# Follow Up Report: #2022188 May 17<sup>th</sup>, 2022 A8 Post Drilling



The following information refers to a spill reported by Agnico Eagle Mines Limited (AEM) on May 17<sup>th</sup>, 2022, and is being provided in accordance with:

- the Nunavut Water Board License 2BB-MEL1424 Water License, part H, item 4c;
- the Fisheries Act subsection 38(7).

#### **Description of the Incident:**

On May 13<sup>th</sup>, 2022, at approximately 14:00, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) arrived on the lake A8 to perform a post-drilling site inspection. The inspection was conducted with AEM employees. During the inspection, the following observations were made and reported by CIRNAC in their Water Licence Inspection Report dated May 16, 2022:

- grey material, suspected to be drill cuttings were observed on the ice surface of lake A8;
- some pools of water within the piles of snow on the surface of the ice containing unknown materials;
- the smell of hydrocarbons was present in some locations; and
- oily rags, garbage and wood debris were found on the surface of the ice.



Figure 1: Lake A8 Spills locations

#### **Spill Response & Clean-up:**

After the inspection, Orbit Garant and AEM's Exploration Geology and Environment Departments began a collaborative effort to clean up lake A8 and the shore of lake A8 on a regular basis (up to daily; Table 1), pending conditions were safe to proceed. The clean-up efforts began on May 14<sup>th</sup>, 2022 and were completed on June 5<sup>th</sup>, 2022. Each clean-up activity is documented in Table 1.

Some materials were frozen in place and couldn't be removed safely such as freshwater lines and an ice auger flight. These items were identified with buoys and GPS locations and will be removed by helicopter when safe to do so during the ice-free season.



Figure 2: Drilling debris clean-up from clean-up efforts on May 29th, 2022

On May 18th, 2022, CIRNAC returned to lake A8 with Environment and Climate Change Canada (ECCC) to conduct sampling of ponded water on the lake ice at four sampling locations (Figure 3). AEM also took samples at these locations, for which analytical results have been included in Appendix A. As seen in Appendix A, all four samples collected were reported as not acutely toxic (passed LC50 tests).



Figure 3: CIRNAC lake A8 sampling locations

Table 1 – Clean-up activities from May 14<sup>th</sup> to June 5<sup>th</sup>

Date	Time	Lake	Material collected	LAT	LONG	Photos	Photo#	Comments
5/14/2022	8:30	A8	Trash collected and oil pads deployed			No		
5/15/2022	17:00	A8	Trash piled to be collected			Y	2022-05-16 Drilling A8	Trash piles to be collected
5/17/2022	8:30	A8/tundra	Trash collected and oil pads deployed			No		
5/18/2022	8:30	A8	Trash clean up A8			No		Trash clean up throughout A8
5/20/2022		A8	Trash collected and oil pads deployed			No		
5/24/2022		A8	Recovered drill cutting mud			Yes	2020504-01 to 03	Photos from helicopter (before and after clean up)
5/26/2022	14:50	A8	Solvent	540311	6986823	Yes	20220526-01	40 L water/solvent mixture collected and removed
5/26/2022	15:15	A8	Oil	540307	6986735	Yes	20220526-02	JD/AB deployed absorbent rags and collected all visible oil
5/27/2022	2:30	A8	Wood	540371	698651	Yes	1	Along shoreline; A8 is no longer safely accessible
5/27/2022	2:45	A8	Wood/Picket	540371	698651	Yes	2	Along shoreline; A8 is no longer safely accessible
5/27/2022	3:00	A8	Water hose	540371	698651	Yes	3	Along shoreline; A8 is no longer safely accessible
5/27/2022	3:15	A8	Wood	540371	698651	Yes	4	Along shoreline; A8 is no longer safely accessible
5/29/2022	17:00	A8	Various materials	540456	6986680	Yes	20220529-01	Env. team cleaned the southern shoreline of debris
5/29/2022	17:45	A8	Oil	540456	6986680	Yes	20220529-02	Minimal amount of oil observed 40 m away from A8 south side- spill rags were deployed
5/31/2022	8:00	A8	Wood debris	540323	6986685	Yes	20220531-01	Picked up wood debris along the south west side of A8
5/31/2022	8:00	A8	Plastic	540323	6986685	Yes	20220531-02	Picked up plastic debris along the south west side of A8
5/31/2022	8:00	A8	Metal frame	540599	6986536	Yes	20220531-03	Small yellow metal drill rig step on the tundra but frozen in ice to be retrieved
6/3/2022	8:50	A8	Insulation material, plastic	539007	6990178	Yes	0775/0776	Cleaned
6/3/2022	9:00	A8	Insulation material	541214	6986949	Yes	777	Cleaned
6/3/2022	9:10	A8	Bubble wrap	541138	6987033	Yes	778	Cleaned
6/3/2022	9:20	A8	Rice bag	541110	6987093	Yes	779	Cleaned
6/3/2022	9:30	A8	Bulk bag	541074	6987118	Yes	780	Stuck in the ice to be retrieved
6/3/2022	9:40	A8	Salt plastic bag	541054	6987119	Yes	781	Stuck in the ice to be retrieved
6/3/2022	9:55	A8	Plastic bag	540996	6987143	Yes	782	Cleaned
6/3/2022	10:05	A8	Insulation material, plastic bag	540859	6987276	Yes	783	Cleaned
6/5/2022	16:30	A8	General A8 clean-up			Yes	Photos in file folder	Map created

#### **Cause of the Incident and Corrective Measures:**

The cause of the event has been attributed to a combination of three factors. Firstly, insufficient follow-up with training and implementation of drilling on ice procedures due to crew reorganizations/shortages as a result of the covid-19 pandemic. Secondly, a high magnitude of snow deposition and drifting in the area which buried the material out-of-site during drill activities. Thirdly, an earlier than expected snowmelt period which inhibited completion of a sufficient post-drilling on ice season clean-up prior to the progression of the 2022 snowmelt period.

As previously explained, a thorough clean-up campaign was implemented on lake A8 to remove debris and substances related to drilling activities (hydrocarbons, suspected drill cuttings, solvent mixture) in the area. The efforts are summarized in Table 1.

In a Letter of Intent date April 28<sup>th</sup>, 2022 addressed to AEM and shared with CIRNAC and ECCC, Orbit Garant committed to several actions to mitigate spill occurrences during the next drilling on ice season, at various levels of their operations (training, procedures, engineered controls, data collection methodology, etc.).

Furthermore, during a meeting held May 17, 2022, AEM, Orbit Garant, CIRNAC and ECCC discussed the observations made during the May 13<sup>th</sup> CINRAC inspection and identified corrective measures aimed to prevent the occurrence of similar events in the future. In this meeting, AEM and Orbit Garant further committed to the development and implementation of a comprehensive exploration drilling action plan prior to the start of next season's winter drilling.

AEM will submit the comprehensive exploration drilling action plan, prior to start of the next winter drilling season, to the Nunavut Water Board and the Inspector, as well as to ECCC, as agreed with CIRNAC and ECCC.

# Appendix A



AquaTox Testing & Consulting Inc. B-11 Nicholas Beaver Road Puslinch, ON NOB 2J0 Tel. (519) 763-4412 Fax. (519) 763-4419

#### TOXICITY TEST REPORT

Daphnia magna EPS 1/RM/14 Page 1 of 2

Work Order: 248470 Sample Number: 72774

**SAMPLE IDENTIFICATION** 

Agnico Eagle Mines Limited - Meliadine Project Company: Sample Date: 2022-05-18 Rankin Inlet NU Time Collected: 19:10 Location: Substance: Site 1 Date Received: 2022-05-25 Sampling Method: Grab Time Received: 10:10 Sampled By: RL/DM/BF Temperature at Receipt: 19 °C Date Tested: Sample Description: Clear, grey. 2022-05-25

Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment Test Method:

Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS							
Effect	Value	95% Confidence Limits	Calculation Method				
LC50 EC50	>100% >100%	_ _	- -				

The results reported relate only to the sample tested and as received.

**TEST ORGANISM** 

Daphnia magna Time to First Brood: 8.4 days Species: Organism Batch: Dm22-10 Average Brood Size: 26.9 young

Culture Mortality: 0.4% (previous 7 days)

**TEST CONDITIONS** 

Sample Treatment: Number of Replicates: 1 None pH Adjustment: Organisms / Replicate: 10 None ~30 mL/min/L Pre-aeration Rate: Organisms / Test Level: 10

Duration of Pre-Aeration: 0 minutes Organism Loading Rate: 15.0 mL/organism

Impaired Control Organisms: 0.0% Test Aeration: None

Test Method Deviation(s): Hardness Adjustment: None Yes (see below)

REFERENCE TOXICANT DATA

Sodium Chloride Toxicant: Historical Mean LC50: 6.5 g/LDate Tested: 2022-05-24 Warning Limits ( $\pm 2SD$ ): 5.8 - 7.2 g/L LC50: Organism Batch: Dm22-10 6.4 g/L IJ

95% Confidence Limits: 6.2 - 6.6 g/L Analyst(s):

Statistical Method: Spearman-Kärber

#### **COMMENTS**

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s): The maximum sample holding time of 5 days allowed by the test method was exceeded. The sample was tested with the client's consent. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By:	





Work Order: 248470 Sample Number: 72774 Daphnia magna EPS 1/RM/14 Page 2 of 2

#### TEST DATA

				IESI DAIA				
			pН	Dissolved O <sub>2</sub> (mg/L)	Conductivity (µmhos/cm)	$\begin{array}{c} Temperature \\ (^{\circ}C) \end{array}$	O <sub>2</sub> Saturation (%)*	Hardness (as CaCO <sub>3</sub> )
	<b>Initial Chemis</b>	try (100%):	7.4	8.1	849	20	92	320 mg/L
				AHOUDG				
Date & Time	2022-05-25	13:30		0 HOURS				
Analyst(s):	JGR (KP)	13.30						
Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	O <sub>2</sub> Saturation*	Hardness
100	0	0	7.4	8.1	849	20	92	320
50	0	0	8.1	8.5	705	19	_	_
25	0	0	8.2	8.5	638	19	_	_
12.5	0	0	8.3	8.5	606	19	_	_
6.25	0	0	8.3	8.5	590	19	_	_
Control	0	0	8.5	8.8	575	19	99	160
Notes:								
				24 HOURS				
Date & Time	2022-05-26	13:30						
Analyst(s):	JGR (KP)							
$Concentration\ (\%)$	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
100	_	0	_	_	_	20		
50	_	0	_	_	_	20		
25	_	0	_	_	_	20		
12.5	_	0	_	_	_	20		
6.25	_	0	_	_	_	20		
Control	-	0	_	_	_	20		
Notes:								
				48 HOURS				
Date & Time Analyst(s):	2022-05-27 CH (KP)	13:30						
Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
100	0	0	7.9	8.3	867	21		
50	0	0	8.2	8.3	713	21		
25	0	0	8.3	8.3	646	21		
12.5	0	0	8.4	8.3	613	21		
6.25	0	0	8.4	8.3	595	21		
Control	0	0	8.4	8.3	582	21		
Notes:				50% and 25% o			(CH).	
11000.	Some test of	5	10070,	5570 unu 2570 C	one on anons	,, ore mouning	(011).	

