Appendix 28

## Meadowbank 2022 GN spills reports



# Canadä NT-NU SPILL REPORT

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

A	REPORT DATE: MONTH – DAY – 02-28-2022	YEAR	F	report tim <b>11:00</b>	ME		ORIGINAL SPILL REI	PORT,	REPORT NUMBER
В	OCCURRENCE DATE: MONTH – 02-27-2022	DAY – YEAR	С	DCCURREN 13:00	ICE TIME		UPDATE # THE ORIGINAL SPIL	L REPORT	
С	LAND USE PERMIT NUMBER (IF	APPLICABLE)	L	w. N	ATER LICENCE NUI	MBER (IF	APPLICABLE) 5 <b>30</b>		
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F	RESPONSIBLE PARTY OR VESS	INES LTD	RESPONSIBLE PA	ARTY ADDF <b>AKE X(</b>	RESS OR OFFICE LO	OCATION			
G	ANY CONTRACTOR INVOLVED		CONTRACTOR AL	DDRESS OF	R OFFICE LOCATIO	N			
	PRODUCT SPILLED DIESEL FUEL		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES				U.N. NUMBER		
H	SECOND PRODUCT SPILLED (IF	QUANTITY IN LITE	res, kilog	GRAMS OR CUBIC N	<b>METRES</b>	U.N. NUMBER			
Ι	SPILL SOURCE PUMP		SPILL CAUSE	NT FAI	ILURE		AREA OF CONTAN	INATION IN	SQUARE METRES
	FACTORS AFFECTING SPILL OR RECOVERY DESCRIBE			SSISTANC	E REQUIRED		HAZARDS TO PER	SONS, PROF	PERTY OR EQUIPMENT
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## 2022-02-27 MBK 700L Diesel

GN reference #: 2022-060

Please find the following information as a follow up to the Spill report submitted February 27, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

## **Spill Description**

During operations at Meadowbank, upon arrival of the pump maintenance crew at the reclaim station it was noticed that the equipment fuel tank had failed emptying its contents in the Pit E tailing storage facility.



Spill location: 65'01'00.5" 96' 03'06.6"

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 400 meters to Second Portage Lake.

## Cause of Spill

Further investigation revealed that the fuel tank of the pump had been damaged by debris on the floor during the transfer of the equipment into its shelter (sea can).

## **Remediation Actions**

The spilled contaminant was fully contained within the tailing storage facilities. As per the section 5.5 of the Spill Contingency Plan Version 13, (AEM, 2021) spills over 100L of petroleum hydrocarbon contaminated snow may be placed within the TSF.



## **Corrective measures**

To prevent the incident from occurring in the future the technic used to transfer the pump into its shell was re-evaluated and changed. Furthermore, a reminder was communicated to workers to complete a visual inspection of all work area as part of the inspection phase prior to starting a task.

## <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on February 27, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.



Sent from Amaruq



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# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca REPORT LINE USE ONLY

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

A	REPORT DATE: MONTH – DAY 03-29-2022	– YEAR		REPORT <b>7:00</b>	TIME		XORIGINAL SPIL	L REPORT,	REPORT NUMBER		
В	OCCURRENCE DATE: MONTH 03-28-2022	– DAY – YEAR		OCCURR 16:30	ENCE TIME		UPDATE # TO THE ORIGINA	L SPILL REPORT	·		
С	LAND USE PERMIT NUMBER (	IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE) NWB-2AM-MEA1530						
D	GEOGRAPHIC PLACE NAME C	DR DISTANCE AND DIRECTIC	N FROM NAMED LO	OCATION	REGION			ADJACENT JURISDICTION OR OCEAN			
Е	LATITUDE	MINUTES 01				6	MINUITES	03 .	13		
F	RESPONSIBLE PARTY OR VES	SSEL NAME		PARTY AD	DRESS OR OFF	ICE LOCATI	ION				
G	ANY CONTRACTOR INVOLVED	)	CONTRACTOR A	ADDRESS							
	PRODUCT SPILLED DIESEL FUEL		QUANTITY IN LIT	TRES, KIL	OGRAMS OR CL	JBIC METRE	ES U.N. NUMBE	R			
H	SECOND PRODUCT SPILLED (IF APPLICABLE) QUANTI			TRES, KIL	OGRAMS OR CL	JBIC METRE	ES U.N. NUMBE	R			
I	SPILL SOURCE FUEL TANKER		SPILL CAUSE	L - Hu	ıman Erro	or	AREA OF CC 50m2	ONTAMINATION IN	I SQUARE METRES		
J	FACTORS AFFECTING SPILL OR RECOVERY DESCRIBE AN			ASSISTAN	NCE REQUIRED		HAZARDS TO	D PERSONS, PRO	DPERTY OR EQUIPMENT		
к	fuel compartment and material was the Meadowbank There were no off lake is 400m to Th Spill Location: No Contact Informati	t. Spill pads were scraped up. App landfarm. f site impacts or o hird Portage Lake orthing 65' 0' 57.9 on: Tom Thomso	e immediate roximately lischarges 4" Easting n 819 759 3	ely pla 10m3 to any 96' 3' 8555 e	ced on th was colle receiving 53.15" xt. 460674	e grou ected in g water 44	nd and the nto a roll of rcourses. I	contamin ff and will Distance to	ated snow be brought to o the closest		
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NI	RECEIVED AT SPILL LINE BY	POSITION		EMPLOY	ER		LOCATION CALLE	D	REPORT LINE NUMBER		
		STATION OPERATOR					YELLOWKNIFE, N	іт 🔤	(867) 920-8130		
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## 2022-03-28 MBK 250L Diesel

GN reference #: 2022-101

Please find the following information as a follow up to the Spill report submitted March 28, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

## **Spill Description**

During operations at Meadowbank, an Arctic Fuel driver was refueling tanker #40 at the Meadowbank Tank Farm. The driver went back into the truck during the refueling and fuel overflowed out of the top fuel compartment and onto the ground.



Spill location: 65'0' 57.94" 96' 3' 53.15"

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 400 meters to Third Portage Lake.

## Cause of Spill

The spill was caused by human error. During refueling, driver protocol is to be on top of the tanker while another person on the ground oversees the shut off valve.

## **Remediation Actions**

Spill pads were immediately placed on the ground and a grader was called to scrape the area clean. Approximately 10m3 of contaminated snow and material was collected and brought to the Meadowbank Landfarm.



## **Corrective measures**

An investigation into the root causes of the spill is being completed. Furthermore, the refueling protocol was communicated to all Arctic Fuel drivers.

## <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on March 28, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.



Tom Thomson | Environment Coordinator tom.thomson@agnicoeagle.com | Direct 819.759.3555 X4606744 | Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0

agnicoeagle.com



# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

							REPORT LINE USE ONLY			
Α	REPORT DATE: MONTH - DAY 04-25-2022	– YEAR		REPORT T 16:30	IME	CRIGINAL SPILL REPORT	REPORT NUMBER			
В	OCCURRENCE DATE: MONTH 04-09-2022	– DAY – YEAR		OCCURRE 7:10	INCE TIME	UPDATE # TO THE ORIGINAL SPILL RE				
С	LAND USE PERMIT NUMBER (	(IF APPLICABLE)		١	NATER LICENCE NUMBER	R (IF APPLICABLE)				
D	GEOGRAPHIC PLACE NAME C Meadowbank	OR DISTANCE AND DIRECTION	ON FROM NAMED L	OCATION		JT 🗆 ADJACENT JURISD	ICTION OR OCEAN			
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F	RESPONSIBLE PARTY OR VES	SSEL NAME MINES LTD	RESPONSIBLE BAKER I	PARTY ADD	RESS OR OFFICE LOCAT	ION				
G	ANY CONTRACTOR INVOLVED CONTRACTOR ADDRESS OR OFFICE LOCATION									
	PRODUCT SPILLED QUANTITY IN LITRES, F Total Suspended Solids (TSS) TBD				GRAMS OR CUBIC METR	ES U.N. NUMBER				
H	1         SECOND PRODUCT SPILLED (IF APPLICABLE)         QUANTITY IN I				GRAMS OR CUBIC METR	ES U.N. NUMBER				
Ι	SPILL SOURCE         SPILL CAUSE           Dewatering water (ST-MMER-3)         Effluent			Discha	rge	AREA OF CONTAMINAT	ION IN SQUARE METRES			
J	FACTORS AFFECTING SPILL OR RECOVERY DESCRIBE AN				CE REQUIRED	HAZARDS TO PERSON	S, PROPERTY OR EQUIPMENT			
к	The effluent of ST-MMER-3 East dike discharge was sampled on April 9, 2022 as required by the Water License 2AM-MEA1530 and MDMER. The results of the internal TSS analysis revealed a concentration of 2.8 mg/L, however the external laboratory results revealed a concentration of 49 mg/L. External laboratory results have been received for effluent samples collected on April 10th and 11th. TSS results for both samples is 2 mg/L. Spill location : ST-MMER-3 65°01'11.2" N 96°02'32.0"W Contact information: Samuel Tapp 819 759 3555 EXT.: 460-6744									
L	REPORTED TO SPILL LINE BY Samuel Tapp	Env. Coordin	nator	Agnic	<sup>R</sup> o Eagle Mines	LOCATION CALLING FROM	TELEPHONE 819-759-3555			
Μ	ANY ALTERNATE CONTACT Eric Haley	POSITION Env. Gen. Su	upervisor	EMPLOYE Agnic	o Eagle Mines	ALTERNATE CONTACT MEADOWBANK LOCATION	ALTERNATE TELEPHONE 819-6511-1010			
			REPORT LIN	E USE ON	LY					
Ν	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR		EMPLOYE	R	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130			
LEAD		GNWT □ GN □ ILA □ INA		SIGNI			E STATUS			
AGEI	NCY	CONTACT NAME		CONT	ACT TIME	REMARKS				
LEAD	DAGENCY									
FIRS	T SUPPORT AGENCY									
SEC	OND SUPPORT AGENCY									
THIR	THIRD SUPPORT AGENCY									



May 24, 2022

## <u>Re: Agnico Eagle Meadowbank Mine – East Dike Pond Discharge Total Suspended</u> Solids Exceedance on April 9, 2022 - Follow up report

As required by Water License 2AM-MEA1530 Part H, Item 8b, Subsections 38(5) of the Fisheries Act and Section 24(1)(a) of the Metal and Diamond Mining Effluent Regulations, Agnico Eagle Mine Ltd. Meadowbank Complex reported via email on April 25, 2022, that the level of Total Suspended Solids (TSS) from the East Dike Discharge (ST-MMER-3/ST-8) exceeded the limits, set out in Water License Part F Item 7 and MDMER Schedule 4, of 30 mg/L for the maximum authorized concentration in a grab sample.

As required by Water License 2AM-MEA1530 Part H, Item 8c, MDMER Section 24 (2), and Subsection 38(7) of the Fisheries Act, this letter serves as the follow up report, describing in full details the event and the analysis results.

The East Dike Discharge effluent was sampled on April 9, 2022 at 7:10am CT. Laboratory result (laboratory certificate Appendix A attach with this letter) of the April 9 sample was received on April 25, 2022. Result for total suspended solid (TSS) of 49 mg/L exceeds the regulatory limit of 30 mg/L maximum authorized concentration in a grab sample. East Dike Discharge to Second Portage Lake effluent was also sampled on April 10 and April 11. External laboratory TSS results for both samples are 2 mg/L. Based on a total flow of 220m<sup>3</sup> between April 9, 7:00am and April 10, 7:30am CT, the quantity of TSS release is estimated to be at most 10.78 kg.

External laboratory results of April 10, April 11, April 18, April 25, and April 26 are below the authorized limits: April 10 (TSS – 2 mg/L), April 11 (TSS – 2 mg/L), April 18 (TSS – 2 mg/L), April 25 (TSS – 2 mg/L), and April 26 (TSS – 2 mg/L) indicating the TSS spike on April 9 was a one-time event. Additionally, acute lethality testing to *Daphnia Magna* and *Rainbow Trout* was performed on April 11, and demonstrated the effluent to be non-toxic to *Rainbow Trout* and *Daphnia Magna*. The April monthly TSS average for ST-MMER-3/ST-8 was 9.8mg/L.

Moreover, as part of internal monitoring to ensure the protection of the receiving environment, Agnico analyses on a daily basis a TSS sample from the East Dike seepage collection system through the onsite laboratory, which provides real time data for guidance. Results of these samples between April 1 and April 9 were all below the authorized limit, ranging between 2.80mg/L and 6.60mg/L, for an average of 4.97mg/L not allowing to foresee the exceedance on April 9. Furthermore, the internal results on April 9 were 2.80mg/L.

