitrite (as N)	mg/L	0.018
Total phosphorus	mg/L	0.025
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.781
Arsenic	mg/L	0.0118
Barium	mg/L	0.0226
Cadmium	mg/L	0.000021
Chromium	mg/L	0.0023
Copper	mg/L	0.00406
Iron	mg/L	1.35
Lead	mg/L	0.00166
Manganese	mg/L	0.0632
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0016
Nickel	mg/L	0.0136
Selenium	mg/L	0.00025
Silver	mg/L	< 0.000020
Thallium	mg/L	0.000015
Zinc	mg/L	0.0052
WQ07- Dissolved Metals		
Calcium (Dissolved)	mg/L	39.9
Magnesium (Dissolved)	mg/L	10.8
Potassium (Dissolved)	mg/L	6.39
Sodium (Dissolved)	mg/L	74.3

Sample date		5/28/2023
Sample name		MEL-20
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.70
Turbidity	NTU	2.6
Hardness, as CaCO ₃	mg/L	392
Total alkalinity, as CaCO ₃	mg/L	73
TDS	mg/L	1420
TDS, calculated	mg/L	1200
TSS	mg/L	10
WQ03- Major Ions		
Chloride	mg/L	410
Cyanide	mg/L	0.0812
Fluoride	mg/L	< 0.10
Silica	mg/L	2.2
Sulfate	mg/L	260
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	9.8
Nitrate (as N)	mg/L	18.8
Nitrite (as N)	mg/L	0.175
Total phosphorus	mg/L	0.041
Orthophosphate (P)	mg/L	0.033
WQ06- Total Metals		
Aluminum	mg/L	0.168
Arsenic	mg/L	0.328
Barium	mg/L	0.0506
Cadmium	mg/L	0.000050
Chromium	mg/L	< 0.0010
Copper	mg/L	0.0275
Iron	mg/L	0.596
Lead	mg/L	0.00819
Manganese	mg/L	0.267
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0066
Nickel	mg/L	0.0204
Selenium	mg/L	0.00400
Silver	mg/L	0.000057
Thallium	mg/L	0.000015
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Calcium (Dissolved)	mg/L	117
Magnesium (Dissolved)	mg/L	34.3
Potassium (Dissolved)	mg/L	17.6
Sodium (Dissolved)	mg/L	253

Sample date		5/28/2023
Sample name		MEL-21
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.85
Turbidity	NTU	2.6
Hardness, as CaCO ₃	mg/L	354
Total alkalinity, as CaCO ₃	mg/L	88
TDS	mg/L	1120
TDS, calculated	mg/L	1100
TSS	mg/L	29
WQ03- Major Ions		
Chloride	mg/L	390
Cyanide	mg/L	0.0223
Fluoride	mg/L	< 0.10
Silica	mg/L	2.7
Sulfate	mg/L	210
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	3.1
Nitrate (as N)	mg/L	7.01
Nitrite (as N)	mg/L	0.155
Total phosphorus	mg/L	0.042
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.458
Arsenic	mg/L	0.117
Barium	mg/L	0.0473
Cadmium	mg/L	0.000047
Chromium	mg/L	0.0013
Copper	mg/L	0.00593
Iron	mg/L	1.12
Lead	mg/L	0.00875
Manganese	mg/L	0.182
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0071
Nickel	mg/L	0.0179
Selenium	mg/L	0.00072
Silver	mg/L	< 0.000020
Thallium	mg/L	0.000014
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Calcium (Dissolved)	mg/L	106
Magnesium (Dissolved)	mg/L	33.9
Potassium (Dissolved)	mg/L	18.3
Sodium (Dissolved)	mg/L	219

Sample date		5/28/2023
Sample name		MEL-22
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.77
Turbidity	NTU	1.2
Hardness, as CaCO ₃	mg/L	627
Total alkalinity, as CaCO ₃	mg/L	74
TDS	mg/L	1740
TDS, calculated	mg/L	1400
TSS	mg/L	9
WQ03- Major Ions		
Chloride	mg/L	610
Cyanide	mg/L	0.00143
Fluoride	mg/L	< 0.10
Silica	mg/L	1.3
Sulfate	mg/L	200
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	1.6
Nitrate (as N)	mg/L	3.37
Nitrite (as N)	mg/L	0.044
Total phosphorus	mg/L	0.042
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.0758
Arsenic	mg/L	0.00425
Barium	mg/L	0.0435
Cadmium	mg/L	0.000029
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00221
Iron	mg/L	0.382
Lead	mg/L	0.00035
Manganese	mg/L	0.385
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0037
Nickel	mg/L	0.0156
Selenium	mg/L	0.00017
Silver	mg/L	< 0.000020
Thallium	mg/L	0.000022
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Calcium (Dissolved)	mg/L	207
Magnesium (Dissolved)	mg/L	43.4
Potassium (Dissolved)	mg/L	18.8
Sodium (Dissolved)	mg/L	237