Number immobile does not include number dead.

Test Data Reviewed By : \_\_\_\_\_E

Date: 2022-05-30

<sup>&</sup>quot;-" = not measured/not required

<sup>\*</sup> adjusted for temperature and barometric pressure



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#### TOXICITY TEST REPORT

Daphnia magna EPS 1/RM/14 Page 1 of 2

Work Order: 248470 Sample Number: 72775

SAMPLE IDENTIFICATION

Agnico Eagle Mines Limited - Meliadine Project Company: Sample Date: 2022-05-18 Location: Rankin Inlet NU Time Collected: 18:00 Substance: Site 2 Date Received: 2022-05-25 Sampling Method: Grab Time Received: 10:10 Sampled By: RL/DM/BF Temperature at Receipt: 19 °C Date Tested: Sample Description: Clear, grey. 2022-05-25

Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment

Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS							
Effect	Value	95% Confidence Limits	Calculation Method				
LC50 EC50	>100% >100%	_ _	- -				

The results reported relate only to the sample tested and as received.

**TEST ORGANISM** 

Species :Daphnia magnaTime to First Brood :8.4 daysOrganism Batch :Dm22-10Average Brood Size :26.9 young

Culture Mortality: 0.4% (previous 7 days)

**TEST CONDITIONS** 

Sample Treatment :NoneNumber of Replicates :1pH Adjustment :NoneOrganisms / Replicate :10Pre-aeration Rate :~30 mL/min/LOrganisms / Test Level :10

Duration of Pre-Aeration: 0 minutes Organism Loading Rate: 15.0 mL/organism

Test Aeration: None Impaired Control Organisms: 0.0%

Hardness Adjustment: None Test Method Deviation(s): Yes (see below)

REFERENCE TOXICANT DATA

Sodium Chloride Historical Mean LC50: Toxicant: 6.5 g/L Date Tested: 2022-05-24 Warning Limits ( $\pm$  2SD): 5.8 - 7.2 g/L LC50: 6.4 g/LOrganism Batch: Dm22-10 95% Confidence Limits: 6.2 - 6.6 g/LIJ Analyst(s):

Statistical Method : Spearman-Kärber

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s): The maximum sample holding time of 5 days allowed by the test method was exceeded. The sample was tested with the client's consent. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By :	
	Project Manager





Work Order: 248470 Sample Number: 72775 Daphnia magna EPS 1/RM/14 Page 2 of 2

#### TEST DATA

Initial Chemistry (100%): 7.3   8.6   430   20   95   160					ILDI DIIII				
Date & Time   Analysis   JGR (KP)   Dissolved O2   Conductivity   Temperature   O2 Saturation*   Hai				pН			_		Hardness (as CaCO <sub>3</sub> )
Date & Time Analyst(s):   JGR (KP)   SIGN (KP)   Dissolved O2   Conductivity Temperature   O2 Saturation®   Ha		Initial Chemis	try (100%):	7.3	8.6	430	20	95	160 mg/L
Date & Time Analyst(s):   JGR (KP)   SIGN (KP)   Dissolved O2   Conductivity Temperature   O2 Saturation®   Ha					0 HOLIDS				
Analysi(s): JGR (KP)  Concentration (%) Dead Immobile 0 PH Dissolved O2 Conductivity Temperature 0.2 Saturation* Had 100 0 0 7.3 8.6 430 20 95 50 0 0 0 8.1 8.8 504 19 1 25 0 0 0 8.3 8.8 5039 19 1 12.5 0 0 0 8.3 8.8 556 19 1 12.5 0 0 0 8.3 8.8 567 19 1 12.5 0 0 0 8.3 8.8 567 19 1 12.5 0 0 0 8.5 8.8 575 19 99  Notes:    Date & Time 2022-05-26 13:05   Analysi(s): JGR (KP)	Date & Time	2022-05-25	13:05		UHOUKS				
100 0 0 7.3 8.6 430 20 95 50 0 0 8.1 8.8 504 19 - 25 0 0 0 8.3 8.8 539 19 - 12.5 0 0 0 8.3 8.8 556 19 - 12.5 0 0 0 8.3 8.8 567 19 - 12.5 0 0 0 8.5 8.8 575 19 99  Notes:    Date & Time   2022-05-26   13:05     Analyst(s) :   JGR (KP)     Concentration (%)   Dead   Immobile   pH   Dissolved O2   Conductivity Temperature	Analyst(s):	JGR (KP)							
50         0         0         8.1         8.8         504         19         -           25         0         0         8.3         8.8         539         19         -           12.5         0         0         8.3         8.8         556         19         -           6.25         0         0         8.3         8.8         567         19         -           Control         0         0         8.5         8.8         575         19         99           Notes:           24 HOURS           24 HOURS           24 HOURS           24 HOURS           100         -         0         -         -         20           50         -         0         -         -         -         20           25         -         0         -         -         -         20           25         -         0         -         -         -         20           Control         -         0         -         -         -         20           Control         -         0         -	$Concentration \ (\%)$	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	O <sub>2</sub> Saturation*	Hardness
25 0 0 8.3 8.8 539 19 - 1 12.5 0 0 0 8.3 8.8 556 19 - 6 6.25 0 0 0 8.3 8.8 567 19 - 6 Control 0 0 0 8.5 8.8 575 19 99  Notes:    Date & Time Analyst(s): JGR (KP)   Dissolved O2   Conductivity Temperature	100	0	0	7.3	8.6	430	20	95	160
12.5	50	0	0	8.1	8.8	504	19	_	_
Control   O	25	0	0	8.3	8.8	539	19	_	_
Control   0	12.5	0	0	8.3	8.8	556	19	_	_
Date & Time   2022-05-26   13:05   Analyst(s) :   JGR (KP)   Dissolved O2   Conductivity   Temperature	6.25	0	0	8.3	8.8	567	19	_	_
Date & Time   2022-05-26   13:05   Analyst(s) :   JGR (KP)   Dissolved O2   Conductivity Temperature   100   -   0   -   -   -   20   20   25   -   0   -   -   -   20   20   25   -   0   -   -   -   20   20   25   -   0   -   -   -   20   20   25   -   0   -   -   -   20   20   25   -   0   -   -   -   20   20   20   20	Control	0	0	8.5	8.8	575	19	99	160
Date & Time Analyst(s) :   JGR (KP)   JGR (KP)   Dissolved O2   Conductivity   Temperature	Notes:								
Analyst(s): JGR (KP)  Concentration (%) Dead Immobile pH Dissolved O2 Conductivity Temperature  100 - 0 - 0 20  50 - 0 - 0 20  25 - 0 - 0 20  12.5 - 0 - 0 20  12.5 - 0 - 0 - 20  6.25 - 0 - 0 - 20  Control - 0 20  Notes:					24 HOURS				
100			13:05						
50	Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
25	100	_	0	_	_	_	20		
12.5	50	_	0	_	_	_	20		
6.25	25	_	0	_	_	_	20		
Control — 0 — — — — 20  Notes:	12.5	_	0	_	_	_	20		
Notes:    Mathematical Region   Mathematical	6.25	_	0	_	_	_	20		
Date & Time 2022-05-27 13:05 Analyst(s): CH (KP)  Concentration (%) Dead Immobile pH Dissolved O2 Conductivity Temperature  100 0 0 7.6 8.2 441 21 50 0 0 8.1 8.2 507 21 25 0 0 0 8.3 8.2 544 21 12.5 0 0 0 8.3 8.2 568 21 12.5 0 0 8.4 8.3 572 21 Control 0 0 8.4 8.3 581 21	Control	_	0	_	_	_	20		
Date & Time Analyst(s):       2022-05-27 CH (KP)       13:05         Concentration (%)       Dead       Immobile pH       Dissolved O2 Conductivity Temperature         100       0       0       7.6       8.2       441       21         50       0       0       8.1       8.2       507       21         25       0       0       8.3       8.2       544       21         12.5       0       0       8.3       8.2       568       21         6.25       0       0       8.4       8.3       572       21         Control       0       8.4       8.3       581       21	Notes:								
Analyst(s):         CH (KP)           Concentration (%)         Dead         Immobile         pH         Dissolved O2 Conductivity Temperature           100         0         0         7.6         8.2         441         21           50         0         0         8.1         8.2         507         21           25         0         0         8.3         8.2         544         21           12.5         0         0         8.3         8.2         568         21           6.25         0         0         8.4         8.3         572         21           Control         0         8.4         8.3         581         21					48 HOURS				
100 0 0 7.6 8.2 441 21 50 0 0 8.1 8.2 507 21 25 0 0 0 8.3 8.2 544 21 12.5 0 0 0 8.3 8.2 568 21 6.25 0 0 0 8.4 8.3 572 21 Control 0 0 8.4 8.3 581 21			13:05						
50       0       0       8.1       8.2       507       21         25       0       0       8.3       8.2       544       21         12.5       0       0       8.3       8.2       568       21         6.25       0       0       8.4       8.3       572       21         Control       0       0       8.4       8.3       581       21	Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
50       0       0       8.1       8.2       507       21         25       0       0       8.3       8.2       544       21         12.5       0       0       8.3       8.2       568       21         6.25       0       0       8.4       8.3       572       21         Control       0       0       8.4       8.3       581       21	100	0	0	7.6	8.2	441	21		
25       0       0       8.3       8.2       544       21         12.5       0       0       8.3       8.2       568       21         6.25       0       0       8.4       8.3       572       21         Control       0       0       8.4       8.3       581       21									
12.5 0 0 8.3 8.2 568 21 6.25 0 0 8.4 8.3 572 21 Control 0 0 8.4 8.3 581 21		0	0						
6.25       0       0       8.4       8.3       572       21         Control       0       0       8.4       8.3       581       21			0						
Control 0 0 8.4 8.3 581 21									
			0						
()	Notes:		ganisms in the						

Number immobile does not include number dead.