In the month of April, the discharge from the East Dike Seepage to Second Portage Lake was operational between April 7<sup>th</sup> and April 30<sup>th</sup> and is only expected to resume later in the fall of 2022.



Through the analysis of all of the available data, specifically the repeated low TSS analysis results, with the exception of April 9<sup>th</sup> analysis, and the non-toxic results of the acute lethality testing performed on April 11<sup>th</sup>, Agnico Eagle is confident that the aquatic environment was protected and not impacted. The Core Receiving Environment Monitoring Program includes Second Portage Lake and will confirm these findings.

Should you have any questions regarding this report, please do not hesitate to contact the below.

Regards,

Samuel Tapp

samuel.tapp@agnicoeagle.com Environment Coordinator



## LIST OF APPENDICES

Appendix A: ST-MMER-3 2022-04-09 Certificate of Analysis Appendix B: ST-MMER-3 2022-04-10 Certificate of Analysis Appendix C: ST-MMER-3 2022-04-11 Certificate of Analysis Appendix D: ST-MMER-3 2022-04-11 Acute Lethality Rainbow Trout Certificate of Analysis Appendix E: ST-MMER-3 2022-04-11 Acute Lethality Daphnia Certificate of Analysis Appendix F: ST-MMER-3 2022-04-18 Certificate of Analysis Appendix G: ST-MMER-3 2022-04-25 Certificate of Analysis Appendix H: ST-MMER-3 2022-04-26 Certificate of Analysis Appendix I: East Dike Internal TSS Results



Appendix A

ST-MMER-3 2022-04-09 Certificate of Analysis



Your P.O. #: PO 1121445 Your Project #: MBK Site#: MBK Your C.O.C. #: 496002

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/04/20 Report #: R7093226 Version: 1 - Final

## **CERTIFICATE OF ANALYSIS**

## BUREAU VERITAS JOB #: C299312

Received: 2022/04/13, 09:30

Sample Matrix: Water # Samples Received: 1

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Total Ammonia-N (1)	1	N/A	2022/04/20	CAM SOP-00441	USGS I-2522-90 m
Field Measured pH (1, 2)	1	N/A	2022/04/14		Field pH Meter
Field Temperature (1, 2)	1	N/A	2022/04/14		Field Thermometer
Low Level Total Suspended Solids (1)	1	2022/04/16	2022/04/18	CAM SOP-00428	SM 23 2540D m
Un-ionized Ammonia (1)	1	2022/04/14	2022/04/20	Auto Calc.	PWQO

#### 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 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 is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.



Your P.O. #: PO 1121445 Your Project #: MBK Site#: MBK Your C.O.C. #: 496002

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/04/20 Report #: R7093226 Version: 1 - Final

## **CERTIFICATE OF ANALYSIS**

BUREAU VERITAS JOB #: C299312 Received: 2022/04/13, 09:30

**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.



## **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SJC561								
Sampling Data		2022/04/09								
Sampling Date		07:10								
COC Number		496002								
	UNITS	ST-MMER-3	RDL	QC Batch						
Calculated Parameters	Calculated Parameters									
Total Un-ionized Ammonia	mg/L	<0.0011	0.0011	7940782						
Field Measurements										
Field Temperature	Celsius	1.3	N/A	ONSITE						
Field Measured pH	рН	8.28		ONSITE						
Inorganics										
Total Ammonia-N	mg/L	<0.050	0.050	7946688						
Total Suspended Solids	mg/L	49	1	7943403						
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
N/A = Not Applicable										



## **TEST SUMMARY**

Bureau Veritas ID: SJC561 Sample ID: ST-MMER-3 Matrix: Water

Collected: 2022/04/09 Shipped: Received: 2022/04/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Ammonia-N	LACH/NH4	7946688	N/A	2022/04/20	Raiq Kashif
Field Measured pH	PH	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Field Measured pH	PH	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Low Level Total Suspended Solids	BAL	7943403	2022/04/16	2022/04/18	Shaneil Hall
Un-ionized Ammonia	CALC/NH3	7940782	2022/04/20	2022/04/20	Automated Statchk



## **GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.3°C
Package 2	13.0°C
Package 3	12.3°C
Package 4	13.3°C

Results relate only to the items tested.



## QUALITY ASSURANCE REPORT

Agnico Eagle Client Project #: MBK Your P.O. #: PO 1121445 Sampler Initials: DN

		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
7943403	Total Suspended Solids	2022/04/18					<1	mg/L	NC	25	100	85 - 115
7946688	Total Ammonia-N	2022/04/20	91	75 - 125	101	80 - 120	<0.050	mg/L	0.70	20		

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.

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).



## VALIDATION SIGNATURE PAGE

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

Cuistin Camiere

Cristina Carriere, Senior 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.



## 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 purposes only and should not be considered a comprehensive listing or statement of conformance to									
applicable regulatory guideli	nes.								



Appendix B

ST-MMER-3 2022-04-10 Certificate of Analysis



Attention: Reporting

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA P0X 0A1 Your P.O. #: PO 1121445 Your Project #: MBK Site#: 65'01'11.2''N 96'02'32.0''W Site Location: MBK Your C.O.C. #: 496003

> Report Date: 2022/04/20 Report #: R7092783 Version: 1 - Final

## **CERTIFICATE OF ANALYSIS**

## BUREAU VERITAS JOB #: C299553

Received: 2022/04/13, 09:30

Sample Matrix: Water # Samples Received: 1

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Total Ammonia-N (1)	1	N/A	2022/04/20	CAM SOP-00441	USGS I-2522-90 m
Field Measured pH (1, 2)	1	N/A	2022/04/14		Field pH Meter
Field Temperature (1, 2)	1	N/A	2022/04/14		Field Thermometer
Low Level Total Suspended Solids (1)	1	2022/04/16	2022/04/18	CAM SOP-00428	SM 23 2540D m
Un-ionized Ammonia (1)	1	2022/04/14	2022/04/20	Auto Calc.	PWQO

#### 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 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 is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.



Your P.O. #: PO 1121445 Your Project #: MBK Site#: 65'01'11.2''N 96'02'32.0''W Site Location: MBK Your C.O.C. #: 496003

#### Attention: Reporting

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/04/20 Report #: R7092783 Version: 1 - Final

## **CERTIFICATE OF ANALYSIS**

BUREAU VERITAS JOB #: C299553 Received: 2022/04/13, 09:30

**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.



## **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SJD753							
Sampling Data		2022/04/10							
Sampling Date		07:30							
COC Number		496003							
	UNITS	ST-MMER-3	RDL	QC Batch					
Calculated Parameters									
Total Un-ionized Ammonia	mg/L	<0.00069	0.00069	7940782					
Field Measurements			-						
Field Temperature	Celsius	1.1	N/A	ONSITE					
Field Measured pH	рН	8.1		ONSITE					
Inorganics			-						
Total Ammonia-N	mg/L	<0.050	0.050	7946688					
Total Suspended Solids	mg/L	2	1	7943403					
RDL = Reportable Detection L	imit		-						
QC Batch = Quality Control Batch									
N/A = Not Applicable									



## **TEST SUMMARY**

Bureau Veritas ID: SJD753 Sample ID: ST-MMER-3 Matrix: Water Collected: 2022/04/10 Shipped: Received: 2022/04/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Ammonia-N	LACH/NH4	7946688	N/A	2022/04/20	Raiq Kashif
Field Measured pH	РН	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Field Measured pH	РН	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Low Level Total Suspended Solids	BAL	7943403	2022/04/16	2022/04/18	Shaneil Hall
Un-ionized Ammonia	CALC/NH3	7940782	2022/04/20	2022/04/20	Automated Statchk



## **GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.3°C
Package 2	13.0°C
Package 3	12.3°C
Package 4	13.3°C

Results relate only to the items tested.



## QUALITY ASSURANCE REPORT

Agnico Eagle Client Project #: MBK Site Location: MBK Your P.O. #: PO 1121445 Sampler Initials: DN

			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
7943403	Total Suspended Solids	2022/04/18					<1	mg/L	NC	25	100	85 - 115
7946688	Total Ammonia-N	2022/04/20	91	75 - 125	101	80 - 120	<0.050	mg/L	0.70	20		

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.

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).



## VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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## Exceedance Summary Table – Metal Mining Effluent Reg

**Result Exceedances** 

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summa	ry table is for information purp	oses only and should	not be considered a compre	hensive listing or	statement of	conformance to
applicable regulatory gu	idelines.					



Appendix C

ST-MMER-3 2022-04-11 Certificate of Analysis



Your P.O. #: PO 1121445 Your Project #: MBK Site Location: MBK Your C.O.C. #: 496008

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/04/25 Report #: R7099059 Version: 2 - Final

## **CERTIFICATE OF ANALYSIS**

## BUREAU VERITAS JOB #: C299332

Received: 2022/04/13, 09:30

Sample Matrix: Water # Samples Received: 4

Extracted	Analyzed	Laboratory Method	Analytical Method
N/A	2022/04/21	AB SOP-00020 / AB SOP-	SM23 4500-CL/SO4-E m
		00018	
N/A	2022/04/21	CAL SOP-00270	SM 23 4500-CN m
2022/04/19	2022/04/21	BBY7SOP-00003/BBY7SOF	PEPA 6020B R2 m
		-00002	
2022/04/21	2022/04/22	BBY7SOP-00003/BBY7SOF	PEPA 6020B R2 m
		-00002	
N/A	2022/04/20	CAM SOP-00441	USGS I-2522-90 m
N/A	2022/04/14		Field pH Meter
N/A	2022/04/21	BQL SOP-00006	Alpha Spectrometry
		BQL SOP-00017	
		BQL SOP-00032	
N/A	2022/04/14		Field Thermometer
2022/04/18	2022/04/19	CAM SOP-00428	SM 23 2540D m
N/A	2022/04/14	CAM SOP-00417	SM 23 2130 B m
2022/04/14	2022/04/20	Auto Calc.	PWQO
	xtracted I/A I/A 022/04/19 022/04/21 I/A I/A I/A 022/04/18 I/A 022/04/14	xtractedAnalyzedI/A2022/04/21I/A2022/04/21022/04/192022/04/22022/04/212022/04/22I/A2022/04/24I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14I/A2022/04/14	xtracted         Analyzed         Laboratory Method           I/A         2022/04/21         AB SOP-00020 / AB SOP- 00018           I/A         2022/04/21         CAL SOP-00270           022/04/19         2022/04/21         BBY7SOP-00003 / BBY7SOP -00002           022/04/21         2022/04/22         BBY7SOP-00003 / BBY7SOP -00002           022/04/21         2022/04/20         CAM SOP-00441           I/A         2022/04/21         BQL SOP-00017 BQL SOP-00017 BQL SOP-00032           I/A         2022/04/14         CAM SOP-00428           I/A         2022/04/14         CAM SOP-00428           I/A         2022/04/14         CAM SOP-00417           I/A         2022/04/14         CAM SOP-00428           I/A         2022/04/14         CAM SOP-00417           I/A         2022/04/14         CAM SOP-00417

#### 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.

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



Your P.O. #: PO 1121445 Your Project #: MBK Site Location: MBK Your C.O.C. #: 496008

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/04/25 Report #: R7099059 Version: 2 - Final

## **CERTIFICATE OF ANALYSIS**

#### BUREAU VERITAS JOB #: C299332

#### Received: 2022/04/13, 09:30

dilution methods.

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

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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 Calgary (19th), 4000 19th Street NE , Calgary, AB, T2E 6P8

(2) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way , Burnaby, BC, V5G 1K5

(3) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

(4) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Road, Unit 4, Mississauga, ON, L5N 5L9

(5) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.

(6) Radium-226 results have not been corrected for blanks.