Sample date		5/28/2023
Sample name		MEL-23
Parameter	Unit	
WQ02- Conventional Parameters		
pH	pH units	7.65
Turbidity	NTU	5.8
Hardness, as CaCO ₃	mg/L	140
Total alkalinity, as CaCO ₃	mg/L	36
TDS	mg/L	470
TDS, calculated	mg/L	380
TSS	mg/L	14
WQ03- Major Ions		
Chloride	mg/L	130
Cyanide	mg/L	0.00050
Fluoride	mg/L	< 0.10
Silica	mg/L	0.68
Sulfate	mg/L	82
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	mg/L	0.65
Nitrate (as N)	mg/L	1.65
Nitrite (as N)	mg/L	0.022
Total phosphorus	mg/L	0.052
Orthophosphate (P)	mg/L	< 0.010
WQ06- Total Metals		
Aluminum	mg/L	0.303
Arsenic	mg/L	0.0120
Barium	mg/L	0.0127
Cadmium	mg/L	0.000026
Chromium	mg/L	0.0010
Copper	mg/L	0.00221
Iron	mg/L	0.510
Lead	mg/L	0.00134
Manganese	mg/L	0.0857
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0021
Nickel	mg/L	0.0151
Selenium	mg/L	0.00024
Silver	mg/L	< 0.000020
Thallium	mg/L	0.000010
Zinc	mg/L	< 0.0050
WQ07- Dissolved Metals		
Calcium (Dissolved)	mg/L	28.6
Magnesium (Dissolved)	mg/L	15.5
Potassium (Dissolved)	mg/L	6.52
Sodium (Dissolved)	mg/L	88.1

Sample date				5/14/2023
Sample name				MEL-25
Parameter	MEL-25 LIMITS MAX GRAB	MEL-25 LIMITS MAX MEAN	Unit	
WQ02- Conventional Parameters				
pH	9.5	9.5	pH units	7.90
TSS	30	15	mg/L	< 1
WQ04- Nutrients and Chlorophyll a				
Ammonia Nitrogen (as N)			mg/L	< 0.050
WQ05- General Organics				
Total oil and grease	5	5	mg/L	1.5
WQ06- Total Metals				
Arsenic			mg/L	0.00121
Copper			mg/L	0.00249
Lead	0.1	0.1	mg/L	0.00021
Nickel			mg/L	0.0027
WQ10- Volatile Organics				
Benzene	0.37	0.37	mg/L	< 0.00020
Ethylbenzene	0.09	0.09	mg/L	< 0.00020
Toluene	0.002	0.002	mg/L	< 0.00020
Xylenes			mg/L	< 0.00040
m,p-Xylenes			mg/L	< 0.00040
o-Xylene			mg/L	< 0.00020
F1 (C6-C10)-BTEX			mg/L	< 0.025
F1 (C6-C10)			mg/L	< 0.025
F2 (C10-C16)			mg/L	< 0.1
F3 (C16-C34)			mg/L	< 0.2
F4 (C34-C50)			mg/L	< 0.2

				Sample date
				5/7/2023
				Sample name
				MEL-SR1
Parameter	MEL-SR MAX GRAB (WSEEP/RO)	MEL-SR MAX MEAN (WSEEP/RO)	Unit	-
WQ01- Field Measured				
Turbidity			NTU	55
WQ02- Conventional Parameters				
pH			pH units	7.39
Turbidity			NTU	6.9
Hardness, as CaCO ₃			mg/L	55.6
Total alkalinity, as CaCO ₃			mg/L	22
TDS			mg/L	50
TDS, calculated			mg/L	67
TSS	100	50	mg/L	48
WQ03- Major Ions				
Chloride			mg/L	8.0
Cyanide			mg/L	<0.00050
Fluoride			mg/L	< 0.10
Silica			mg/L	0.83
Sulfate			mg/L	14
WQ04- Nutrients and Chlorophyll a				
Ammonia Nitrogen (as N)			mg/L	0.11
Nitrate (as N)			mg/L	< 0.10
Nitrite (as N)			mg/L	< 0.010
Total phosphorus			mg/L	0.12
Orthophosphate (P)			mg/L	0.011
WQ05- General Organics				
Total oil and grease			mg/L	2.1
WQ06- Total Metals				
Aluminum			mg/L	1.36
Arsenic			mg/L	0.00295
Barium			mg/L	0.0224
Cadmium			mg/L	0.000022
Chromium			mg/L	0.0076
Copper			mg/L	0.00736
Iron			mg/L	2.28
Lead			mg/L	0.00118
Manganese			mg/L	0.0532
Mercury			mg/L	< 0.00001
Molybdenum			mg/L	<0.0010
Nickel			mg/L	0.0051
Selenium			mg/L	<0.00010
Silver			mg/L	<0.000020
Thallium			mg/L	0.000016
Zinc			mg/L	0.0252
WQ07- Dissolved Metals				
Calcium (Dissolved)			mg/L	17.8
Magnesium (Dissolved)			mg/L	2.49
Potassium (Dissolved)			mg/L	4.06
Sodium (Dissolved)			mg/L	7.13