Test Data Reviewed By : \_\_\_\_\_E

Date: 2022-05-31

<sup>&</sup>quot;-" = not measured/not required

<sup>\*</sup> adjusted for temperature and barometric pressure



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TOXICITY TEST REPORT

Rainbow Trout EPS 1/RM/13 Page 1 of 2

Work Order: 248470 Sample Number: 72775

SAMPLE IDENTIFICAT
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Agnico Eagle Mines Limited - Meliadine Project Sample Date: 2022-05-18 Company: Location: Rankin Inlet NU Time Collected: 18:00 Substance: Site 2 Date Received: 2022-05-25 Sampling Method: Grab Time Received: 10:10 Sampled By: RL/DM/BF Temperature at Receipt: 19 °C 2022-05-25 Sample Description: Clear, grey. Date Tested:

Test Method(s): Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada,

EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

		96-HOUR TEST RESULTS		
Effect	Value	95% Confidence Limits	Statistical Method	
LC50	>100%	_	_	

The results reported relate only to the sample tested and as received.

#### TEST ORGANISM

Test Organism: Oncorhynchus mykiss Average Fork Length ( $\pm 2$  SD):  $45.9 \text{ mm} (\pm 4.2)$ Organism Batch: T22-11 Range of Fork Lengths: 41 - 48 mm Control Sample Size: 10 Average Wet Weight ( $\pm 2 \text{ SD}$ ):  $0.84 \text{ g} (\pm 0.25)$ Cumulative stock tank mortality rate: 0% (previous 7 days) Range of Wet Weights: 0.61 - 0.97 g Control organisms showing stress: 0 (at test completion) Organism Loading Rate: 0.5 g/L

#### TEST CONDITIONS

Sample Treatment: Volume Tested (L): 16 None pH Adjustment: None Number of Replicates: 1 Test Aeration: Organisms Per Replicate: 10 Yes Pre-aeration/Aeration Rate:  $6.5 \pm 1 \text{ mL/min/L}$ Organisms Per Test Level: 10

Duration of Pre-Aeration: 30 minutes Test Method Deviation(s): Yes (see 'COMMENTS')

#### REFERENCE TOXICANT DATA

Toxicant: Potassium Chloride Date Tested: 2022-05-11 PC, CN, JW Organism Batch: T22-11 Analyst(s): LC50: 4068 mg/L Historical Mean LC50: 3700 mg/L 95% Confidence Limits: 3733 - 4470 mg/L 2777 - 4929 mg/L Warning Limits ( $\pm$  2SD):

Statistical Method: Linear Regression (MLE)

#### **COMMENTS**

- •All test validity criteria as specified in the test method were satisfied.
- •Noted Deviation(s): The maximum sample holding time of 5 days allowed by the test method was exceeded. The sample was tested with the client's consent. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By:	
	Project Manager



### TOXICITY TEST REPORT

Work Order: 248470 Sample Number: 72775 Rainbow Trout EPS 1/RM/13 Page 2 of 2

#### TEST DATA

			TEST DA	TA			
			pН	Dissolved O <sub>2</sub> (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O <sub>2</sub> Saturation (%)*
Initial Water Chem	istry (100%):		7.4	8.4	437	16	92
After 30 min pre-ac	eration :		7.5	8.9	439	16	96
			A HOUD	C			
D . 0 F	2022 05 25	12.50	0 HOUR	.5			
Date & Time	2022-05-25	12:50					
Analyst(s):	LL (KP)					_	
Concentration (%)	Dead	Impaired	pН			_	O <sub>2</sub> Saturation*
100	0	0	7.5	8.9	439	16	96
50	0	0	8.2	9.5	656	14	=
25	0	0	8.3	9.6	759	14	=
12.5	0	0	8.3	9.6	813	14	=
6.25	0	0	8.3	9.6	838	14	-
Control Notes:	0	0	8.3	9.6	861	14	100
Notes.							
			24 HOUF	RS			
Date & Time	2022-05-26	12:50					
Analyst(s):	PC (KP)						
Concentration (%)	Dead	Impaired	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	
100	0	0	-	-	_	14	
50	0	0	-	-	_	14	
25	0	0	_	-	-	14	
12.5	0	0	_	_	_	14	
6.25	0	0	_	_	_	14	
Control	0	0	_	_	_	14	
Notes:							
			40.770.77				
			48 HOUF	RS			
Date & Time	2022-05-27	12:50					
Analyst(s):	JW						
Concentration (%)	Dead	Impaired	pН	Dissolved O <sub>2</sub>	Conductivity	_	
100	0	0	-	_	_	14	
50	0	0	-	_	_	14	
25	0	0	-	_	_	14	
12.5	0	0	-	_	_	14	
6.25	0	0	-	_	_	14	
Control	0	0	-	_	_	14	
Notes:							
			72 HOUE	RS			
Date & Time	2022-05-28	12:50					
Analyst(s):	LL (AW)						
Concentration (%)	Dead	Impaired	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	
100	0	0	-	-	-	16	
50	0	0	-	-	-	16	
25	0	0	-	_	_	16	
12.5	0	0	_	_	_	16	
6.25	0	0	-	_	_	16	
Control	0	0	_	=	_	16	
Notes:							
			0.41011				
Data 9 Tim	2022 05 20	10.50	96 HOUF	(2)			
Date & Time	2022-05-29	12:50					
Analyst(s):	LL (AW)	¥	**	D: 1 22	G	m ·	
Concentration (%)	Dead	Impaired	pH 7.5	_	Conductivity	_	
100	0	0	7.5	9.3	447	16	
50	0	0	8.1	9.1	661	16	
25	0	0	8.3	9.3	759	16	
12.5	0	0	8.3	9.2	810	16	
6.25	0	0	8.3	9.2	816	16	
Control	0	0	8.3	8.9	833	16	
Notes:							

<sup>&</sup>quot;-" = not measured/not required

Number impaired does not include number dead.

Test Data Reviewed By : EM

Date : 2022-05-31

<sup>\*</sup> adjusted for temperature and barometric pressure



AquaTox Testing & Consulting Inc. B-11 Nicholas Beaver Road Puslinch, ON NOB 2JO Tel. (519) 763-4412 Fax. (519) 763-4419

#### TOXICITY TEST REPORT

Daphnia magna EPS 1/RM/14 Page 1 of 2

Work Order: 248470 Sample Number: 72776

SAMI	PL.E	IDEN	TIFIC	Δ	TION

Agnico Eagle Mines Limited - Meliadine Project Company: Sample Date: 2022-05-18 Location: Rankin Inlet NU Time Collected: 18:30 Substance: Site 3 Date Received: 2022-05-25 Sampling Method: Grab Time Received: 10:10 Sampled By: RL/DM/BF Temperature at Receipt: 19 °C Date Tested: Sample Description: Cloudy, grey. 2022-05-25

Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment

Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

		48-HOUR TEST RESULTS	
Effect	Value	95% Confidence Limits	Calculation Method
LC50 EC50	>100% >100%	<del>-</del>	_ _

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :Daphnia magnaTime to First Brood :8.4 daysOrganism Batch :Dm22-10Average Brood Size :26.9 young

Culture Mortality: 0.4% (previous 7 days)

**TEST CONDITIONS** 

Sample Treatment :NoneNumber of Replicates :1pH Adjustment :NoneOrganisms / Replicate :10Pre-aeration Rate :~30 mL/min/LOrganisms / Test Level :10

Duration of Pre-Aeration: 0 minutes Organism Loading Rate: 15.0 mL/organism

Test Aeration: None Impaired Control Organisms: 0.0%

Hardness Adjustment : None Test Method Deviation(s) : Yes (see below)

REFERENCE TOXICANT DATA

Sodium Chloride Historical Mean LC50: Toxicant: 6.5 g/L Date Tested: 2022-05-24 Warning Limits ( $\pm$  2SD): 5.8 - 7.2 g/L LC50: 6.4 g/L Organism Batch: Dm22-10 6.2 - 6.6 g/L 95% Confidence Limits: Analyst(s): IJ

Ct-ti-ti-1 M-th-1

Statistical Method: Spearman-Kärber

#### **COMMENTS**

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s): The maximum sample holding time of 5 days allowed by the test method was exceeded. The sample was tested with the client's consent. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By:		
'	Project Manager	