**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

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## **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SJC681	SJC682			SJC683	SJC684			
Sampling Date		2022/04/11 07:30	2022/04/11 07:30			2022/04/11 07:30	2022/04/11 07:30			
COC Number		496008	496008			496008	496008			
	UNITS	ST-MMER-3	ST-MMER-3-DUP	RDL	QC Batch	ST-MMER-3-FB	ST-MMER-3-TB	RDL	QC Batch	
Calculated Parameters										
Total Un-ionized Ammonia	mg/L	<0.00061	<0.00061	0.00061	7940782					
Field Measurements	•		•			•	•			
Field Temperature	Celsius	1.2	1.2	N/A	ONSITE					
Field Measured pH	рН	7.35	7.35		ONSITE					
Inorganics										
Total Ammonia-N	mg/L	<0.050	<0.050	0.050	7946688	<0.050	<0.050	0.050	7946688	
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	0.00050	7955510	<0.00050	<0.00050	0.00050	7955510	
Total Suspended Solids	mg/L	2	2	1	7943484	<1	<1	1	7945025	
Turbidity	NTU	0.3	0.4	0.1	7941445	<0.1	<0.1	0.1	7941445	
Dissolved Sulphate (SO4)	mg/L	6.6	6.6	0.50	7952956	<0.50	<0.50	0.50	7952956	
Metals										
Total Aluminum (Al)	mg/L	0.0453	0.0473	0.0030	7954201	<0.0030	<0.0030	0.0030	7955256	
Total Arsenic (As)	mg/L	0.00136	0.00129	0.00010	7954201	<0.00010	<0.00010	0.00010	7955256	
Total Copper (Cu)	mg/L	0.00119	0.00117	0.00050	7954201	<0.00050	<0.00050	0.00050	7955256	
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	7954201	<0.00020	<0.00020	0.00020	7955256	
Total Nickel (Ni)	mg/L	<0.0010	<0.0010	0.0010	7954201	<0.0010	<0.0010	0.0010	7955256	
Total Zinc (Zn)	mg/L	<0.0050	<0.0050	0.0050	7954201	<0.0050	<0.0050	0.0050	7955256	
RADIONUCLIDE										
Radium-226	Bq/L	<0.0050	<0.0050	0.0050	7944275	<0.0050	<0.0050	0.0050	7944275	
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
N/A = Not Applicable										



## **TEST SUMMARY**

Bureau Veritas ID: SJC681 Sample ID: ST-MMER-3 Matrix: Water Collected: 2022/04/11 Shipped: Received: 2022/04/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Chloride and Sulphate by AC	KONE	7952956	N/A	2022/04/21	Shanna McKort
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	7955510	N/A	2022/04/21	Ming Dong
Elements by CRC ICPMS (total)	ICP/MS	7954201	2022/04/19	2022/04/21	Sahar Omar Al-Abdalla-Inactive
Total Ammonia-N	LACH/NH4	7946688	N/A	2022/04/20	Raiq Kashif
Field Measured pH	PH	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Radium-226 Low Level	AS	7944275	N/A	2022/04/21	Sarah Simpson
Field Measured pH	PH	ONSITE	N/A	2022/04/14	Khanh Vi Trinh
Low Level Total Suspended Solids	BAL	7943484	2022/04/18	2022/04/19	Shaneil Hall
Turbidity	AT	7941445	N/A	2022/04/14	Roya Fathitil
Un-ionized Ammonia	CALC/NH3	7940782	2022/04/20	2022/04/20	Automated Statchk

Bureau Veritas ID: SJC682 Sample ID: ST-MMER-3-DUP Matrix: Water Collected: 2022/04/11 Shipped: Received: 2022/04/13

**Collected:** 2022/04/11

Received: 2022/04/13

Shipped:

nactive

Bureau Veritas ID: SJC683 Sample ID: ST-MMER-3-FB Matrix: Water

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Chloride and Sulphate by AC	KONE	7952956	N/A	2022/04/21	Shanna McKort
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	7955510	N/A	2022/04/21	Ming Dong
Elements by CRC ICPMS (total)	ICP/MS	7955256	2022/04/21	2022/04/22	Sahar Omar Al-Abdalla-Inactive
Total Ammonia-N	LACH/NH4	7946688	N/A	2022/04/20	Raiq Kashif
Radium-226 Low Level	AS	7944275	N/A	2022/04/21	Sarah Simpson
Low Level Total Suspended Solids	BAL	7945025	2022/04/18	2022/04/19	Shaneil Hall
Turbidity	AT	7941445	N/A	2022/04/14	Roya Fathitil



## **TEST SUMMARY**

Bureau Veritas ID:SJC684Sample ID:ST-MMER-3-TBMatrix:Water

Collected: 2022/04/11 Shipped: Received: 2022/04/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Chloride and Sulphate by AC	KONE	7952956	N/A	2022/04/21	Shanna McKort
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	7955510	N/A	2022/04/21	Ming Dong
Elements by CRC ICPMS (total)	ICP/MS	7955256	2022/04/21	2022/04/22	Sahar Omar Al-Abdalla-Inactive
Total Ammonia-N	LACH/NH4	7946688	N/A	2022/04/20	Raiq Kashif
Radium-226 Low Level	AS	7944275	N/A	2022/04/21	Sarah Simpson
Low Level Total Suspended Solids	BAL	7945025	2022/04/18	2022/04/19	Shaneil Hall
Turbidity	AT	7941445	N/A	2022/04/14	Roya Fathitil



## **GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.3°C
Package 2	13.0°C
Package 3	12.3°C
Package 4	13.3°C

Results relate only to the items tested.


#### QUALITY ASSURANCE REPORT

#### Agnico Eagle Client Project #: MBK Site Location: MBK Your P.O. #: PO 1121445 Sampler Initials: LD

			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
7941445	Turbidity	2022/04/14			112	85 - 115	<0.1	NTU	2.4	20		
7943484	Total Suspended Solids	2022/04/19					<1	mg/L	6.9	25	98	85 - 115
7944275	Radium-226	2022/04/20			90	85 - 115	<0.0050	Bq/L	NC	N/A		
7945025	Total Suspended Solids	2022/04/19					<1	mg/L	NC	25	96	85 - 115
7946688	Total Ammonia-N	2022/04/20	91	75 - 125	101	80 - 120	<0.050	mg/L	0.70	20		
7952956	Dissolved Sulphate (SO4)	2022/04/21	105	80 - 120	108	80 - 120	<0.50	mg/L	0.40	20		
7954201	Total Aluminum (Al)	2022/04/21	108	80 - 120	104	80 - 120	<0.0030	mg/L				
7954201	Total Arsenic (As)	2022/04/21	107	80 - 120	106	80 - 120	<0.00010	mg/L				
7954201	Total Copper (Cu)	2022/04/21	99	80 - 120	100	80 - 120	<0.00050	mg/L				
7954201	Total Lead (Pb)	2022/04/21	107	80 - 120	107	80 - 120	<0.00020	mg/L				L
7954201	Total Nickel (Ni)	2022/04/21	100	80 - 120	100	80 - 120	<0.0010	mg/L				
7954201	Total Zinc (Zn)	2022/04/21	NC	80 - 120	102	80 - 120	<0.0050	mg/L				
7955256	Total Aluminum (Al)	2022/04/22	97	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20		
7955256	Total Arsenic (As)	2022/04/22	105	80 - 120	105	80 - 120	<0.00010	mg/L				
7955256	Total Copper (Cu)	2022/04/22	95	80 - 120	97	80 - 120	<0.00050	mg/L				
7955256	Total Lead (Pb)	2022/04/22	101	80 - 120	102	80 - 120	<0.00020	mg/L				
7955256	Total Nickel (Ni)	2022/04/22	98	80 - 120	100	80 - 120	<0.0010	mg/L				
7955256	Total Zinc (Zn)	2022/04/22	114	80 - 120	113	80 - 120	<0.0050	mg/L				
7955510	Strong Acid Dissoc. Cyanide (CN)	2022/04/21	101	80 - 120	100	80 - 120	<0.00050	mg/L				1

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.

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).



Agnico Eagle Client Project #: MBK Site Location: MBK Your P.O. #: PO 1121445 Sampler Initials: LD

#### VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

austin Camere

Cristina Carriere, Senior Scientific Specialist

David Huang, BBY Scientific Specialist



Steven Simpson, "Lab Director

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.



Agnico Eagle Client Project #: MBK Site Location: MBK Your P.O. #: PO 1121445 Sampler Initials: LD

# 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 no	ot be considered a compreh	ensive listing or	statement of	conformance to



Appendix D

ST-MMER-3 2022-04-11 Acute Lethality Rainbow Trout Certificate of Analysis



**RESULTS OF RAINBOW TROUT - LC50 (ACUTE-96H)** 

Culture/Control/Dilution Water Dechlorinated municipal tap water Hardness: 87 mg/l CaCO<sub>3</sub> Other parameters available on request. 0,6.25,12.5,25,50,100 (%v/v) **Test Conditions** Test concentration : 10 15 ± 1 °C Organisms per Vessel : Test Temperature : Solution Depth : 35 cm Total # of Organisms Used : 60 Pre-aeration Time : 30 min. Rate of Aeration 6.5±1 mL/min/L Test Volume : 16 L Vessel Volume : 20L Test pH Adjusted: No Loading Density : 0.3 g/L Photoperiod : 16 hours of of light; 8 hours of darkness Test vessel: Plastic container with polyethylene bag. **Test Organism :** Rainbow Trout (Oncorhynchus mykiss) Source : **Piscicultures Les Arpents Verts** 15 ± 2 °C 3.79 ± 0.16 cm Culture Temperature : Weight (Mean) +- SD :  $0.5 \pm 0.1 \, g$ Length (Mean) +- SD : Culture Water Renewal : 2 liters/min Weight (Range) :  $0.4 - 0.7 \, g$ Length (Range) : 3.50 - 4.00 cm Culture Photoperiod : 16 hours of of light; 8 hours of darkness % Mortality within 7 days : 0.1% Feeding rate and frequency : 1-2x a day; 1-5% of the body weights. Acclimation Time: >14 days

The results contained in this report refer only to the testing of the sample submitted. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Bureau Veritas 2690, avenue Dalton, Sainte-Foy, Quebec G1P 3S4 Tél: (418) 658-5784 Télécopieur: (418) 658-6594 www.bvna.com

		RES	ULTS OF RAINBO	W TROUT - LC	50 (ACUTE-96H)		
VERITAS Client : Client Project N	6463 Name & Number:	Agnico Eagle Miı 65°01'11.2'' N	nes Limited, Meado 96°02'32.0''W	wbank MBK		Job Number: Sample Number:	C215355 KH1465-02
Reference chemical:			Phenol		Test Date:	Apr 12, 202	22
Test Endpoint 96 hrs LC50 (95% confidence interval) :			): 9.43 (6.0	0, 13.0)mg/L	Statistical Method :	Binomial	
Historical Mean LC50 (warning limits) :			10.2 (8.6	9, 12.1) mg/L	Concentration : 0,4,6,9,	13,18 mg/L	
<u>Test Method</u>		QUE SOP - 004 - Second Editio This is essentia	08. Reference Met on. Environment Ca ally a 96H static test	hod for Deterr nada. 2000. (In Ten individua	nining Acute Lethality of Ef Icluding Amendments: May Is are submitted to differen	fluents to Rainbow Trou y 2007 and February 20: Int effluent concentration points	it. EPS1/RM/13 16). ns in order to
Method Deviat	tions ·	None	CSO IN CONTrolled LE	imperature, lig	nt intensity and loading de	nsity.	
Analyst :	Andriy Bukhtiya	rov, Wasire Konse	iga				
Verified By :	Wael Ellamouch	ii, Analyste 2			Da	ate: Apr 28, 202	2 11:26 AM