			Sample date	5/25/2023
			Sample name	MEL-SR-17 ⁵
Parameter	MEL-SR MAX GRAB (WSEEP/RO)	MEL-SR MAX MEAN (WSEEP/RO)	Unit	
WQ01- Field Measured				
Turbidity			NTU	17.9
WQ02- Conventional Parameters				
pH			pH units	7.22
Turbidity			NTU	4.9
Hardness, as CaCO3			mg/L	13.9
Hardness, as CaCO3-Dissolved			mg/L	14.3
Total alkalinity, as CaCO3			mg/L	11
TDS			mg/L	25
TDS, calculated			mg/L	20
TSS	100	50	mg/L	11
WQ03- Major Ions				
Chloride			mg/L	< 1.0
Cyanide			mg/L	0.00058
Fluoride			mg/L	< 0.10
Silica			mg/L	3.4
Sulfate			mg/L	5.9
WQ04- Nutrients and Chlorophyll a				
Ammonia Nitrogen (as N)			mg/L	< 0.050
Nitrate (as N)			mg/L	< 0.10
Nitrite (as N)			mg/L	< 0.010
Total phosphorus			mg/L	0.025
Orthophosphate (P)			mg/L	< 0.010
WQ05- General Organics				
Total oil and grease			mg/L	2.6
WQ06- Total Metals				
Aluminum			mg/L	0.262
Arsenic			mg/L	0.0110
Barium			mg/L	0.0103
Cadmium			mg/L	< 0.000010
Chromium			mg/L	0.0096
Copper			mg/L	0.00303
Iron			mg/L	0.523
Lead			mg/L	0.00185
Manganese			mg/L	0.0195
Mercury			mg/L	< 0.00001
Molybdenum			mg/L	0.0086
Nickel			mg/L	0.0384
Selenium			mg/L	< 0.00010
Silver			mg/L	< 0.000020
Thallium			mg/L	< 0.000010
Zinc			mg/L	< 0.0050
WQ07- Dissolved Metals				
Calcium (Dissolved)			mg/L	4.73
Magnesium (Dissolved)			mg/L	0.604
Potassium (Dissolved)			mg/L	0.753
Sodium (Dissolved)			mg/L	1.28

⁵ Station MEL-SR17 is a new monitoring station located at 15V 547508 m E, 6977096 m N

Sample date				5/27/2023
Sample name				MEL-SR-18 ⁶
Parameter	MEL-SR MAX GRAB (WSEEP/RO)	MEL-SR MAX MEAN (WSEEP/RO)	Unit	-
WQ01- Field Measured				
Turbidity			NTU	5.06
WQ02- Conventional Parameters				
pH			pH units	6.87
Turbidity			NTU	3.4
Hardness, as CaCO3			mg/L	14.4
Total alkalinity, as CaCO3			mg/L	8.9
TDS			mg/L	50
TDS, calculated			mg/L	27
TSS	100	50	mg/L	3
WQ03- Major Ions				
Chloride			mg/L	1.2
Cyanide			mg/L	< 0.00050
Fluoride			mg/L	< 0.10
Silica			mg/L	0.19
Sulfate			mg/L	10
WQ04- Nutrients and Chlorophyll a				
Ammonia Nitrogen (as N)			mg/L	< 0.050
Nitrate (as N)			mg/L	0.11
Nitrite (as N)			mg/L	< 0.010
Total phosphorus			mg/L	0.023
Orthophosphate (P)			mg/L	< 0.010
WQ05- General Organics				
Total oil and grease			mg/L	1.3
WQ06- Total Metals				
Aluminum			mg/L	0.164
Arsenic			mg/L	0.00249
Barium			mg/L	0.0099
Cadmium			mg/L	0.000034
Chromium			mg/L	0.0011
Copper			mg/L	0.00239
Iron			mg/L	0.215
Lead			mg/L	0.00042
Manganese			mg/L	0.0095
Mercury			mg/L	< 0.00001
Molybdenum			mg/L	0.0011
Nickel			mg/L	0.0040
Selenium			mg/L	< 0.00010
Silver			mg/L	< 0.000020
Thallium			mg/L	< 0.000010
Zinc			mg/L	< 0.0050
WQ07- Dissolved Metals				
Calcium (Dissolved)			mg/L	5.16
Magnesium (Dissolved)			mg/L	0.897
Potassium (Dissolved)			mg/L	1.51
Sodium (Dissolved)			mg/L	1.74

⁶ Station MEL-SR18 is a new monitoring station located at 15V 547385 m E, 6977080 m N