Work Order: 248470 Sample Number: 72776 Daphnia magna EPS 1/RM/14 Page 2 of 2

#### TEST DATA

Process					IESI DAIA				
Date & Time   Analysis(s)   JGR (KP)   Dissolved O2   Conductivity Temperature   O2 Saturation*   Hardness				pН		-	_		Hardness (as CaCO <sub>3</sub> )
Date & Time Analysit(s) : JGR (KP)   Date & Time Analysit(s) : JGR (KP)   Date & Time Analysit(s) : JGR (KP)   Date & Immobile pH   Dissolved O2   Conductivity   Temperature   O2 Saturation*   Hardness		Initial Chemis	try (100%):	8.5	8.7	78	20	100	26 mg/L
Date & Time Analysit(s) : JGR (KP)   Date & Time Analysit(s) : JGR (KP)   Date & Time Analysit(s) : JGR (KP)   Date & Immobile pH   Dissolved O2   Conductivity   Temperature   O2 Saturation*   Hardness					A MANDS				
Analyst(s)   JGR (KP)   Concentration (%)   Diea   Immobile   pH   Dissolved O2   Conductivity   Temperature   O2 Saturation*   Hardness*   100   0   0   8.5   8.7   7.8   20   100   26   50   0   0   8.4   8.7   333   19   -   -   -	Date & Time	2022-05-25	13:50		0 HOURS				
100 0 0 8.5 8.7 78 20 100 26 50 0 0 8.4 8.7 333 19 25 0 0 0 8.4 8.7 455 19 25 12.5 0 0 8.4 8.7 515 19 26.25 0 0 0 8.4 8.7 544 19 27 Control 0 0 0 8.5 8.8 575 19 99 160  Notes:    Date & Time   2022-05-26   13:50     Analyst(s):			13.30						
100	Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	O <sub>2</sub> Saturation*	Hardness
50         0         0         8.4         8.7         333         19         -         -           25         0         0         8.4         8.7         455         19         -         -           12.5         0         0         8.4         8.7         515         19         -         -           6.25         0         0         8.5         8.8         575         19         99         160           Notes:           2022-05-26 JI (KP)           2022-05-26 JI (KP)           Concentration (%)         Dead         Immobile         pH         Dissolved O2 Conductivity Temperature           100         -         0         -         -         -         21           50         -         0         -         -         -         21           25         -         0         -         -         -         21           25         -         0         -         -         -         21           26.25         -         0         -         -         -         21           20 Control         -         -         -	100	0	0	_					
25 0 0 8.4 8.7 455 19 1 12.5 0 0 8.4 8.7 515 19 1 12.5 0 0 0 8.4 8.7 515 19 1 12.5 19 0 0 0 8.4 8.7 515 19 0 1 12.5 19 0 0 0 8.4 8.7 544 19 0 1 12.5 19 0 0 0 1 12.5 19 0 0 0 1 12.5 19 0 1 12.5 19 0	50	0	0						_
12.5 0 0 8.4 8.7 515 19 6.25 0 0 8.4 8.7 544 19 6.05 0 0 8.5 8.8 575 19 99 160 Notes:    Date & Time Adayst(s): JJ (KP)   Dissolved O2   Conductivity Temperature	25	0				455	19	_	_
Control   O	12.5	0	0			515		_	_
Control         0         0         8.5         8.8         575         19         99         160           Notes:         24 HOURS           Date & Time Analyst(s):         JJ (KP)           Concentration (%)         Dead         Immobile Immobile         pH         Dissolved O2 Conductivity Temperature           100         -         0         -         -         21           50         -         0         -         -         21           25         -         0         -         -         21           6.25         -         0         -         -         -         21           6.25         -         0         -         -         -         21           Control         -         0         -         -         -         21           Notes:         48 HOURS           Date & Time Analysi(s):         CH (EM)           Control         Dead         Immobile         pH         Dissolved O2 Conductivity Temperature           100         2         2         7.9         8.2         83         21           50         0         1	6.25	0	0				19	_	_
Date & Time   2022-05-26   13:50   Analyst(s):   JJ (KP)		0	0					99	160
Date & Time Analyst(s) : JJ (KP)   Dissolved O2   Conductivity   Temperature	Notes:								
Analyst(s): JJ (KP)  Concentration (%) Dead Immobile pH Dissolved O2 Conductivity Temperature  100 - 0 - 0 - 21  50 - 0 - 21  25 - 0 - 21  12.5 - 0 - 21  12.5 - 0 - 21  12.5 - 0 - 21  12.5 - 0 - 21  12.5 - 21  12.5 - 20 - 21  12.5 - 20 - 21  12.5 - 20 - 21  12.5 - 20 - 21  12.5 - 20 - 21  Notes:  Analyst(s): VEH (EM)  Concentration (%) Dead Immobile pH Dissolved O2 Conductivity Temperature  100 2 2 7.9 8.2 83 21  50 0 1 8.2 8.3 347 21  25 0 0 8.3 8.4 465 21  12.5 0 0 0 8.4 8.3 523 21  6.25 0 0 0 8.4 8.3 551 21  Control 0 0 8.4 8.3 551 21  Control 0 0 8.4 8.3 582 21					24 HOURS				
Concentration (%)         Dead         Immobile         pH         Dissolved O2         Conductivity         Temperature           100         -         0         -         -         21           50         -         0         -         -         21           25         -         0         -         -         21           12.5         -         0         -         -         21           6.25         -         0         -         -         -         21           Control         -         0         -         -         -         21           Notes:         -         0         -         -         -         21           Notes:         -         -         -         -         21           Notes:         -         -         -         -         -         21           Notes:         -	Date & Time	2022-05-26	13:50						
100	Analyst(s):	JJ (KP)							
50	$Concentration\ (\%)$	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
25	100	_	0	_	_	_	21		
12.5	50	_	0	_	_	_	21		
Control   -   0   -   -   21   21	25	_	0	_	_	_	21		
Control — 0 — — — — 21  Notes:	12.5	_	0	_	_	_	21		
Notes:    Mathematical Region   Mathematical	6.25	_	0	_	_	_	21		
Date & Time 2022-05-27 13:50 Analyst(s): CH (EM)  Concentration (%) Dead Immobile pH Dissolved O <sub>2</sub> Conductivity Temperature  100 2 2 2 7.9 8.2 83 21  50 0 1 8.2 8.3 347 21  25 0 0 0 8.3 8.4 465 21  12.5 0 0 0 8.4 8.3 523 21  6.25 0 0 8.4 8.3 551 21  Control 0 0 8.4 8.3 582 21	Control	_	0	_	_	_	21		
Date & Time Analyst(s):       2022-05-27 CH (EM)       13:50         Concentration (%)       Dead       Immobile       pH       Dissolved O2 Conductivity       Temperature         100       2       2       7.9       8.2       83       21         50       0       1       8.2       8.3       347       21         25       0       0       8.3       8.4       465       21         12.5       0       0       8.4       8.3       523       21         6.25       0       0       8.4       8.3       551       21         Control       0       8.4       8.3       582       21	Notes:								
Analyst(s):         CH (EM)           Concentration (%)         Dead         Immobile         pH         Dissolved O2 Conductivity         Temperature           100         2         2         7.9         8.2         83         21           50         0         1         8.2         8.3         347         21           25         0         0         8.3         8.4         465         21           12.5         0         0         8.4         8.3         523         21           6.25         0         0         8.4         8.3         551         21           Control         0         8.4         8.3         582         21					48 HOURS				
Concentration (%)         Dead         Immobile         pH         Dissolved O2         Conductivity         Temperature           100         2         2         7.9         8.2         83         21           50         0         1         8.2         8.3         347         21           25         0         0         8.3         8.4         465         21           12.5         0         0         8.4         8.3         523         21           6.25         0         0         8.4         8.3         551         21           Control         0         0         8.4         8.3         582         21			13:50						
100       2       2       7.9       8.2       83       21         50       0       1       8.2       8.3       347       21         25       0       0       8.3       8.4       465       21         12.5       0       0       8.4       8.3       523       21         6.25       0       0       8.4       8.3       551       21         Control       0       8.4       8.3       582       21			Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
50       0       1       8.2       8.3       347       21         25       0       0       8.3       8.4       465       21         12.5       0       0       8.4       8.3       523       21         6.25       0       0       8.4       8.3       551       21         Control       0       0       8.4       8.3       582       21		2	2	7.9	8.2	83	21		
25       0       0       8.3       8.4       465       21         12.5       0       0       8.4       8.3       523       21         6.25       0       0       8.4       8.3       551       21         Control       0       0       8.4       8.3       582       21									
12.5 0 0 8.4 8.3 523 21 6.25 0 0 8.4 8.3 551 21 Control 0 0 8.4 8.3 582 21		0	0						
6.25       0       0       8.4       8.3       551       21         Control       0       0       8.4       8.3       582       21									
Control 0 0 8.4 8.3 582 21									

Number immobile does not include number dead.

Test Data Reviewed By : \_\_\_\_\_E

Date: 2022-05-30

<sup>&</sup>quot;-" = not measured/not required

<sup>\*</sup> adjusted for temperature and barometric pressure



AquaTox Testing & Consulting Inc. B-11 Nicholas Beaver Road Puslinch, ON NOB 2J0 Tel. (519) 763-4412 Fax. (519) 763-4419

#### TOXICITY TEST REPORT

Daphnia magna EPS 1/RM/14 Page 1 of 2

Work Order: 248470 Sample Number: 72777

SAMPLE IDENTIFICATION

Agnico Eagle Mines Limited - Meliadine Project Company: Sample Date: 2022-05-18 Location: Rankin Inlet NU Time Collected: 18:40 Substance: Date Received: Site 4 2022-05-25 Sampling Method: Grab Time Received: 10:10 Sampled By: RL/DM/BF Temperature at Receipt: 19 °C Sample Description: Cloudy, grey. Date Tested: 2022-05-25

Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment

Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS											
Effect	Value	95% Confidence Limits	Calculation Method								
LC50 EC50	>100% <6.25%	- -	- -								

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species : Daphnia magna Time to First Brood : 8.4 days
Organism Batch : Dm22-10 Average Brood Size : 26.9 young

Culture Mortality: 0.4% (previous 7 days)

**TEST CONDITIONS** 

Sample Treatment :NoneNumber of Replicates :1pH Adjustment :NoneOrganisms / Replicate :10Pre-aeration Rate :~30 mL/min/LOrganisms / Test Level :10

Duration of Pre-Aeration: 0 minutes Organism Loading Rate: 15.0 mL/organism

Test Aeration: None Impaired Control Organisms: 0.0%

Hardness Adjustment : None Test Method Deviation(s) : Yes (see below)

REFERENCE TOXICANT DATA

Toxicant: Sodium Chloride Historical Mean LC50: 6.5 g/L Date Tested: 2022-05-24 Warning Limits ( $\pm$  2SD): 5.8 - 7.2 g/L LC50: 6.4 g/L Organism Batch: Dm22-10 95% Confidence Limits: 6.2 - 6.6 g/L Analyst(s): IJ

Statistical Method: Spearman-Kärber

**COMMENTS** 

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s): The maximum sample holding time of 5 days allowed by the test method was exceeded. The sample was tested with the client's consent. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By :	
	Project Manager





Work Order: 248470 Sample Number: 72777 Daphnia magna EPS 1/RM/14 Page 2 of 2

#### TEST DATA

				IESI DAIA				
			pН	Dissolved O <sub>2</sub> (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O <sub>2</sub> Saturation (%)*	Hardness (as CaCO <sub>3</sub> )
	Initial Chemist	try (100%):	7.2	8.0	84	20	90	36 mg/L
				0 HOURS				
Date & Time	2022-05-25	14:25		UHUUKS				
Analyst(s):	JGR/JJ (KP)							
Concentration (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature	O <sub>2</sub> Saturation*	Hardness
100	0	0	7.2	8.0	84	20	90	36
50	0	0	8.1	8.4	350	19	_	_
25	0	0	8.3	8.5	467	19	_	_
12.5	0	0	8.3	8.5	525	19	_	_
6.25	0	0	8.3	8.5	549	19	_	_
Control	0	0	8.5	8.8	575	19	99	160
Notes:								
				24 HOURS				
Date & Time	2022-05-26	14:25						
Analyst(s):	JJ (KP)							
Concentration  (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
100	_	0	_	_	_	21		
50	_	0	_	_	_	21		
25	_	0	_	_	_	21		
12.5	_	0	_	_	_	21		
6.25	_	0	_	_	_	21		
Control	_	0	_	_	_	21		
Notes:								
				48 HOURS				
Date & Time	2022-05-27	14:25						
Analyst(s):	CH (EM)							
Concentration  (%)	Dead	Immobile	pН	Dissolved O <sub>2</sub>	Conductivity	Temperature		
100	3	7	8.1	8.2	95	21		
50	0	6	8.2	8.2	354	21		
25	2	8	8.3	8.2	473	21		
12.5	0	9	8.3	8.3	527	21		
6.25	1	7	8.4	8.2	555	21		
Control	0	0	8.4	8.3	583	21		
Notes:	Test organism	ns in the 6.25	%, 12.5	5%, 25%, 50% a	nd 100% were	stuck to the si	ides of the cup	

Number immobile does not include number dead.

above the water level (CH).