Appendix E

ST-MMER-3 2022-04-11 Acute Lethality Daphnia Certificate of Analysis



### **RESULTS OF DAPHNIA - LC50 (ACUTE-48H)-FEDERAL**

B U R E A U VERITAS												
Client :	6463		Agnico Eagle N	/lines Limit	ed, Meadowba	ank				Job Numb	er:	C215355
Client Project N	lame & Numb	er:	55°01'11.2'' N	96°02'3	32.0''W	MBK				No. d'écha	antillon :	KH1465-01
<u>Test Result:</u> 48 hrs LC50 %v, 48 hrs EC50 %v, <u>Sample Name :</u>	/v (95% CL): /v (95% CL): ST-MI	>100 ( >100 ( MER-3	N/A) Statistic N/A) Statistic	al Method: al Method:	Visual Visual			To» Cor	k <b>ic unit:</b> <1 <b>mment:</b> Nor Sample Matr	n toxic rix : V	Vater	
Description:		Color	less, transluce	nt, no susp	ended solids			( )	Sample Prior	to Analysis	<u>s:</u>	
Sample Collecte	ed:	Apr 1	1, 2022 07:30	AM	Sampling M	ethod	l: Grab	· · · · · ·	oH:		8.0	
Sample Collecte	ed By:	OJ - A	В		Site Collecti	on: 6 9	5°01'11.2'' 6°02'32.0''\	N W	Temperature	2:	21.7 °(	2
Sample Receive	ed:	Apr 1	4, 2022 08:30	AM	Volume Rec	eived	: 1L	I	Dissolved Ox	ygen:	126.0	%
Analysis Start : End :		Apr 1 Apr 1	6, 2022 12:16 8, 2022 12:42	PM PM	Avg Temp A Storage:	rrival:	12 °C 2-6°C	C S	Sample Conc Hardness:	luctance:	82 μS/ 35 mg	′cm CaCO ₃/L
Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved oxygen (mg/L)	Temperature (°C)	pH (pH)	Dissolved oxygen (mg/L)	Immobility (#)	Immobility (%)	Mortality (#)	Mortality (%)	
%v/v	0 hr	0 hr	0 hr	0 hr	48 hrs	48 hr	48 hrs	48 hrs	48 hrs	48 hrs	48 hrs	
0	21	7.7	376	8.7	20	7.9	9.0	0	0	0	0	
6.25	20.8	7.8	365	8.8	20.8	7.9	9.1	0	0	0	0	
12.5	21.3	7.8	345	8.8	20.7	7.9	9.1	0	0	0	0	
25	21.3	7.8	310	8.8	20.4	7.9	9.2	0	0	0	0	
50	21.4	7.9	236	8.8	20.3	7.9	9.2	0	0	0	0	
100	21.5	8.0	78	9.3	20.5	8.0	9.2	1	10.0	0	0	
<u>Comments</u> : After 30 minutes of aeration, dissolved oxygen is over 100% of saturation.												
Culture/Contro Hardness:	l/Dilution Wa	<u>ter:</u>	Recor 170 n	nstitued wa ng/I CaCO₃	ter for Daphni	а	Other para	ameters ava	ilable on req	uest.		
Test Condition	<u>s</u>		Test o	concentrati	on: 0,	6.25,1	2.5,25,50,1	100 (%v/v)				
Organisms per	Vessel :		10	Pre-	aeration Time : 30 min F			Rate	Rate of Pre-aeration :			′min/L
Total # of Orga	nisms Used :		60	Test	Temperature	Temperature : 20 ± 2 °C			Test Hardness Adjusted :			
Test Volume :			150 mL	Vess	21 Volume : 200 ml Test pH Adjust				d:	No		
Loading Densit	y :		15.0 mL/Da	phnia Phot	operiod :		16 hours c	of of light; 8 l	nours of darl	kness		
Test Organism	<u>:</u>		Daph	nia magna				Source :	BV Lab C	ulture		
Age at Test Init	iation :		<24 h	res				Average Bro	bod Size :		51	L.0
Culture Photop	eriod :		16 ho	urs of of lig	ht; 8 hours of	darkn	ess	% Mortality	within / day	ys :	1	Davia
Culture Tempe Culture Diet	rature :		20 ± 2 Fed o	nce a day.				Time to Fir	St Brood :		9	Days
Reference che	mical:			Po	tassium Dichro	omate		Test Date:			Ар	r 24, 2022
Test Endpoint	48 hrs LC50 (9!	5% cor	fidence interv	val):	0.088 (0.063)	, 0.13)	)mg/L	Statistical	Method :		Bin	omial
Historical Mea	n LC50 (warnir	ng limit	:s) :		0.16 (0.037,	0.69)	mg/L	Concentra	tion : 0,0.06	525,0.125,0	.25,0.5,1 m	ıg/L
Test Method			SPE 1/RM/1	4								
Method Deviat	ions:		NONE									
Analyst :	lgor Mitroi	fanov,	Marie-Michèl	e Ferland, S	hivia Marine N	Vanko	0					
Verified By :	Hamida Djo	ouder,	Analyst 1						Date	e: N	1ay 10, 202	2 05:31 PM

The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Bureau Veritas 889, Montée de Liesse, Saint-Laurent, Quebec H4T 1P5 Tél: (514) 448-9001 Télécopieur: (514) 448-9199 www.bvna.com



Appendix F

ST-MMER-3 2022-04-18 Certificate of Analysis



Your P.O. #: 1121445 Site#: 65'01'11.2'' N 96'02'32.0''W Your C.O.C. #: 498865

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/05/16 Report #: R7127155 Version: 4 - Revision

#### **CERTIFICATE OF ANALYSIS – REVISED REPORT**

### BUREAU VERITAS JOB #: C2A6847

### Received: 2022/04/21, 10:00

Sample Matrix: Surface Water # Samples Received: 2

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Alkalinity (1)	1	N/A	2022/04/28	CAM SOP-00448	SM 23 2320 B m
Chloride by Automated Colourimetry (1)	1	N/A	2022/04/27	CAM SOP-00463	SM 23 4500-Cl E m
Mercury (low level) (1)	1	2022/04/26	2022/04/26	CAM SOP-00453	EPA 7470 m
Low Level Chloride and Sulphate by AC (2)	1	N/A	2022/04/27	AB SOP-00020 / AB SOP-	SM23 4500-CL/SO4-E m
				00018	
Hardness Total (calculated as CaCO3) (3, 4)	1	N/A	2022/04/28	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	1	2022/04/22	2022/04/28	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (total) (3)	1	2022/04/26	2022/04/27	BBY7SOP-00003/BBY7SO	PEPA 6020B R2 m
				-00002	
Total Phosphorus Low Level Total (2)	1	2022/04/27	2022/04/28	AB SOP-00024	SM 23 4500-P A,B,F m
Total Ammonia (as NH3) (1)	1	N/A	2022/04/26	Auto Calc.	
Total Ammonia-N (1)	2	N/A	2022/04/26	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 5)	1	N/A	2022/04/28	CAM SOP-00440	SM 23 4500-NO3I/NO2B
Field Measured pH (1, 6)	2	N/A	2022/04/22		Field pH Meter
Field Temperature (1, 6)	2	N/A	2022/04/22		Field Thermometer
Low Level Total Suspended Solids (1)	1	2022/04/25	2022/04/26	CAM SOP-00428	SM 23 2540D m
Un-ionized Ammonia (1)	1	2022/04/22	2022/04/26	Auto Calc.	PWQO

#### 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 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.



Your P.O. #: 1121445 Site#: 65'01'11.2" N 96'02'32.0"W Your C.O.C. #: 498865

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/05/16 Report #: R7127155 Version: 4 - Revision

### CERTIFICATE OF ANALYSIS – REVISED REPORT

# BUREAU VERITAS JOB #: C2A6847

Received: 2022/04/21, 10:00

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.

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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) "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).

(5) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

(6) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.

**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

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

Bureau Veritas ID		SKR971			SKR971			SKR972		
Sampling Data		2022/04/18			2022/04/18			2022/04/18		
Sampling Date		07:00			07:00			07:00		
COC Number		498865			498865			498865		
	UNITS	ST-MMER-3	RDL	QC Batch	ST-MMER-3 Lab-Dup	RDL	QC Batch	ST-MMER-3-EEM	RDL	QC Batch
Calculated Parameters										
Total Ammonia (as NH3)	mg/L							<0.061	0.061	7954267
Total Un-ionized Ammonia	mg/L	<0.0021	0.0021	7954265						
Field Measurements										
Field Temperature	Celsius	0.4	N/A	ONSITE				0.4	N/A	ONSITE
Field Measured pH	рН	8.62		ONSITE				8.62		ONSITE
Inorganics				<u></u>		-	<u> </u>			
Total Ammonia-N	mg/L	<0.050	0.050	7959465				<0.050	0.050	7959465
Total Suspended Solids	mg/L	2	1	7957782	3	1	7957782			
Alkalinity (Total as CaCO3)	mg/L							34	1.0	7960462
Dissolved Chloride (Cl-)	mg/L							<1.0	1.0	7960140
Nitrite (N)	mg/L							<0.010	0.010	7959789
Nitrate (N)	mg/L							<0.10	0.10	7959789
Dissolved Sulphate (SO4)	mg/L							6.9	0.50	7966504
Nitrate + Nitrite (N)	mg/L							<0.10	0.10	7959789
Metals										
Total Aluminum (Al)	mg/L							0.0357	0.0030	7965007
Total Cadmium (Cd)	mg/L							<0.000010	0.000010	7965007
Total Chromium (Cr)	mg/L							<0.0010	0.0010	7965007
Total Cobalt (Co)	mg/L							<0.00020	0.00020	7965007
Total Iron (Fe)	mg/L							0.047	0.010	7965007
Total Manganese (Mn)	mg/L							0.0017	0.0010	7965007
Total Molybdenum (Mo)	mg/L							<0.0010	0.0010	7965007
Total Selenium (Se)	mg/L							<0.00010	0.00010	7965007
Total Thallium (Tl)	mg/L							<0.000010	0.000010	7965007
Total Uranium (U)	mg/L							0.00051	0.00010	7965007
Total Calcium (Ca)	mg/L							11.1	0.050	7965006
Total Magnesium (Mg)	mg/L							1.93	0.050	7965006
Nutritional Parameters										
Total Phosphorus (P)	mg/L							0.0021	0.0010	7968059
RDL = Reportable Detection I	RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch										
Lab-Dup = Laboratory Initiate	Lab-Dup = Laboratory Initiated Duplicate									
J/A = Not Applicable										



# ELEMENTS BY ATOMIC SPECTROSCOPY (SURFACE WATER)

Bureau Veritas ID		SKR972					
Sampling Date		2022/04/18					
		07:00					
COC Number		498865					
	UNITS	ST-MMER-3-EEM	RDL	QC Batch			
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	35.7	0.50	7965005			
Metals							
Mercury (Hg)	mg/L	<0.00001	0.00001	7959255			
RDL = Reportable Detection Limit							
QC Batch = Quality Control Ba	itch						



2022/04/26

2022/04/26

Kristen Chan

Automated Statchk

Collected: 2022/04/18

### **TEST SUMMARY**

Bureau Veritas ID:	SKR971
Sample ID:	ST-MMER-3
Matrix:	Surface Water

Low Level Total Suspended Solids

Un-ionized Ammonia

Bureau Veritas ID: Sample ID: Matrix:	SKR971 ST-MMER-3 Surface Water				(	Collected: 2022/04/18 Shipped: Received: 2022/04/21
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Ammonia-N		LACH/NH4	7959465	N/A	2022/04/26	Amanpreet Sappal
Field Measured pH		РН	ONSITE	N/A	2022/04/22	Khanh Vi Trinh
Field Measured pH		PH	ONSITE	N/A	2022/04/22	Khanh Vi Trinh

2022/04/25

2022/04/26

Bureau Veritas ID:	SKR971 Dup	Collected:	2022/04/18
Sample ID:	ST-MMER-3	Shipped:	
Matrix:	Surface Water	Received:	2022/04/21

7957782

7954265

BAL

CALC/NH3

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Total Suspended Solids	BAL	7957782	2022/04/25	2022/04/26	Kristen Chan

Bureau Veritas ID:	SKR972
Sample ID:	ST-MMER-3-EEM
Matrix	Surface Water

Sample ID: ST-MMER-3-EEM Matrix: Surface Water				F	Shipped: Received: 2022/04/21
Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	7960462	N/A	2022/04/28	Surinder Rai
Chloride by Automated Colourimetry	KONE	7960140	N/A	2022/04/27	Raiq Kashif
Mercury (low level)	CV/AA	7959255	2022/04/26	2022/04/26	Jaswinder Kaur
Low Level Chloride and Sulphate by AC	KONE	7966504	N/A	2022/04/27	Bradley Freake
Hardness Total (calculated as CaCO3)	CALC	7965005	N/A	2022/04/28	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	7965006	2022/04/28	2022/04/28	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	7965007	2022/04/26	2022/04/27	Sahar Omar Al-Abdalla-Inactive
Total Phosphorus Low Level Total	KONE	7968059	2022/04/27	2022/04/28	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	7954267	N/A	2022/04/26	Automated Statchk
Total Ammonia-N	LACH/NH4	7959465	N/A	2022/04/26	Amanpreet Sappal
Nitrate & Nitrite as Nitrogen in Water	LACH	7959789	N/A	2022/04/28	Samuel Law
Field Measured pH	PH	ONSITE	N/A	2022/04/22	Khanh Vi Trinh
Field Measured pH	PH	ONSITE	N/A	2022/04/22	Khanh Vi Trinh



### **GENERAL COMMENTS**

Each te	emperature is the ave	rage of up to th	ree cooler temperatures taken at receipt
	Package 1	9.3°C	
Revised Revised	l Report (2022/05/16 l Report (2022/05/02	): GPS coordinat ): Split Report	es added

Results relate only to the items tested.