Test Data Reviewed By : \_\_\_\_ EM

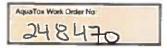
Date : 2022-05-30

<sup>&</sup>quot;-" = not measured/not required

<sup>\*</sup> adjusted for temperature and barometric pressure

### **CHAIN OF CUSTODY RECORD**





P.O. Number: 1006008
Field Sampler Name (print): RL,DM, BF
Signature:
Affiliation: Agnico Eagle Mines - Meliadine
Sample Storage (prior to shipping): Refrigerator/cooler
Custody Relinquished by: Daphne Morin
Date/Time Shipped: 2022-05-20 8:00

Shipping Address:

AquaTox Testing & Consulting Inc. B-11 Nicholas Beaver Road

Puslinch, Ontario Canada N0B 2J0

Voice: (519) 763-4412

Fax: (519) 763-4419

Client:	Agnico Eagle Meliadine Project Rankin Inlet, Nunavut, Canada
Phone:	(819) 759-3555
Fax:	
Contact	Brett Fairbairn

			Sample Identification						Analys	es Req	uested			-	Sa	ampl	e Method and Volume
	Date Collected (yyyy-mm-dd)	Time Collected (e.g. 14:30, 24 hr clock)	Sample Name	AquaTox Sample Number	Temp. on	Rainbow Trout Single Concentration	Rainbow Trout LC50	Daphnia magna Single Concentration	Daphnia magna LC50	Fathead Minnow Survival & Growth	Ceriodaphnia dubia Survival & Reproduction	Lemna minor Growth	Pseudokirchneriella subcapitala Growth	Microtox	Grab	Composite	# of Containers and Volume (eg. 2 x 1t., 3 x 10L, etc.)
	2022-05-19		Site 1	72774	192				~						~		1 pail (40L) 🔏
44	2022-05-19	18:00	Site 2	7277	5 PC		~		~						V	_	2 pails (40L)
4*	2022-05-19	18:30	Site 3	72776					~						~		1 pail (40L) 🛠
**	2022-05-19	18:40	Site 4	72777	19.0				~						<b>V</b>		1 pail (40L) %
																$\dashv$	
Į																-	

For Lab Use	Only
Received By:	PCILL
Date:	2022-05-25
Time:	10:10
Storage Location:	
Storage Temp.(°C)	

Please list any special requests or instructions:	
* Client Sent IX20L Drill	PC.
* Client Sunt 1X201 pair. ** Sample date is 2022-0	05-18 as Per Client



Your P.O. #: OL-1129375 Site Location: MELIADINE

Your C.O.C. #: n/a

**Attention: Reporting** 

Agnico-Eagle Meliadine Meliadine Mine Rankin Inlet, NU CANADA XOC 0G0

Report Date: 2022/06/06

Report #: R7153525 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

BUREAU VERITAS JOB #: C2E2308 Received: 2022/05/25, 10:00

Sample Matrix: Water # Samples Received: 4

Date Date **Quantity Extracted** Analyzed **Analytical Method Analyses Laboratory Method** Alkalinity (1) 4 N/A 2022/05/31 CAM SOP-00448 SM 23 2320 B m 2022/06/01 CAM SOP-00102 Carbonate, Bicarbonate and Hydroxide (1) 4 N/A APHA 4500-CO2 D Chloride by Automated Colourimetry (1) 4 N/A 2022/05/30 CAM SOP-00463 SM 23 4500-CI E m 4 N/A Conductivity (1) 2022/05/31 CAM SOP-00414 SM 23 2510 m Petroleum Hydro. CCME F1 & BTEX in Water (1) 4 N/A 2022/05/30 CAM SOP-00315 CCME PHC-CWS m Petroleum Hydrocarbons F2-F4 in Water (1, 4) 4 2022/05/31 2022/05/31 CAM SOP-00316 CCME PHC-CWS m 4 2022/05/27 2022/05/31 CAM SOP-00449 Fluoride (1) SM 23 4500-F C m SM23 4500-CL/SO4-E m 4 2022/06/03 AB SOP-00020 / AB SOP-Low Level Chloride and Sulphate by AC (2) N/A 00018 Hardness Total (calculated as CaCO3) (3, 5) 4 N/A 2022/06/01 BBY WI-00033 Auto Calc Hardness (calculated as CaCO3) (3) 4 N/A 2022/06/01 BBY WI-00033 Auto Calc 2022/06/01 BBY7SOP-00002 Na, K, Ca, Mg, S by CRC ICPMS (diss.) (3) 4 N/A EPA 6020B R2 m Elements by CRC ICPMS (dissolved) (3) 4 N/A 2022/05/31 BBY7SOP-00002 EPA 6020B R2 m Na, K, Ca, Mg, S by CRC ICPMS (total) (3) 4 2022/05/26 2022/06/01 BBY7SOP-00002 EPA 6020B R2 m Elements by CRC ICPMS (total) (3) 2022/05/31 2022/05/31 BBY7SOP-00003/ BBY7SOPEPA 6020B R2 m -00002 pH (1) 4 2022/05/27 2022/05/31 CAM SOP-00413 SM 4500H+ B m Total Dissolved Solids (1) 2 2022/05/28 2022/05/30 CAM SOP-00428 SM 23 2540C m 2022/05/30 2022/05/31 CAM SOP-00428 SM 23 2540C m Total Dissolved Solids (1) 2 2022/05/30 CAM SOP-00446 Total Organic Carbon (TOC) (1, 6) SM 23 5310B m Low Level Total Suspended Solids (1) 3 2022/05/27 2022/05/30 CAM SOP-00428 SM 23 2540D m Low Level Total Suspended Solids (1) 1 2022/05/28 2022/05/30 CAM SOP-00428 SM 23 2540D m Turbidity (1) N/A 2022/05/27 CAM SOP-00417 SM 23 2130 B m

#### Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement



Your P.O. #: OL-1129375 Site Location: MELIADINE

Your C.O.C. #: n/a

**Attention: Reporting** 

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA XOC 0G0

Report Date: 2022/06/06

Report #: R7153525 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

#### BUREAU VERITAS JOB #: C2E2308 Received: 2022/05/25, 10:00

Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

- \* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
- (2) This test was performed by Bureau Veritas Calgary (19th), 4000 19th Street NE, Calgary, AB, T2E 6P8
- (3) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way, Burnaby, BC, V5G 1K5
- (4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
- (5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (6) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

#### **Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Katherine Szozda, Project Manager

Email: Katherine.Szozda@bureauveritas.com

Phone# (613)274-0573 Ext:7063633

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

# CCME PHCS, BTEX/F1-F4 (WATER)

Bureau Veritas ID		SSJ130	SSJ131			SSJ131			SSJ132	SSJ133		
Sampling Date		2022/05/18	2022/05/18			2022/05/18			2022/05/18	2022/05/18		
Jamping Date		19:00	18:00			18:00			18:30	18:45		
COC Number		n/a	n/a			n/a			n/a	n/a		
	UNITS	SITE 1	SITE 2	RDL	QC Batch	SITE 2 Lab-Dup	RDL	QC Batch	SITE 3	SITE 4	RDL	QC Batch
BTEX & F1 Hydrocarbons												
Benzene	ug/L	0.69	<0.20	0.20	8022137	<0.20	0.20	8022137	<0.20	<0.20	0.20	8022137
Toluene	ug/L	7.5	0.34	0.20	8022137	0.35	0.20	8022137	<0.20	0.75	0.20	8022137
Ethylbenzene	ug/L	4.4	0.31	0.20	8022137	0.30	0.20	8022137	<0.20	0.77	0.20	8022137
o-Xylene	ug/L	8.0	0.65	0.20	8022137	0.69	0.20	8022137	<0.20	1.7	0.20	8022137
p+m-Xylene	ug/L	10	0.84	0.40	8022137	0.87	0.40	8022137	<0.40	2.1	0.40	8022137
Total Xylenes	ug/L	18	1.5	0.40	8022137	1.6	0.40	8022137	<0.40	3.8	0.40	8022137
F1 (C6-C10)	ug/L	73	<25	25	8022137	<25	25	8022137	<25	<25	25	8022137
F1 (C6-C10) - BTEX	ug/L	42	<25	25	8022137	<25	25	8022137	<25	<25	25	8022137
F2-F4 Hydrocarbons	-	•				-			-	-		
F2 (C10-C16 Hydrocarbons)	ug/L	230	<100	100	8023643				<100	8800	100	8023643
F3 (C16-C34 Hydrocarbons)	ug/L	880	1000	200	8023643				250	11000	200	8023643
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	8023643				<200	870	200	8023643
Reached Baseline at C50	ug/L	Yes	Yes		8023643				Yes	Yes		8023643
Surrogate Recovery (%)												
1,4-Difluorobenzene	%	101	99		8022137	106		8022137	101	101		8022137
4-Bromofluorobenzene	%	98	99		8022137	97		8022137	98	100		8022137
D10-o-Xylene	%	97	98		8022137	101		8022137	100	102		8022137
D4-1,2-Dichloroethane	%	99	98		8022137	100		8022137	96	101		8022137
o-Terphenyl	%	88	89		8023643				87	92		8023643

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

# DISS. ICPMS METALS FOR FEDERAL INT. GWQG (WATER)

Bureau Veritas ID		SSJ130	SSJ131	SSJ132	SSJ133		
Sampling Date		2022/05/18	2022/05/18	2022/05/18	2022/05/18		
Sumpling Dute		19:00	18:00	18:30	18:45		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	SITE 1	SITE 2	SITE 3	SITE 4	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	291	140	23.2	27.7	0.50	8027273
Metals	•					•	
Dissolved Aluminum (AI)	mg/L	0.0205	0.0346	0.0902	0.0336	0.0030	8027744
Dissolved Antimony (Sb)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8027744
Dissolved Arsenic (As)	mg/L	0.0165	0.00581	0.0415	0.0173	0.00010	8027744
Dissolved Barium (Ba)	mg/L	0.0274	0.0141	0.0026	0.0064	0.0010	8027744
Dissolved Beryllium (Be)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8027744
Dissolved Bismuth (Bi)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8027744
Dissolved Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	8027744
Dissolved Cadmium (Cd)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8027744
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010 <0.0010		<0.0010	0.0010	8027744
Dissolved Cobalt (Co)	mg/L	0.00036	<0.00020	<0.00020	<0.00020	0.00020	8027744
Dissolved Copper (Cu)	mg/L	0.00302	0.00169	0.00530	0.00122	0.00020	8027744
Dissolved Iron (Fe)	mg/L	0.0302	<0.0050	0.0165	0.0117	0.0050	8027744
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8027744
Dissolved Lithium (Li)	mg/L	0.0225	0.0173	<0.0020	<0.0020	0.0020	8027744
Dissolved Manganese (Mn)	mg/L	0.0338	0.0522	0.0120	0.0134	0.0010	8027744
Dissolved Molybdenum (Mo)	mg/L	0.0043	0.0019	<0.0010	<0.0010	0.0010	8027744
Dissolved Nickel (Ni)	mg/L	0.0024	0.0010	<0.0010	<0.0010	0.0010	8027744
Dissolved Selenium (Se)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8027744
Dissolved Silicon (Si)	mg/L	0.34	0.19	0.17	0.15	0.10	8027744
Dissolved Silver (Ag)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8027744
Dissolved Strontium (Sr)	mg/L	0.434	0.261	0.0342	0.0460	0.0010	8027744
Dissolved Thallium (TI)	mg/L	0.000014	<0.000010	<0.000010	<0.000010	0.000010	8027744
Dissolved Tin (Sn)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8027744
Dissolved Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8027744
Dissolved Uranium (U)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	0.00010	8027744
Dissolved Vanadium (V)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8027744
Dissolved Zinc (Zn)	mg/L	0.0181	0.0050	<0.0050	0.0051	0.0050	8027744
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8027744
Dissolved Calcium (Ca)	mg/L	108	53.5	8.82	10.1	0.050	8027274
RDL = Reportable Detection Li	mit		<u> </u>		·		
I							

QC Batch = Quality Control Batch



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

### DISS. ICPMS METALS FOR FEDERAL INT. GWQG (WATER)

Bureau Veritas ID		SSJ130	SSJ131	SSJ132	SSJ133		
Sampling Date		2022/05/18	2022/05/18	2022/05/18	2022/05/18		
Sampling Bute		19:00	18:00	18:30	18:45		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	SITE 1	SITE 2	SITE 3	SITE 4	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	5.44	1.59	0.293	0.587	0.050	8027274
Dissolved Potassium (K)	mg/L	2.67	1.03	0.204	0.473	0.050	8027274
Dissolved Sodium (Na)	mg/L	14.7	4.53	0.610	1.54	0.050	8027274
Dissolved Sulphur (S)	mg/L	6.2	<3.0	<3.0	<3.0	3.0	8027274

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

# TOTAL ICPMS METALS FOR CCME CEQG FOR SW (WATER)

Bureau Veritas ID		SSJ130	SSJ131	SSJ132	SSJ133		
Camplina Data		2022/05/18	2022/05/18	2022/05/18	2022/05/18		
Sampling Date		19:00	18:00	18:30	18:45		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	SITE 1	SITE 2	SITE 3	SITE 4	RDL	QC Batch
Metals							
Total Aluminum (Al)	mg/L	0.219	0.201	1.72	0.573	0.0030	8027743
Total Antimony (Sb)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8027743
Total Arsenic (As)	mg/L	0.0257	0.0111	0.260	0.0440	0.00010	8027743
Total Barium (Ba)	mg/L	0.0272	0.0152	0.0226	0.0116	0.0010	8027743
Total Beryllium (Be)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8027743
Total Bismuth (Bi)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	8027743
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	8027743
Total Cadmium (Cd)	mg/L	0.000012	<0.000010	0.000027	0.000017	0.000010	8027743
Total Chromium (Cr)	mg/L	<0.0010	0.0011	0.0036	0.0031	0.0010	8027743
Total Cobalt (Co)	mg/L	0.00054	0.00036	0.00132	0.00056	0.00020	8027743
Total Copper (Cu)	mg/L	0.00454	0.00449	0.0187	0.0214	0.00050	8027743
Total Iron (Fe)	mg/L	0.597	0.605	5.38	1.89	0.010	8027743
Total Lead (Pb)	mg/L	0.00210	0.00133	0.0430	0.00781	0.00020	8027743
Total Lithium (Li)	mg/L	0.0204	0.0160	0.0026	0.0024	0.0020	8027743
Total Manganese (Mn)	mg/L	0.0419	0.0619	0.0706	0.0403	0.0010	8027743
Total Molybdenum (Mo)	mg/L	0.0043	0.0021	<0.0010	0.0044	0.0010	8027743
Total Nickel (Ni)	mg/L	0.0030	0.0016	0.0042	0.0022	0.0010	8027743
Total Selenium (Se)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8027743
Total Silicon (Si)	mg/L	0.57	0.39	2.80	0.82	0.10	8027743
Total Silver (Ag)	mg/L	0.000039	0.000118	0.000041	0.000332	0.000020	8027743
Total Strontium (Sr)	mg/L	0.414	0.255	0.0445	0.0484	0.0010	8027743
Total Thallium (TI)	mg/L	0.000017	<0.000010	0.000022	<0.000010	0.000010	8027743
Total Tin (Sn)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8027743
Total Titanium (Ti)	mg/L	0.0062	0.0056	0.0422	0.0157	0.0050	8027743
Total Uranium (U)	mg/L	0.00018	<0.00010	0.00015	<0.00010	0.00010	8027743
Total Vanadium (V)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8027743
Total Zinc (Zn)	mg/L	0.0260	0.0192	0.0140	0.111	0.0050	8027743
Total Zirconium (Zr)	mg/L	0.00016	<0.00010	0.00037	0.00016	0.00010	8027743
Total Calcium (Ca)	mg/L	104	52.5	9.82	10.8	0.050	8027742
Total Magnesium (Mg)	mg/L	5.33	1.63	1.18	1.02	0.050	8027742
Total Potassium (K)	mg/L	2.59	1.03	0.554	0.544	0.050	8027742
RDL = Reportable Detection L	imit						
QC Batch = Quality Control Ba	atch						



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

# TOTAL ICPMS METALS FOR CCME CEQG FOR SW (WATER)

	2022/05/18 19:00 n/a	2022/05/18 18:00 n/a	2022/05/18 18:30 n/a	2022/05/18 18:45 n/a					
	n/a	n/a	n/a	n/a					
			, , ,	, a					
UNITS	SITE 1	SITE 2	SITE 3	SITE 4	RDL	QC Batch			
mg/L	14.1	4.33	0.676	1.50	0.050	8027742			
mg/L	5.8	<3.0	<3.0	<3.0	3.0	8027742			
Calculated Parameters									
mg/L	281	138	29.4	31.1	0.50	8027741			
1	mg/L	mg/L 14.1 mg/L 5.8 mg/L 281	mg/L 14.1 4.33 mg/L 5.8 <3.0	mg/L     14.1     4.33     0.676       mg/L     5.8     <3.0	mg/L     14.1     4.33     0.676     1.50       mg/L     5.8     <3.0	mg/L     14.1     4.33     0.676     1.50     0.050       mg/L     5.8     <3.0			

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

### **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SSJ130			SSJ131			SSJ132			
Sampling Date		2022/05/18 19:00			2022/05/18 18:00			2022/05/18 18:30			
COC Number		n/a			n/a			n/a			
	UNITS	SITE 1	RDL	QC Batch	SITE 2	RDL	QC Batch	SITE 3	RDL	QC Batch	
Calculated Parameters											
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	45	1.0	8016219	20	1.0	8016219	29	1.0	8016219	
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8016219	<1.0	1.0	8016219	<1.0	1.0	8016219	
Inorganics											
Conductivity	umho/cm	860	1.0	8019679	420	1.0	8019679	69	1.0	8019679	
Total Dissolved Solids	mg/L	760	10	8021081	360	10	8019354	60	10	8021081	
Fluoride (F-)	mg/L	<0.10	0.10	8019659	<0.10	0.10	8019659	<0.10	0.10	8019659	
Total Organic Carbon (TOC)	mg/L	5.8	0.40	8019345	2.0	0.40	8019345	0.61	0.40	8019345	
рН	рН	7.13		8019681	6.83		8019681	7.60		8019681	
Total Suspended Solids	mg/L	8	1	8019011	13	1	8019011	61	1	8019011	
Turbidity	NTU	1.2	0.1	8018157	0.8	0.1	8018157	170	0.1	8018157	
Alkalinity (Total as CaCO3)	mg/L	45	1.0	8019671	20	1.0	8019671	29	1.0	8019671	
Dissolved Chloride (Cl-)	mg/L	200	2.0	8019148	110	1.0	8019148	2.6	1.0	8019148	
Dissolved Sulphate (SO4)	mg/L	19	1.0	8032894	4.4	1.0	8032894	1.0	0.50	8032894	
RDL = Reportable Detection Limit											