#### QUALITY ASSURANCE REPORT

Agnico Eagle Your P.O. #: 1121445 Sampler Initials: FQS

			Matrix	Matrix Spike		BLANK	Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7957782	Total Suspended Solids	2022/04/26					<1	mg/L	NC	25	95	85 - 115
7959255	Mercury (Hg)	2022/04/26	95	75 - 125	97	80 - 120	<0.00001	mg/L	NC	20		
7959465	Total Ammonia-N	2022/04/26	98	75 - 125	100	80 - 120	<0.050	mg/L	0.0068	20		
7959789	Nitrate (N)	2022/04/28	96	80 - 120	95	80 - 120	<0.10	mg/L	NC	20		
7959789	Nitrite (N)	2022/04/28	104	80 - 120	110	80 - 120	<0.010	mg/L	NC	20		
7960140	Dissolved Chloride (Cl-)	2022/04/27	NC	80 - 120	102	80 - 120	<1.0	mg/L	2.3	20		
7960462	Alkalinity (Total as CaCO3)	2022/04/28			100	85 - 115	<1.0	mg/L	0.18	20		
7965007	Total Aluminum (Al)	2022/04/27	105	80 - 120	102	80 - 120	<0.0030	mg/L	1.4	20		
7965007	Total Cadmium (Cd)	2022/04/27	101	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20		
7965007	Total Chromium (Cr)	2022/04/27	100	80 - 120	101	80 - 120	<0.0010	mg/L	1.2	20		
7965007	Total Cobalt (Co)	2022/04/27	103	80 - 120	103	80 - 120	<0.00020	mg/L				
7965007	Total Iron (Fe)	2022/04/27	108	80 - 120	102	80 - 120	<0.010	mg/L	1.1	20		
7965007	Total Manganese (Mn)	2022/04/27	NC	80 - 120	102	80 - 120	<0.0010	mg/L	2.6	20		
7965007	Total Molybdenum (Mo)	2022/04/27	107	80 - 120	105	80 - 120	<0.0010	mg/L	2.5	20		
7965007	Total Selenium (Se)	2022/04/27	105	80 - 120	102	80 - 120	<0.00010	mg/L	9.8	20		
7965007	Total Thallium (TI)	2022/04/27	107	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20		
7965007	Total Uranium (U)	2022/04/27	119	80 - 120	118	80 - 120	<0.00010	mg/L	1.3	20		
7966504	Dissolved Sulphate (SO4)	2022/04/27	NC	80 - 120	106	80 - 120	<0.50	mg/L				
7968059	Total Phosphorus (P)	2022/04/28	67 (1)	80 - 120	98	80 - 120	<0.0010	mg/L			91	80 - 120

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.

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.



#### VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

David Huang, BBY Scientific Specialist

ayont

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

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.



Appendix G

ST-MMER-3 2022-04-25 Certificate of Analysis



Your P.O. #: 1121445 Site Location: MBK Your C.O.C. #: 502257

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/05/03 Report #: R7109916 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

### BUREAU VERITAS JOB #: C2B2678

#### Received: 2022/04/27, 09:30

Sample Matrix: Surface Water # Samples Received: 1

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Total Ammonia-N (1)	1	N/A	2022/05/03	CAM SOP-00441	USGS I-2522-90 m
Field Measured pH (1, 2)	1	N/A	2022/04/28		Field pH Meter
Field Temperature (1, 2)	1	N/A	2022/04/28		Field Thermometer
Low Level Total Suspended Solids (1)	1	2022/05/03	2022/05/03	CAM SOP-00428	SM 23 2540D m
Un-ionized Ammonia (1)	1	2022/04/28	2022/05/03	Auto Calc.	PWQO

#### 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 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 is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.



Your P.O. #: 1121445 Site Location: MBK Your C.O.C. #: 502257

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/05/03 Report #: R7109916 Version: 1 - Final

### **CERTIFICATE OF ANALYSIS**

BUREAU VERITAS JOB #: C2B2678 Received: 2022/04/27, 09:30

**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.



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

Bureau Veritas ID		SLX894			SLX894				
Sampling Data		2022/04/25			2022/04/25				
Sampling Date		08:10			08:10				
COC Number		502257			502257				
	UNITS	ST-MMER-3	RDL	QC Batch	ST-MMER-3 Lab-Dup	RDL	QC Batch		
Calculated Parameters									
Total Un-ionized Ammonia	mg/L	0.0011	0.00061	7964330					
Field Measurements									
Field Temperature	Celsius	0.1	N/A	ONSITE					
Field Measured pH	рН	7.86		ONSITE					
Inorganics									
Total Ammonia-N	mg/L	0.16	0.050	7971414	0.11	0.050	7971414		
Total Suspended Solids	mg/L	2	1	7971490	2	1	7971490		
RDL = Reportable Detection L	imit								
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
N/A = Not Applicable									



#### **TEST SUMMARY**

Bureau Veritas ID: SLX894 Sample ID: ST-MMER-3 Matrix: Surface Water Collected: 2022/04/25 Shipped: Received: 2022/04/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Ammonia-N	LACH/NH4	7971414	N/A	2022/05/03	Amanpreet Sappal
Field Measured pH	PH	ONSITE	N/A	2022/04/28	Khanh Vi Trinh
Field Measured pH	PH	ONSITE	N/A	2022/04/28	Khanh Vi Trinh
Low Level Total Suspended Solids	BAL	7971490	2022/05/03	2022/05/03	Kristen Chan
Un-ionized Ammonia	CALC/NH3	7964330	2022/05/03	2022/05/03	Automated Statchk

Bureau Veritas ID: Sample ID: Matrix:	SLX894 Dup ST-MMER-3 Surface Water					Collected: Shipped: Received:	2022/04/25 2022/04/27
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Total Ammonia-N		LACH/NH4	7971414	N/A	2022/05/03	Amanpree	et Sappal
Low Level Total Suspende	ed Solids	BAL	7971490	2022/05/03	2022/05/03	Kristen Ch	an



### **GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1 12.3°C

Results relate only to the items tested.



#### QUALITY ASSURANCE REPORT

Agnico Eagle Site Location: MBK Your P.O. #: 1121445 Sampler Initials: FQS

			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
7971414	Total Ammonia-N	2022/05/03	94	75 - 125	102	80 - 120	<0.050	mg/L	NC	20		
7971490	Total Suspended Solids	2022/05/03					<1	mg/L	9.5	25	98	85 - 115

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.

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).



#### VALIDATION SIGNATURE PAGE

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

austin Camere

Cristina Carriere, Senior Scientific Specialist

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# Exceedance Summary Table – Metal Mining Effluent Reg

**Result Exceedances** 

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summa	ry table is for information purp	oses only and should no	ot be considered a compreh	ensive listing or	statement of	conformance to
applicable regulatory gu	idelines.					



Appendix H

ST-MMER-3 2022-04-26 Certificate of Analysis



Your P.O. #: 1121445 Site#: 65'01'11.2'' N 96'02'32.0''W Site Location: MBK Your C.O.C. #: 502971

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA POX 0A1

> Report Date: 2022/05/12 Report #: R7122012 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

#### BUREAU VERITAS JOB #: C2B5526

#### Received: 2022/04/29, 09:30

Sample Matrix: Water # Samples Received: 2

		Date	Date		
Analyses Q	uantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Alkalinity (1)	1	N/A	2022/05/03	CAM SOP-00448	SM 23 2320 B m
Chloride by Automated Colourimetry (1)	1	N/A	2022/05/03	CAM SOP-00463	SM 23 4500-Cl E m
Mercury (low level) (1)	1	2022/05/03	2022/05/03	CAM SOP-00453	EPA 7470 m
Low Level Chloride and Sulphate by AC (2)	2	N/A	2022/05/09	AB SOP-00020 / AB SOP- 00018	SM23 4500-CL/SO4-E m
Cyanide, Strong Acid Dissociable (SAD) (2)	1	N/A	2022/05/03	CAL SOP-00270	SM 23 4500-CN m
Hardness Total (calculated as CaCO3) (3, 5)	1	N/A	2022/05/05	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total) (3)	2	2022/05/04	2022/05/05	BBY7SOP-00003/ BBY7SO -00002	PEPA 6020B R2 m
Total Phosphorus Low Level Total (2)	1	2022/05/05	2022/05/06	AB SOP-00024	SM 23 4500-P A,B,F m
Total Ammonia (as NH3) (1)	1	N/A	2022/05/05	Auto Calc.	
Total Ammonia-N (1)	2	N/A	2022/05/05	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 6)	1	N/A	2022/05/04	CAM SOP-00440	SM 23 4500-NO3I/NO2B
Field Measured pH (1, 7)	2	N/A	2022/04/30		Field pH Meter
Radium-226 Low Level (4, 8)	1	N/A	2022/05/11	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Field Temperature (1, 7)	2	N/A	2022/04/30		Field Thermometer
Low Level Total Suspended Solids (1)	1	2022/05/03	2022/05/03	CAM SOP-00428	SM 23 2540D m
Turbidity (1)	1	N/A	2022/05/02	CAM SOP-00417	SM 23 2130 B m
Un-ionized Ammonia (1)	1	2022/04/30	2022/05/06	Auto Calc.	PWQO

#### 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 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



Your P.O. #: 1121445 Site#: 65'01'11.2'' N 96'02'32.0''W Site Location: MBK Your C.O.C. #: 502971

#### **Attention: Reporting**

Agnico Eagle Meadowbank Meadowbank Keewatin, NU CANADA P0X 0A1

> Report Date: 2022/05/12 Report #: R7122012 Version: 1 - Final

#### **CERTIFICATE OF ANALYSIS**

#### **BUREAU VERITAS JOB #: C2B5526**

#### Received: 2022/04/29, 09:30

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) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Road, Unit 4, Mississauga, ON, L5N 5L9

(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) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

(7) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.

(8) Radium-226 results have not been corrected for blanks.

**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

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

Bureau Veritas ID		SMN430			SMN430			SMN431		
Sampling Date		2022/04/26			2022/04/26			2022/04/26		
		07:15			07:15			07:15		
		502971			502971			502971		
	UNITS	ST-MMER-3-EEM	RDL	QC Batch	Lab-Dup	RDL	QC Batch	ST-MMER-3	RDL	QC Batch
Calculated Parameters										
Total Ammonia (as NH3)	mg/L	<0.061	0.061	7969339						
Total Un-ionized Ammonia	mg/L							<0.00055	0.00055	7969340
Field Measurements		•	•	•	·					
Field Temperature	Celsius	0.1	N/A	ONSITE				0.1	N/A	ONSITE
Field Measured pH	рН	8.04		ONSITE				8.04		ONSITE
Inorganics	-									
Total Ammonia-N	mg/L	<0.050	0.050	7975264				<0.050	0.050	7976118
Strong Acid Dissoc. Cyanide (CN)	mg/L							<0.00050	0.00050	7984827
Total Suspended Solids	mg/L							2	1	7971490
Turbidity	NTU							1.1	0.1	7969418
Alkalinity (Total as CaCO3)	mg/L	32	1.0	7971492						
Dissolved Chloride (Cl-)	mg/L	<1.0	1.0	7971568						
Nitrite (N)	mg/L	<0.010	0.010	7971533						
Nitrate (N)	mg/L	<0.10	0.10	7971533						
Dissolved Sulphate (SO4)	mg/L	7.5	0.50	7984826	7.4	0.50	7984826	7.4	0.50	7984826
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	7971533						
Metals										
Total Aluminum (Al)	mg/L	0.0528	0.0030	7980449				0.0477	0.0030	7980449
Total Arsenic (As)	mg/L							0.00079	0.00010	7980449
Total Cadmium (Cd)	mg/L	<0.000010	0.000010	7980449						
Total Chromium (Cr)	mg/L	<0.0010	0.0010	7980449						
Total Cobalt (Co)	mg/L	<0.00020	0.00020	7980449						
Total Copper (Cu)	mg/L							0.00172	0.00050	7980449
Total Iron (Fe)	mg/L	0.085	0.010	7980449						
Total Lead (Pb)	mg/L							<0.00020	0.00020	7980449
Total Manganese (Mn)	mg/L	0.0020	0.0010	7980449						
Total Molybdenum (Mo)	mg/L	<0.0010	0.0010	7980449						
Total Nickel (Ni)	mg/L							<0.0010	0.0010	7980449
Total Selenium (Se)	mg/L	<0.00010	0.00010	7980449						
RDL = Reportable Detection Limit										
QC Batch – Quality Control Batch										

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable



## **RESULTS OF ANALYSES OF WATER**

Bureau Veritas ID		SMN430			SMN430			SMN431		
Compling Data		2022/04/26			2022/04/26			2022/04/26		
Sampling Date		07:15			07:15			07:15		
COC Number		502971			502971			502971		
	UNITS	ST-MMER-3-EEM	RDL	QC Batch	ST-MMER-3-EEM Lab-Dup	RDL	QC Batch	ST-MMER-3	RDL	QC Batch
Total Thallium (Tl)	mg/L	<0.000010	0.000010	7980449	1	1			<u> </u>	<u> </u>
Total Uranium (U)	mg/L	0.00044	0.00010	7980449						
Total Zinc (Zn)	mg/L							0.0068	0.0050	7980449
Nutritional Parameters							<u> </u>		<u>.</u>	
Total Phosphorus (P)	mg/L	0.0019	0.0010	7983010						
RADIONUCLIDE	<b>!</b>	•		•		•			+	*
Radium-226	Bq/L							<0.0050	0.0050	7972582
RDL = Reportable Detection L	imit			<u>.</u>			<u></u>		<u>.</u>	
QC Batch = Quality Control Ba	atch									
Lab-Dup = Laboratory Initiate	d Duplicate									



# ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		SMN430							
Compling Data		2022/04/26							
Sampling Date		07:15							
COC Number		502971							
	UNITS	ST-MMER-3-EEM	RDL	QC Batch					
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	36.3	0.50	7980448					
Metals									
Mercury (Hg)	mg/L	<0.00001	0.00001	7972588					
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



### **TEST SUMMARY**

Bureau Veritas ID:	SMN430
Sample ID:	ST-MMER-3-EEM
Matrix:	Water

Collected:	2022/04/26
Shipped:	
Received:	2022/04/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	7971492	N/A	2022/05/03	Surinder Rai
Chloride by Automated Colourimetry	KONE	7971568	N/A	2022/05/03	Raiq Kashif
Mercury (low level)	CV/AA	7972588	2022/05/03	2022/05/03	Rupinder Gill
Low Level Chloride and Sulphate by AC	KONE	7984826	N/A	2022/05/09	Marjolen Busslinger
Hardness Total (calculated as CaCO3)	CALC	7980448	N/A	2022/05/05	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	7980449	2022/05/04	2022/05/05	Sahar Omar Al-Abdalla-Inactive
Total Phosphorus Low Level Total	KONE	7983010	2022/05/05	2022/05/06	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	7969339	N/A	2022/05/05	Automated Statchk
Total Ammonia-N	LACH/NH4	7975264	N/A	2022/05/05	Amanpreet Sappal
Nitrate & Nitrite as Nitrogen in Water	LACH	7971533	N/A	2022/05/04	Samuel Law
Field Measured pH	PH	ONSITE	N/A	2022/04/30	Dipika Singh
Field Measured pH	PH	ONSITE	N/A	2022/04/30	Dipika Singh

Bureau Veritas ID: Sample ID: Matrix:	SMN430 Dup ST-MMER-3-EEM Water					Collected: Shipped: Received:	2022/04/26 2022/04/29
Test Description		Instrumentation	Batch	Extracted	Date Analyzed	Analyst	

Test Description	matiamentation	Daten	LALIACLEU	Date Analyzeu	Anaryst
Low Level Chloride and Sulphate by AC	KONE	7984826	N/A	2022/05/09	Marjolen Busslinger

Bureau Veritas ID:	SMN431
Sample ID:	ST-MMER-3
Matrix:	Water

Collected:	2022/04/26
Shipped:	
Received:	2022/04/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Chloride and Sulphate by AC	KONE	7984826	N/A	2022/05/09	Marjolen Busslinger
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	7984827	N/A	2022/05/03	Taylor Mullings
Elements by CRC ICPMS (total)	ICP/MS	7980449	2022/05/04	2022/05/05	Sahar Omar Al-Abdalla-Inactive
Total Ammonia-N	LACH/NH4	7976118	N/A	2022/05/05	Amanpreet Sappal
Field Measured pH	РН	ONSITE	N/A	2022/04/30	Dipika Singh
Radium-226 Low Level	AS	7972582	N/A	2022/05/11	Sarah Simpson
Field Measured pH	РН	ONSITE	N/A	2022/04/30	Dipika Singh
Low Level Total Suspended Solids	BAL	7971490	2022/05/03	2022/05/03	Kristen Chan
Turbidity	AT	7969418	N/A	2022/05/02	Roya Fathitil
Un-ionized Ammonia	CALC/NH3	7969340	2022/05/06	2022/05/06	Automated Statchk



### **GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1 10.3°C

Results relate only to the items tested.



### QUALITY ASSURANCE REPORT

#### Agnico Eagle Site Location: MBK Your P.O. #: 1121445

Sampler Initials: FQS

		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
7969418	Turbidity	2022/05/02			101	85 - 115	<0.1	NTU	7.7	20		
7971490	Total Suspended Solids	2022/05/03					<1	mg/L	9.5	25	98	85 - 115
7971492	Alkalinity (Total as CaCO3)	2022/05/03			95	85 - 115	<1.0	mg/L	5.2	20		
7971533	Nitrate (N)	2022/05/04	101	80 - 120	104	80 - 120	<0.10	mg/L	0.30	20		
7971533	Nitrite (N)	2022/05/04	91	80 - 120	101	80 - 120	<0.010	mg/L	NC	20		
7971568	Dissolved Chloride (Cl-)	2022/05/03	NC	80 - 120	107	80 - 120	<1.0	mg/L	0	20		
7972582	Radium-226	2022/05/09			92	85 - 115	<0.0050	Bq/L	NC	N/A		
7972588	Mercury (Hg)	2022/05/03	88	75 - 125	94	80 - 120	<0.00001	mg/L	NC	20		
7975264	Total Ammonia-N	2022/05/05	92	75 - 125	98	80 - 120	<0.050	mg/L	3.0	20		
7976118	Total Ammonia-N	2022/05/05	98	75 - 125	97	80 - 120	<0.050	mg/L	NC	20		
7980449	Total Aluminum (Al)	2022/05/05	102	80 - 120	103	80 - 120	<0.0030	mg/L	1.8	20		
7980449	Total Arsenic (As)	2022/05/05	105	80 - 120	105	80 - 120	<0.00010	mg/L	0.97	20		
7980449	Total Cadmium (Cd)	2022/05/05	103	80 - 120	104	80 - 120	<0.000010	mg/L	11	20		
7980449	Total Chromium (Cr)	2022/05/05	103	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
7980449	Total Cobalt (Co)	2022/05/05	106	80 - 120	104	80 - 120	<0.00020	mg/L	2.7	20		
7980449	Total Copper (Cu)	2022/05/05	103	80 - 120	102	80 - 120	<0.00050	mg/L	0.31	20		
7980449	Total Iron (Fe)	2022/05/05	105	80 - 120	105	80 - 120	<0.010	mg/L	4.4	20		
7980449	Total Lead (Pb)	2022/05/05	101	80 - 120	103	80 - 120	<0.00020	mg/L	4.3	20		
7980449	Total Manganese (Mn)	2022/05/05	103	80 - 120	104	80 - 120	<0.0010	mg/L	1.0	20		
7980449	Total Molybdenum (Mo)	2022/05/05	104	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20		
7980449	Total Nickel (Ni)	2022/05/05	104	80 - 120	105	80 - 120	<0.0010	mg/L	2.3	20		
7980449	Total Selenium (Se)	2022/05/05	113	80 - 120	111	80 - 120	<0.00010	mg/L	NC	20		
7980449	Total Thallium (TI)	2022/05/05	100	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20		
7980449	Total Uranium (U)	2022/05/05	105	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20		
7980449	Total Zinc (Zn)	2022/05/05	110	80 - 120	105	80 - 120	<0.0050	mg/L	3.8	20		
7983010	Total Phosphorus (P)	2022/05/06	106	80 - 120	100	80 - 120	<0.0010	mg/L			93	80 - 120
7984826	Dissolved Sulphate (SO4)	2022/05/09	99	80 - 120	102	80 - 120	<0.50	mg/L	1.7	20		



### QUALITY ASSURANCE REPORT(CONT'D)

Agnico Eagle Site Location: MBK Your P.O. #: 1121445 Sampler Initials: FQS

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7984827	Strong Acid Dissoc. Cyanide (CN)	2022/05/03	100	80 - 120	102	80 - 120	<0.00050	mg/L				
N/A = Not A	pplicable								-			

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.

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).


Agnico Eagle Site Location: MBK Your P.O. #: 1121445 Sampler Initials: FQS

#### VALIDATION SIGNATURE PAGE

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

avisting Carriere

Cristina Carriere, Senior Scientific Specialist

David Huang, BBY Scientific Specialist

AIISH SA HEMIS

Danish Samad, Laboratory Supervisor

Sandy Yuan, M.Sc., QP, 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.



Agnico Eagle Site Location: MBK Your P.O. #: 1121445 Sampler Initials: FQS

#### Exceedance Summary Table – Metal Mining Effluent Reg

**Result Exceedances** 

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summa	ry table is for information purp	oses only and should r	not be considered a compre	hensive listing or	statement of	conformance to
applicable regulatory gu	idelines.					



Appendix I

East Dike Internal TSS Results

Date	TSS (mg/L)
4/1/2022	5
4/2/2022	5
4/3/2022	4
4/4/2022	6.6
4/5/2022	5.5
4/6/2022	6
4/7/2022	3.5
4/8/2022	6.3
4/9/2022	2.8

 Table 1. East Dike Seepage Station Internal Sample Results



# Canadä NT-NU SPILL REPORT

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Α	REPORT DATE: MONTH – DAY 04-24-2022	Y – YEAR	RE 1	PORT TIM	E	<b>X</b>	ORIGINAL SPILL R	EPORT,	REPORT NUMBER	
В	OCCURRENCE DATE: MONTH 04-23-2022	H – DAY – YEAR	oc 1	CCURRENCE TIME			UPDATE # THE ORIGINAL SP	PILL REPORT	<del>_</del>	
С	LAND USE PERMIT NUMBER	(IF APPLICABLE)	1	WA N	TER LICENCE NUME	BER (IF	APPLICABLE)			
D	GEOGRAPHIC PLACE NAME (	OR DISTANCE AND DIRECTIC MINE SITE	DN FROM NAMED LOC	ATION	REGION □ NWT XNUN	AVUT	ADJACENT J	URISDICTION	OR OCEAN	
Ε	LATITUDE DEGREES <b>65</b>	MINUTES 01	SECONDS 09	LO DE	NGITUDE GREES <b>96</b>		MINUTES <b>O</b>	<b>3</b> s	econds 13	
F	RESPONSIBLE PARTY OR VE AGNICO EAGLE	ESSEL NAME MINES LTD	RESPONSIBLE PAR	PARTY ADDRESS OR OFFICE LOCATION _AKE XOC 0A0						
G	ANY CONTRACTOR INVOLVED	D	CONTRACTOR ADD	RESS OR	OFFICE LOCATION					
	PRODUCT SPILLED DIESEL FUEL		QUANTITY IN LITRE	es, kilogi	RAMS OR CUBIC ME	TRES	U.N. NUMBER			
Н	SECOND PRODUCT SPILLED	(IF APPLICABLE)	QUANTITY IN LITRE	S, KILOGI	RAMS OR CUBIC ME	TRES	U.N. NUMBER			
l	SPILL SOURCE FUEL TANKER	or			AREA OF CONT.	amination in	SQUARE METRES			
J	FACTORS AFFECTING SPILL	DESCRIBE ANY AS	SISTANCE	REQUIRED		HAZARDS TO PI	Ersons, Pro	PERTY OR EQUIPMENT		
K	Meadowbank Tar on the equipment the reservoir to be immediately brou 5m3 was collecte There were no of lake is 400m to T Spill Location: No Contact Informat	nk farm. The drive t, causing the tan eak onto the grou ught at the tank fa ed into a roll off an f site impacts or o hird Portage Lake orthing 65' 0' 57.9 ion: Samuel Tapp	er initiated its ker connecto ind. Spill pade irm to scrape nd was broug discharges to e 4" Easting 90 5 819 759 3555	depar r to ru s were the cc ht to t any r 6' 3' 53 5 ext. 4	ture while the pture. The c placed on t ontaminated he Meadowl eceiving wa 8.15" 4606744	ne de lama he g sno bank terco	ocking stat age caused yround and ow and mate ( landfarm. ourses. Dis	ion was the rem an exca erial. Ap stance to	still attached aining fuel of vator was proximately o the closest	
L	REPORTED TO SPILL LINE BY	Y POSITION Env. Coordir	nator A	IPLOYER	Eagle Mine	LC <b>S 8</b>	CATION CALLING	FROM <b>5</b>	TELEPHONE <b>4606744</b>	
Μ	ANY ALTERNATE CONTACT Alex Lavallee	POSITION Env. Superin	itendent A	IPLOYER <b>gnico</b>	Eagle Mine	AL S LC	TERNATE CONTAC	T.	ALTERNATE TELEPHONE 819 860 0804	
			REPORT LINE U	SE ONLY						
Ν	RECEIVED AT SPILL LINE BY		EM	IPLOYER					REPORT LINE NUMBER	
LEAD	I DAGENCY □ EC □ CCG □ (		C D NEB D TC	SIGNIFIC		MAJO		FILE STAT		
AGE	NCY	CONTACT NAME		CONTAC	TTIME		REMARKS			
LEAD	) AGENCY									
FIRS	T SUPPORT AGENCY									
SEC	OND SUPPORT AGENCY									
тнів	D SUPPORT AGENCY									



## 2022-04-23 MBK 100L Diesel

GN reference #: 2022-141

Please find the following information as a follow up to the Spill report submitted April 24, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### **Spill Description**

During operations at Meadowbank, an Arctic Fuel driver had finished unloading his tanker to the Meadowbank Tank farm. The driver initiated its departure while the docking station was still attached on the equipment, causing the tanker connector to rupture. The damage caused the remaining fuel of the reservoir to leak onto the ground.