QC Batch = Quality Control Batch



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

### **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SSJ132			SSJ133			SSJ133		
Samulina Data		2022/05/18			2022/05/18			2022/05/18		
Sampling Date		18:30			18:45			18:45		
COC Number		n/a			n/a			n/a		
	UNITS	SITE 3 Lab-Dup	RDL	QC Batch	SITE 4	RDL	QC Batch	SITE 4 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				26	1.0	8016219			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	8016219			
Inorganics										
Conductivity	umho/cm				86	1.0	8019679	86	1.0	8019679
Total Dissolved Solids	mg/L				50	10	8019354			
Fluoride (F-)	mg/L				<0.10	0.10	8019659	<0.10	0.10	8019659
Total Organic Carbon (TOC)	mg/L				2.4	0.40	8019345			
рН	рН				6.92		8019681	6.93		8019681
Total Suspended Solids	mg/L				41	1	8021077			
Turbidity	NTU				3.6	0.1	8018157			
Alkalinity (Total as CaCO3)	mg/L				26	1.0	8019671	25	1.0	8019671
Dissolved Chloride (Cl-)	mg/L	2.5	1.0	8019148	9.5	1.0	8019148			
Dissolved Sulphate (SO4)	mg/L				2.2	0.50	8032895			

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

#### **TEST SUMMARY**

Bureau Veritas ID: SSJ130 Sample ID: SITE 1

**Collected:** 2022/05/18 Shipped:

Matrix: Water

**Received:** 2022/05/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8019671	N/A	2022/05/31	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8016219	N/A	2022/06/01	Automated Statchk
Chloride by Automated Colourimetry	KONE	8019148	N/A	2022/05/30	Alina Dobreanu
Conductivity	AT	8019679	N/A	2022/05/31	Surinder Rai
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8022137	N/A	2022/05/30	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8023643	2022/05/31	2022/05/31	Jeevaraj Jeevaratrnam
Fluoride	ISE	8019659	2022/05/27	2022/05/31	Surinder Rai
Low Level Chloride and Sulphate by AC	KONE	8032894	N/A	2022/06/03	Shanna McKort
Hardness Total (calculated as CaCO3)	CALC	8027741	N/A	2022/06/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8027273	N/A	2022/06/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8027274	N/A	2022/06/01	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8027744	N/A	2022/05/31	Jeffrey Laporte
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8027742	2022/06/01	2022/06/01	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8027743	2022/05/31	2022/05/31	Jeffrey Laporte
рН	AT	8019681	2022/05/27	2022/05/31	Surinder Rai
Total Dissolved Solids	BAL	8021081	2022/05/28	2022/05/30	Kristen Chan
Total Organic Carbon (TOC)	TOCV/NDIR	8019345	N/A	2022/05/30	Anna-Kay Gooden
Low Level Total Suspended Solids	BAL	8019011	2022/05/27	2022/05/30	Shaneil Hall
Turbidity	AT	8018157	N/A	2022/05/27	Roya Fathitil

Bureau Veritas ID: SSJ131 Sample ID: SITE 2 Matrix: Water

**Collected:** 2022/05/18 Shipped:

**Received:** 2022/05/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8019671	N/A	2022/05/31	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8016219	N/A	2022/06/01	Automated Statchk
Chloride by Automated Colourimetry	KONE	8019148	N/A	2022/05/30	Alina Dobreanu
Conductivity	AT	8019679	N/A	2022/05/31	Surinder Rai
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8022137	N/A	2022/05/30	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8023643	2022/05/31	2022/05/31	Jeevaraj Jeevaratrnam
Fluoride	ISE	8019659	2022/05/27	2022/05/31	Surinder Rai
Low Level Chloride and Sulphate by AC	KONE	8032894	N/A	2022/06/03	Shanna McKort
Hardness Total (calculated as CaCO3)	CALC	8027741	N/A	2022/06/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8027273	N/A	2022/06/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8027274	N/A	2022/06/01	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8027744	N/A	2022/05/31	Jeffrey Laporte
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8027742	2022/06/01	2022/06/01	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8027743	2022/05/31	2022/05/31	Jeffrey Laporte
рН	AT	8019681	2022/05/27	2022/05/31	Surinder Rai
Total Dissolved Solids	BAL	8019354	2022/05/30	2022/05/31	Kristen Chan
Total Organic Carbon (TOC)	TOCV/NDIR	8019345	N/A	2022/05/30	Anna-Kay Gooden
Low Level Total Suspended Solids	BAL	8019011	2022/05/27	2022/05/30	Shaneil Hall
Turbidity	AT	8018157	N/A	2022/05/27	Roya Fathitil



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

#### **TEST SUMMARY**

Bureau Veritas ID: SSJ131 Dup

Collected: Shipped:

2022/05/18

Sample ID: SITE 2 Matrix: Water

Received:

2022/05/25

**Test Description** Instrumentation Batch **Extracted Date Analyzed** Analyst Petroleum Hydro. CCME F1 & BTEX in Water HSGC/MSFD 8022137 2022/05/30 Abdikarim Ali N/A

Bureau Veritas ID: SSJ132 Sample ID:

Shipped:

**Collected:** 2022/05/18

SITE 3 Matrix: Water

Received: 2022/05/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8019671	N/A	2022/05/31	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8016219	N/A	2022/06/01	Automated Statchk
Chloride by Automated Colourimetry	KONE	8019148	N/A	2022/05/30	Alina Dobreanu
Conductivity	AT	8019679	N/A	2022/05/31	Surinder Rai
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8022137	N/A	2022/05/30	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8023643	2022/05/31	2022/05/31	Jeevaraj Jeevaratrnam
Fluoride	ISE	8019659	2022/05/27	2022/05/31	Surinder Rai
Low Level Chloride and Sulphate by AC	KONE	8032894	N/A	2022/06/03	Shanna McKort
Hardness Total (calculated as CaCO3)	CALC	8027741	N/A	2022/06/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8027273	N/A	2022/06/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8027274	N/A	2022/06/01	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8027744	N/A	2022/05/31	Jeffrey Laporte
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8027742	2022/06/01	2022/06/01	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8027743	2022/05/31	2022/05/31	Jeffrey Laporte
рН	AT	8019681	2022/05/27	2022/05/31	Surinder Rai
Total Dissolved Solids	BAL	8021081	2022/05/28	2022/05/30	Kristen Chan
Total Organic Carbon (TOC)	TOCV/NDIR	8019345	N/A	2022/05/30	Anna-Kay Gooden
Low Level Total Suspended Solids	BAL	8019011	2022/05/27	2022/05/30	Shaneil Hall
Turbidity	AT	8018157	N/A	2022/05/27	Roya Fathitil

Bureau Veritas ID: SSJ132 Dup Sample ID: SITE 3

Matrix: Water

Collected: 2022/05/18

Shipped:

Received: 2022/05/25

**Test Description** Instrumentation Extracted **Date Analyzed Batch** Analyst Chloride by Automated Colourimetry KONE 8019148 2022/05/30 Alina Dobreanu N/A

Bureau Veritas ID: SSJ133 Sample ID: SITE 4

Collected: 2022/05/18

Shipped:

Received: 2022/05/25

Matrix: Water Tost Dossription Instrumentation

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8019671	N/A	2022/05/31	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8016219	N/A	2022/06/01	Automated Statchk
Chloride by Automated Colourimetry	KONE	8019148	N/A	2022/05/30	Alina Dobreanu
Conductivity	AT	8019679	N/A	2022/05/31	Surinder Rai
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8022137	N/A	2022/05/30	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8023643	2022/05/31	2022/05/31	Jeevaraj Jeevaratrnam



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

#### **TEST SUMMARY**

Bureau Veritas ID: SSJ133

**Collected:** 2022/05/18

Sample ID: SITE 4
Matrix: Water

Shipped: Received: 2022/05/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE	8019659	2022/05/27	2022/05/31	Surinder Rai
Low Level Chloride and Sulphate by AC	KONE	8032895	N/A	2022/06/03	Shanna McKort
Hardness Total (calculated as CaCO3)	CALC	8027741	N/A	2022/06/01	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8027273	N/A	2022/06/01	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8027274	N/A	2022/06/01	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8027744	N/A	2022/05/31	Jeffrey Laporte
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8027742	2022/06/01	2022/06/01	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8027743	2022/05/31	2022/05/31	Jeffrey Laporte
рН	AT	8019681	2022/05/27	2022/05/31	Surinder Rai
Total Dissolved Solids	BAL	8019354	2022/05/30	2022/05/31	Kristen Chan
Total Organic Carbon (TOC)	TOCV/NDIR	8019345	N/A	2022/05/30	Anna-Kay Gooden
Low Level Total Suspended Solids	BAL	8021077	2022/05/28	2022/05/30	Shaneil Hall
Turbidity	AT	8018157	N/A	2022/05/27	Roya Fathitil

Bureau Veritas ID: SSJ133 Dup Sample ID: SITE 4 **Collected:** 2022/05/18

Shipped:

Matrix: Water

**Received:** 2022/05/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8019671	N/A	2022/05/31	Surinder Rai
Conductivity	AT	8019679	N/A	2022/05/31	Surinder Rai
Fluoride	ISE	8019659	2022/05/27	2022/05/31	Surinder Rai
рН	AT	8019681	2022/05/27	2022/05/31	Surinder Rai



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

### **GENERAL COMMENTS**

Each te	emperature is the	average of up to t	hree cooler temperatures taken at receipt
	Package 1	17.0°C	
Result	s relate only to th	e items tested.	