Spill location: Northing 65' 0' 57.94" Easting 96' 3' 53.15"

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 400 meters to Third Portage Lake.

The spill was caused by human error. After offloading the driver failed to disconnect the arm.

#### **Remediation Actions**

Spill pads were placed on the ground and an excavator was immediately brought at the tank farm to scrape the contaminated snow and material. Approximately 5m3 was collected into a roll off and was brought to the Meadowbank landfarm.



#### **Corrective measures**

An investigation into the root causes of the spill has been completed. The procedure for offloading is being updated to ensure drivers perform a circle check before leaving tank farm. This procedure will then be communicated to all Arctic Fuel drivers. Furthermore, the incident will be reviewed with both crews on site.

#### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on April 23, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.



Tom Thomson | Environment Coordinator tom.thomson@agnicoeagle.com | Direct 819.759.3555 x4606744 | Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0



Sent from Meadowbank



# NT-NU SPILL REPORT

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

EMAIL: spills@gov.nt.ca

		VEAD									
A	04-26-2022			12.00		XORIGINAL SPILL F	REPORT,				
В	04-25-2022			14:00		TO THE ORIGINAL S	PILL REPORT				
С		IF APPLICABLE)		Ň							
	RIUL-DL-14					1530					
D	GEOGRAPHIC PLACE NAME O	OR DISTANCE AND DIRECTION	N FROM NAMED LO	CATION							
	LATITUDE			l				SHOOLAN			
E	DEGREES 65	MINUTES <b>01</b>	SECONDS 09		DEGREES <b>96</b>	MINUTES 0	<b>3</b> SE	CONDS 13			
_	RESPONSIBLE PARTY OR VES	SSEL NAME	RESPONSIBLE PA	ARTY ADD	RESS OR OFFICE LOCAT	ION					
F	AGNICO EAGLE N	MINES LTD	BAKER L	AKE )	(0C 0A0						
G	ANY CONTRACTOR INVOLVED	)	CONTRACTOR AL	DDRESS (	DR OFFICE LOCATION						
	PRODUCT SPILLED SEWAGE WATER		QUANTITY IN LITE	RES, KILC	GRAMS OR CUBIC METR	ES U.N. NUMBER					
H	SECOND PRODUCT SPILLED (	(IF APPLICABLE)	QUANTITY IN LITE	RES, KILC	GRAMS OR CUBIC METR	ES U.N. NUMBER					
	SPILL SOURCE WING#6 DRAIN LI	INE	SPILL CAUSE		E	AREA OF CONT <b>2 m2</b>	amination in	SQUARE METRES			
J	FACTORS AFFECTING SPILL C	DR RECOVERY	SSISTAN	CE REQUIRED	HAZARDS TO P	ERSONS, PROF	PERTY OR EQUIPMENT				
	ADDITIONAL INFORMATION, C	OMMENTS, ACTIONS PROPO	SED OR TAKEN TO	CONTAIN	, RECOVER OR DISPOSE	OF SPILLED PRODUC	T AND CONTA	MINATED MATERIALS			
к	observed a slow leak of sewage coming from the drain line. Upon further investigation, it was found that due to the building shifting, the pipe had slightly moved causing a small gap in the seal. As a result of the break, approximately 30L of sewage water was spilled under the building and onto the frozen ground. The contaminated material will be collected and brought to the Tailing Storage Facility. There were no off site impacts or discharges. Distance to the closest water body is 220 m to Third Portage Lake. Spill Location: 65° 01' 15.90"N 96° 04' 19.14"W Contact information: Samuel Tapp 819-759-3555 EXT.: 460-6744										
1	REPORTED TO SPILL LINE BY	POSITION	E	EMPLOYE	R	LOCATION CALLING	FROM T	ELEPHONE			
	Samuel Tapp	Env. Coordina		Agnic	o ⊨agle Mines	Meadowbar		519-759-3555			
Μ	ANY ALTERNATE CONTACT Eric Haley	Env. Gen. Sup	pervisor	EMPLOYE Agnic	o Eagle Mines	Meadowbar	אד אר <b>ו</b> ג א	<b>819-651-1010</b>			
			REPORT LINE	USE ON	LY		•				
N	RECEIVED AT SPILL LINE BY	POSITION	E	EMPLOYE	R	LOCATION CALLED	R	EPORT LINE NUMBER			
		STATION OPERATOR				YELLOWKNIFE, NT		367) 920-8130			
LEA		GNWT □ GN □ ILA □ INAC		SIGNI			FILE STATU	IS  OPEN  CLOSED			
AGE	NCY	CONTACT NAME		CONT	ACT TIME	REMARKS					
LEA	DAGENCY										
FIRS	T SUPPORT AGENCY										
SEC	OND SUPPORT AGENCY										
	1										



## 2022-04-25 MBK 30L Sewage

GN reference #: 2022-146

Please find the following information as a follow up to the Spill report submitted April 25, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### Spill Description

During a routine inspection of the sewage piping of wing #6 at Meadowbank Camp, a worker observed a slow leak of sewage coming from the drain line. Upon further investigation, it was found that due to the building shifting, the pipe had slightly moved causing a small gap in the seal. As a result of the break, approximately 30L of sewage water was spilled under the building and onto the frozen ground.



Spill location: 65° 01' 15.90"N 96° 04' 19.14"W

There were no off-site impacts or discharges. Distance to the closest water body is 220 m to Third Portage Lake.

Damaged sewage line due to thermal expansion/contraction.

#### **Remediation Actions**

Monthly visual inspection of all sewage piping was conducted as part of regular maintenance activities. Hands shovels and equipment were used to manually excavate the contaminated area under the wing. The contaminated material was disposed of appropriately at the Hazmat area.



#### **Corrective measures**

Special couplings were ordered and will be installed to replace the existing joints to prevent the same event from reoccurring in the future.

#### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on April 25, 2022. Please contact the undersigned should you have any questions.



Samuel Tapp Environment Coordinator samuel.tapp@agnicoeagle.com Direct 819.759.3555 x4606744 Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0 agnicoeagle.com f @ V in D



# NT-NU SPILL REPORT

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

A	REPORT DATE: MONTH – DAY - 05-19-2022		REPORT	TIME						
P	OCCURRENCE DATE: MONTH -	– DAY – YEAR		OCCURR	ENCE TIME					
Ь	05-18-2022			10:30						
C	LAND USE PERMIT NUMBER (I	IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)					
D	GEOGRAPHIC PLACE NAME O	R DISTANCE AND DIRECTION	N FROM NAMED L		REGION		JT 🗆 ADJACENT JUI	RISDICTION	OR OCEAN	
E	LATITUDE			a	LONGITUDE 96 03 13					
-	RESPONSIBLE PARTY OR VES	PARTY ADI	DEGREES	FICE LOCAT		SE				
F	AGNICO EAGLE	MINES LTD	BAKER		X0C 0A0					
G	ANY CONTRACTOR INVOLVED		CONTRACTOR	ADDRESS	OR OFFICE LC	OCATION				
			QUANTITY IN L	ITRES, KILO	OGRAMS OR C	UBIC METRI	ES U.N. NUMBER			
Н			525L							
	SECOND PRODUCT SPILLED (	IF APPLICABLE)		ITRES, KILU	JGRAMS OR C		ES U.N. NUMBER			
I	SPILL SOURCE	ENT F	AILURE		AREA OF CONTAM	INATION IN	SQUARE METRES			
J	FACTORS AFFECTING SPILL O	ASSISTAN	ICE REQUIRED	)	HAZARDS TO PER	SONS, PROF	PERTY OR EQUIPMENT			
	ADDITIONAL INFORMATION, C	OMMENTS, ACTIONS PROPO	O CONTAIN	N, RECOVER C	R DISPOSE	OF SPILLED PRODUCT	AND CONTAI	MINATED MATERIALS		
к	<ul> <li>big big big big big big big big big big</li></ul>									
L	REPORTED TO SPILL LINE BY Samuel Tapp	POSITION Env. Coordina	ator	EMPLOYE Agnic	<sup>:R</sup> co Eagle	Mines	LOCATION CALLING FF	ROM T	ELEPHONE <b>Ext.:460-6744</b>	
Μ	ANY ALTERNATE CONTACT Eric Haley	POSITION Env. Gen. Su	pervisor	EMPLOYE Agnic	<sup>:R</sup> co Eagle	Mines	ALTERNATE CONTACT Meadowbank	<b>K</b>	LTERNATE TELEPHONE 819-651-1010	
		· · · · · · · · · · · · · · · · · · ·		IE USE ON	ILY					
N	RECEIVED AT SPILL LINE BY	POSITION		EMPLOYE	R		LOCATION CALLED	R	EPORT LINE NUMBER	
FIDE										
320										
IHIR	D SUPPORT AGENCY						1			



# 2022-05-18 MBK 525L Hydraulic Oil

GN reference #: 2022-192

Please find the following information as a follow up to the Spill report submitted May 18, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### Spill Description

During operations at Meadowbank, a hydraulic hose of the container handler failed causing a total of 525L of hydraulic oil to leak on the warehouse sea cans storage pad.



Spill location: 65°01'07.83"N 96°04'09.78"W

There were no off-site impacts or discharges to any receiving watercourses. Distance to the closest lake is 400m to Third Portage Lake

Hydraulic hose failure

### **Remediation Actions**

The operator immediately shut down the equipment and called the environment department. A combination of absorbent booms and peat moss were placed around the equipment to capture as much oil as possible. The used spill response material was disposed appropriately at the Hazmat facility and approximately 8m3 of contaminated soil was brought to the Meadowbank landfarm.





#### **Corrective measures**

A routine visual inspection of all systems is performed during pre-operation checks as a part of the preventative maintenance program.

### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on May 18, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.



Samuel Tapp | Environment Coordinator samuel.tapp@agnicoeagle.com | Direct 819.759.3555 x4606744 | Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0

agnicoeagle.com f



# Canadä NT-NU SPILL REPORT

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

OIL, GASOLINE	, CHEMICALS AND	OTHER HAZARDOUS	MATERIALS
---------------	-----------------	-----------------	-----------

							REPORT LINE USE ONLY
Α	REPORT DATE: MONTH – DAY – 06-07-2022	YEAR		REPORT <b>16:30</b>	ГIME	ORIGINAL SPILL REPORT,	REPORT NUMBER
В	OCCURRENCE DATE: MONTH – 06-07-2022	DAY – YEAR		OCCURRI 10:00	ENCE TIME	UPDATE # TO THE ORIGINAL SPILL REPORT	<u>-</u>
С	LAND USE PERMIT NUMBER (IF KIOL-BL-14	APPLICABLE)			WATER LICENCE NUMBE	r (IF APPLICABLE)	
D	GEOGRAPHIC PLACE NAME OR	DISTANCE AND DIRECTIO	N FROM NAMED L	OCATION	REGION	UT	N OR OCEAN
Е	LATITUDE DEGREES 65 M	MINUTES 01	SECONDS 19	•	longitude degrees <b>96</b>	MINUTES <b>03</b>	SECONDS 13
F	RESPONSIBLE PARTY OR VESS AGNICO EAGLE M	INES	RESPONSIBLE	PARTY ADI	NESS OR OFFICE LOCA	ΓΙΟΝ	
G	ANY CONTRACTOR INVOLVED		CONTRACTOR	ADDRESS	OR OFFICE LOCATION		
	PRODUCT SPILLED Total Suspended S	Solids (TSS)	QUANTITY IN LI	TRES, KILC	OGRAMS OR CUBIC METF	RES U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF	APPLICABLE)	QUANTITY IN LI	TRES, KILC	DGRAMS OR CUBIC METF	RES U.N. NUMBER	
I	SPILL SOURCE Surface Runoff		SPILL CAUSE Turbid R	unoff		AREA OF CONTAMINATION IN	N SQUARE METRES
J	FACTORS AFFECTING SPILL OR	RECOVERY	DESCRIBE ANY	ASSISTAN	CE REQUIRED	HAZARDS TO PERSONS, PRO	OPERTY OR EQUIPMENT
к	shore. The source fences, wood-chip samples will be co Spill Location: 64'1 Contact Informatio	of the turbid flo booms and man llected tomorrov 18'20" 95'57'23" on: Eric Haley, 8 <sup>4</sup>	w appeared ritime barrid w (2022-06- 19-651-1010	d to ori ers we 08). 0	ginate from the re deployed an	Agnico Eagle infrast d are present in the fi	ructure. Silt eld. Water
L	REPORTED TO SPILL LINE BY Eric Haley	POSITION Env. Gen. Su	pervisor	EMPLOYE Agnic	R Co Eagle Mines	LOCATION CALLING FROM	TELEPHONE 819-651-1010
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# 2022-06-07 MBK Baker Lake TSS

#### GN reference #: 2022-236

Please find the following information as a follow up to the spill report, #2022-236, submitted June 7, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c and subsection 38(7) of the fisheries act.