### **QUALITY ASSURANCE REPORT**

Agnico-Eagle

Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8022137	1,4-Difluorobenzene	2022/05/30	100	70 - 130	99	70 - 130	104	%				
8022137	4-Bromofluorobenzene	2022/05/30	98	70 - 130	99	70 - 130	96	%				
8022137	D10-o-Xylene	2022/05/30	95	70 - 130	92	70 - 130	101	%				
8022137	D4-1,2-Dichloroethane	2022/05/30	97	70 - 130	97	70 - 130	90	%				
8023643	o-Terphenyl	2022/05/31	96	60 - 130	94	60 - 130	93	%				
8018157	Turbidity	2022/05/27			103	85 - 115	<0.1	NTU	0.85	20		
8019011	Total Suspended Solids	2022/05/30					<1	mg/L	11	25	95	85 - 115
8019148	Dissolved Chloride (Cl-)	2022/05/30	126 (1)	80 - 120	105	80 - 120	<1.0	mg/L	2.2	20		
8019345	Total Organic Carbon (TOC)	2022/05/30	94	80 - 120	96	80 - 120	<0.40	mg/L	4.3	20		
8019354	Total Dissolved Solids	2022/05/31					<10	mg/L	0.43	25	97	90 - 110
8019659	Fluoride (F-)	2022/05/31	96	80 - 120	101	80 - 120	<0.10	mg/L	NC	20		
8019671	Alkalinity (Total as CaCO3)	2022/05/31			95	85 - 115	<1.0	mg/L	2.1	20		
8019679	Conductivity	2022/05/31			102	85 - 115	<1.0	umho/c m	0.12	25		
8019681	рН	2022/05/31			102	98 - 103			0.24	N/A		
8021077	Total Suspended Solids	2022/05/30					<1	mg/L	0	25	96	85 - 115
8021081	Total Dissolved Solids	2022/05/30					<10	mg/L	2.4	25	102	90 - 110
8022137	Benzene	2022/05/30	94	50 - 140	97	50 - 140	<0.20	ug/L	NC	30		
8022137	Ethylbenzene	2022/05/30	105	50 - 140	109	50 - 140	<0.20	ug/L	4.3	30		
8022137	F1 (C6-C10) - BTEX	2022/05/30					<25	ug/L	NC	30		
8022137	F1 (C6-C10)	2022/05/30	88	60 - 140	90	60 - 140	<25	ug/L	NC	30		
8022137	o-Xylene	2022/05/30	100	50 - 140	103	50 - 140	<0.20	ug/L	4.9	30		
8022137	p+m-Xylene	2022/05/30	101	50 - 140	103	50 - 140	<0.40	ug/L	3.9	30		
8022137	Toluene	2022/05/30	100	50 - 140	101	50 - 140	<0.20	ug/L	1.7	30		
8022137	Total Xylenes	2022/05/30					<0.40	ug/L	4.3	30		
8023643	F2 (C10-C16 Hydrocarbons)	2022/05/31	111	60 - 130	102	60 - 130	<100	ug/L	NC	30		
8023643	F3 (C16-C34 Hydrocarbons)	2022/05/31	109	60 - 130	104	60 - 130	<200	ug/L	NC	30		
8023643	F4 (C34-C50 Hydrocarbons)	2022/05/31	106	60 - 130	100	60 - 130	<200	ug/L	NC	30		
8027743	Total Aluminum (Al)	2022/05/31	92	80 - 120	97	80 - 120	<0.0030	mg/L	14	20		<u></u>
8027743	Total Antimony (Sb)	2022/05/31	99	80 - 120	98	80 - 120	<0.00050	mg/L				
8027743	Total Arsenic (As)	2022/05/31	NC	80 - 120	98	80 - 120	<0.00010	mg/L	3.0	20		
8027743	Total Barium (Ba)	2022/05/31	NC	80 - 120	94	80 - 120	<0.0010	mg/L	1.5	20		



# QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle

Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8027743	Total Beryllium (Be)	2022/05/31	94	80 - 120	94	80 - 120	<0.00010	mg/L				
8027743	Total Bismuth (Bi)	2022/05/31	90	80 - 120	92	80 - 120	<0.0010	mg/L				
8027743	Total Boron (B)	2022/05/31	100	80 - 120	100	80 - 120	<0.050	mg/L				
8027743	Total Cadmium (Cd)	2022/05/31	98	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20		
8027743	Total Chromium (Cr)	2022/05/31	101	80 - 120	98	80 - 120	<0.0010	mg/L	14	20		
8027743	Total Cobalt (Co)	2022/05/31	98	80 - 120	99	80 - 120	<0.00020	mg/L				
8027743	Total Copper (Cu)	2022/05/31	94	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20		
8027743	Total Iron (Fe)	2022/05/31	NC	80 - 120	100	80 - 120	<0.010	mg/L	7.5	20		
8027743	Total Lead (Pb)	2022/05/31	95	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20		
8027743	Total Lithium (Li)	2022/05/31	97	80 - 120	95	80 - 120	<0.0020	mg/L				
8027743	Total Manganese (Mn)	2022/05/31	NC	80 - 120	97	80 - 120	<0.0010	mg/L	1.5	20		
8027743	Total Molybdenum (Mo)	2022/05/31	NC	80 - 120	98	80 - 120	<0.0010	mg/L	3.0	20		
8027743	Total Nickel (Ni)	2022/05/31	95	80 - 120	97	80 - 120	<0.0010	mg/L	1.0	20		
8027743	Total Selenium (Se)	2022/05/31	106	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20		
8027743	Total Silicon (Si)	2022/05/31	102	80 - 120	107	80 - 120	<0.10	mg/L				
8027743	Total Silver (Ag)	2022/05/31	98	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20		
8027743	Total Strontium (Sr)	2022/05/31	NC	80 - 120	90	80 - 120	<0.0010	mg/L				
8027743	Total Thallium (TI)	2022/05/31	95	80 - 120	93	80 - 120	<0.000010	mg/L	6.1	20		
8027743	Total Tin (Sn)	2022/05/31	97	80 - 120	98	80 - 120	<0.0050	mg/L				
8027743	Total Titanium (Ti)	2022/05/31	94	80 - 120	96	80 - 120	<0.0050	mg/L				
8027743	Total Uranium (U)	2022/05/31	100	80 - 120	95	80 - 120	<0.00010	mg/L				
8027743	Total Vanadium (V)	2022/05/31	99	80 - 120	95	80 - 120	<0.0050	mg/L				
8027743	Total Zinc (Zn)	2022/05/31	97	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20		
8027743	Total Zirconium (Zr)	2022/05/31	99	80 - 120	93	80 - 120	<0.00010	mg/L				
8027744	Dissolved Aluminum (Al)	2022/05/31	93	80 - 120	99	80 - 120	<0.0030	mg/L				
8027744	Dissolved Antimony (Sb)	2022/05/31	96	80 - 120	99	80 - 120	<0.00050	mg/L				
8027744	Dissolved Arsenic (As)	2022/05/31	99	80 - 120	101	80 - 120	<0.00010	mg/L				
8027744	Dissolved Barium (Ba)	2022/05/31	92	80 - 120	98	80 - 120	<0.0010	mg/L				
8027744	Dissolved Beryllium (Be)	2022/05/31	92	80 - 120	97	80 - 120	<0.00010	mg/L				
8027744	Dissolved Bismuth (Bi)	2022/05/31	86	80 - 120	94	80 - 120	<0.0010	mg/L				
8027744	Dissolved Boron (B)	2022/05/31	94	80 - 120	100	80 - 120	<0.050	mg/L				
8027744	Dissolved Cadmium (Cd)	2022/05/31	93	80 - 120	98	80 - 120	<0.00010	mg/L				



# QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle

Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8027744	Dissolved Chromium (Cr)	2022/05/31	93	80 - 120	99	80 - 120	<0.0010	mg/L				
8027744	Dissolved Cobalt (Co)	2022/05/31	92	80 - 120	100	80 - 120	<0.00020	mg/L				
8027744	Dissolved Copper (Cu)	2022/05/31	88	80 - 120	97	80 - 120	<0.00020	mg/L				
8027744	Dissolved Iron (Fe)	2022/05/31	93	80 - 120	102	80 - 120	<0.0050	mg/L				
8027744	Dissolved Lead (Pb)	2022/05/31	91	80 - 120	96	80 - 120	<0.00020	mg/L				
8027744	Dissolved Lithium (Li)	2022/05/31	91	80 - 120	97	80 - 120	<0.0020	mg/L				
8027744	Dissolved Manganese (Mn)	2022/05/31	91	80 - 120	99	80 - 120	<0.0010	mg/L				
8027744	Dissolved Molybdenum (Mo)	2022/05/31	98	80 - 120	101	80 - 120	<0.0010	mg/L				
8027744	Dissolved Nickel (Ni)	2022/05/31	90	80 - 120	99	80 - 120	<0.0010	mg/L				
8027744	Dissolved Selenium (Se)	2022/05/31	98	80 - 120	104	80 - 120	<0.00010	mg/L				
8027744	Dissolved Silicon (Si)	2022/05/31	102	80 - 120	110	80 - 120	<0.10	mg/L				
8027744	Dissolved Silver (Ag)	2022/05/31	95	80 - 120	98	80 - 120	<0.000020	mg/L				
8027744	Dissolved Strontium (Sr)	2022/05/31	NC	80 - 120	95	80 - 120	<0.0010	mg/L				
8027744	Dissolved Thallium (TI)	2022/05/31	91	80 - 120	95	80 - 120	<0.000010	mg/L				
8027744	Dissolved Tin (Sn)	2022/05/31	93	80 - 120	98	80 - 120	<0.0050	mg/L				
8027744	Dissolved Titanium (Ti)	2022/05/31	96	80 - 120	101	80 - 120	<0.0050	mg/L				
8027744	Dissolved Uranium (U)	2022/05/31	94	80 - 120	98	80 - 120	<0.00010	mg/L				
8027744	Dissolved Vanadium (V)	2022/05/31	95	80 - 120	97	80 - 120	<0.0050	mg/L				
8027744	Dissolved Zinc (Zn)	2022/05/31	92	80 - 120	101	80 - 120	<0.0050	mg/L				
8027744	Dissolved Zirconium (Zr)	2022/05/31	99	80 - 120	100	80 - 120	<0.00010	mg/L				
8032894	Dissolved Sulphate (SO4)	2022/06/03	104	80 - 120	107	80 - 120	<0.50	mg/L	1.4	20		



Bureau Veritas Job #: C2E2308 Report Date: 2022/06/06

#### QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle

Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

		Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard		
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8032895	Dissolved Sulphate (SO4)	2022/06/03	NC	80 - 120	106	80 - 120	<0.50	mg/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

#### **VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by:

Cristia Carriere
Cristina Carriere, Senior Scientific Specialist
A
David Huang, BBY Scientific Specialist
- July
Sze Yeung Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



applicable regulatory guidelines.

Agnico-Eagle

Site Location: MELIADINE Your P.O. #: OL-1129375 Sampler Initials: DM

# Exceedance Summary Table – Metal Mining Effluent Reg Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table	is for information purp	oses only and should not	be considered a compreher	nsive listing	or statement of co	nformance to