#### **Description**

During an inspection of the Baker Lake Marshalling Facilities by an environmental technician, two turbid flows of water were observed entering into the thawed shore of Baker Lake, creating apparent plumes of TSS along the shore. The flows of water appeared to flow through the Agnico Eagle facilities, where heavy equipment were travelling to prepare the area for the upcoming maritime shipping season. The visible plumes in Baker Lake were mostly contained within a few feet from the shoreline, and water appeared clear a few meters into the lake. The two plumes are hereafter referred to as "BL-BARGE" for the flow of water that entered on the West side of the dock (64°18'17.68" N, 95°57'11.11" W), and "BL-LAKE" for the flow of water further West (64°18'20.23" N, 95°57'22.77"W). See figure 1 below for general site layout information and flow path estimate.



Figure 1. Overall Layout - Aerial Picture (2022/06/07)

Water samples in the lake of both locations were taken for analysis for TSS, as well as for acute lethality to *Daphnia Magna* and *Rainbow Trout*. The lethality samples were collected on June 8<sup>th</sup>, however due to the timing of the event and the logistics of shipment for analysis to an accredited third-party laboratory, they were processed outside of hold time. The analysis demonstrated the sampled water to be non-lethal to both species. The results for TSS samples taken in the lake are presented in Table 1 below.

Date	BL BARGE TSS (mg/L)	BL LAKE TSS (mg/L)
2022/06/08	5	110
2022/06/09	60	280
2022/06/10	4	17
2022/06/11	2	3
2022/06/12	20	4
2022/06/14	2	2
2022/06/15	15	5

#### Tpable 1. TSS Results of Baker Lake Samples



Figure 2. Aerial view of Baker Lake Shore prior to deployment of maritime booms (2022/06/07)

Location: 64° 18'20" 95° 57'23". The impacted waterbody is Baker Lake.

### <u>Cause</u>

The identified cause for the turbid runoff is the large volume of water reporting through the Marshalling Facilities without sufficient control measures in place. The volume of water flows through exposed till material, from which sediments are transported towards the lake. Furthermore, poor snow management practices during the winter of 2021-2022 allowed for little room for sedimentation to occur in the runoff water.

#### **Remediation Actions**

Upon observation of the runoff into the lake, the environmental personnel deployed maritime curtains, woodchip-log or straw-log booms and silt fence in the flow path of the runoff, to control the transportation of sediments. Over the next week, daily inspections and monitoring of the sector was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, if needed. Samples of the water quality (total suspended solids) of the lake at both inflow locations were taken, as described in Table 1. Acute Lethality sample results are pending final analysis. As part of the Core Receiving Environmental Monitoring Program, water chemistry monitoring will occur in Baker Lake.



Figure 3. Mitigation Measures at BL-LAKE (2022/06/07)



Figure 4. Mitigation Measures at BL-BARGE (2022/06/07)



Figure 5. Contained turbidity & sediments at BL-BARGE (2022/06/10)



Figure 6. BL-LAKE (2022/06/30)



Figure 7. BL-BARGE (2022/06/30)

From Figure 4, it is possible to see the effectiveness of the barriers to contain the turbidity in a localized area. The lakebed can also be seen to have apparent additional sediments. From figures 6 and 7, it is possible to see the effectiveness of the measures as of June 30<sup>th</sup>, with little to no water reporting to the lake. The area will require close monitoring following each rain events.

#### **Corrective Measures**

A contractor was retained to compact and address the problematic exposed till material. This work is scheduled to take place during the week of July 11<sup>th</sup>, 2022.

An engineering firm was retained to propose long-term solutions for water management at the Baker Lake Marshalling Facilities. Proposed solutions will be evaluated and discussed with CIRNAC prior to implementation.

Lastly, snow management of the sector will be reviewed following the selected water management solution.

Implementing these three measures will address the identified issues having caused this event.

#### <u>Closure</u>

We trust that the above details described appropriately the event that occurred at the Baker Lake Marshaling Facilities on June 7<sup>th</sup>, 2022 and the remediation activities. Please contact the undersigned should you have any questions.





# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

								REPORT LINE USE ONLY	
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Μ	ANY ALTERNATE CONTACT Eric Haley	POSITION Env. Gen. Sup	pervisor	EMPLOYE Agnic	R Ro Eagle Mines	ALTERNATE CONTACT Meadowbank	A	LTERNATE TELEPHONE 819-651-1010	
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# 2022-06-25 MBK 200L Diesel Exhaust Fluid

GN reference #: 2022-342

Please find the following information as a follow up to the Spill report submitted June 25, 2022 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### **Spill Description**

During operations at the Meadowbank site, an operator was placing a tote into a shipping container near the Maintenance shop and did not notice the metal support bracket around the tote was damaged. When the tote was placed into the shipping container, the damaged bracket punctured the tote next to it causing diesel exhaust fluid to spill onto the floor of the container as well as the ground.



Spill location: Northing 65' 01'17.9" Easting 96'04'4.01"

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 450 meters to Third Portage Lake.

A visual inspection of the tote was not completed prior to loading it into the seacan.

#### **Remediation Actions**

Spill pads were placed on the ground and a loader was immediately brought at the maintenance shop area to scrape the contaminated material. Approximately 1m<sup>3</sup> was collected into a roll off and was brought to the Meadowbank landfarm.



#### **Corrective measures**

An investigation into the root causes of the spill has been completed. The procedure for offloading is being updated to ensure drivers perform a circle check before leaving tank farm. This procedure will then be communicated to all Arctic Fuel drivers. Furthermore, cameras will be procured and installed on the telehandlers, allowing for additional visibility for the operators.

#### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on June 25, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.





# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

EMAIL: spills@gov.nt.ca

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к	<ul> <li>hydraulic oil to leak on the ground at the Transit Laydown #4 between a row of seacans. The equipment was parked by the operator and absorbent pads were immediately place under the hose to capture as much oil as possible. The environment department was called to assess the spill and mechanics to repair the equipment. Approximately 2 cubic meters of contaminated material was collected and brought to the landfarm.</li> <li>There were no off site impacts or discharges to any receiving watercourses. Distance to the closest lake is 440m to Third Portage Lake</li> <li>Spill Location: Northing 65' 1' 1.66" Easting 96' 3' 53.64"</li> <li>Contact Information: Louis Dubois 819 759 3555 ext. 4606744</li> </ul>										
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# 2022-08-29 MBK 200L Hydraulic Oil

GN reference #: 2022-440

Please find the following information as a follow up to the Spill report submitted August 30<sup>th</sup>, 2022, by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

#### Spill Description

During operations at Meadowbank, a hydraulic hose of the Hyster failed causing a total of 200L of hydraulic oil to leak on the ground at the Transit Laydown #4 between a row of sea cans.

Spill Location: Northing 65' 01' 01.66" Easting 96' 03' 53.64" on IOL There were no off-site impacts or discharges. Distance to the closest water body is 440m to Third Portage Lake

## Cause of Spill

#### Hydraulic Hose Failure



### **Remediation Actions**

The equipment was parked by the operator and absorbent pads were immediately place under the hose to capture as much oil as possible. The environment department was called to assess the spill and mechanics to repair the equipment. Approximately 2 cubic meters of contaminated material was collected and brought to the landfarm.



#### Corrective measures

A routine visual inspection of all systems is performed during pre-operation checks as a part of the preventative maintenance program. In addition, an environmental incident reduction plan has been developed. This plan includes a review of mechanical equipment failure, including hydraulic hose failure, to identify and address root causes.

#### **Closure**

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on August 29<sup>th</sup>, 2022, and the cleanup activities. Please contact the undersigned should you have any questions.





# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

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# 2022-10-05 MBK\_750L\_Waste Oil

GN reference #: 2022-490

Please find the following information as a follow up to the Spill report submitted October 6<sup>th</sup>, 2022, by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### **Spill Description**

During operations at the Meadowbank Project, a tote containing 1000L of waste oil was punctured by an equipment during the process of storing the reservoir in a sea can, causing a total of 750L of oil to leak onto the ground of the pad.



Spill location: N65' 01'02.6 W96'03'58.7" on IOL

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 400 meters to Third Portage Lake.

The improper method and equipment attachment were used for the task which led to the perforation of the tote.

## **Remediation Actions**

The tote was flipped over to prevent additional oil from leaking out of the container and a berm was built to halt the spill from going further. Absorbent material was used to collect as much oil as possible before removing approximately 10 cubic meters of contaminated soil with an excavator. The contaminated material was brought to the Meadowbank landfarm.





#### **Corrective measures**

The procedure was reviewed to include the proper method and equipment attachment to be used for the task and will be presented to all the operators.

### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on October 5th, 2022, and the cleanup activities. Please contact the undersigned should you have any questions.





# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

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## 2022-10-23 MBK 250L Diesel

GN reference #: 2022-508

Please find the following information as a follow up to the Spill report submitted October 23, 2022, by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### **Spill Description**

During operations at Meadowbank, an Arctic Fuel driver was refueling tanker #45 at the Meadowbank Tankfarm. The driver went back into the truck during refueling and fuel overflowed out of the air vent.



Spill location: 65°0'57"N 96°3'52"W

There were no off-site impacts or discharge to any receiving watercourses. Distance to the closest water body is 400 meters to Third Portage Lake.

The spill was caused due to the operator's failure to comply with the protocol.

#### **Remediation Actions**

Spill pads were immediately placed on the ground and the contaminated snow and material was scraped up. Approximately 6m3 was collected and brought to the Meadowbank landfarm.



#### **Corrective measures**

Refueling protocol was communicated and reviewed with all drivers. Furthermore, AEM is evaluating alternative refueling systems to avoid overflows.

#### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on October 23, 2022 and the cleanup activities. Please contact the undersigned should you have any questions.

TP



Tom Thomson | Environment Coordinator tom.thomson@agnicoeagle.com | Direct 819.759.3555 x4606744 | Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0

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# Canadä **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Α	REPORT DATE: MONTH – DAY –	YEAR	F	REPORT TI	ME	,				
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	11-26-2022			6:00	<b>5:00</b>					
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D	MEADOWBANK							OR OCEAN		
F				L		•		00	10	
	DEGREES <b>05</b>	SECONDS 09	ECONDS U9 DEGREES 90			MINUTES U3 SECONDS 13				
F	AGNICO EAGLE MINES LTD		BAKER LAKE XOC 0A0							
G	ANY CONTRACTOR INVOLVED		CONTRACTOR AL	DRESS O	R OFFICE LOC	ATION				
	PRODUCT SPILLED	QUANTITY IN LITE	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES U.N. NUMBER							
Η	SEWAGE WATER		140L	140L						
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			G U.N. NUMBER	U.N. NUMBER			
_	SPILL SOURCE	SPILL CAUSE	SPILL CAUSE				AREA OF CONTAMINATION IN SQUARE METRES			
I	CAMP DRAIN LINE		DAMAGE	DAMAGED PIPE			3 m2	3 m2		
J			DESCRIBE ANY ASSISTANCE REQUIRED			HAZARDS TO	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT			
<u> </u>										
	Ine shifted and loosened the coupling. As a result of the break, approximately 140L of sewage water was spilled under the building and onto the frozen ground. The contaminated material will be collected and brought to the Tailing Storage Facility. There were no off site impacts or discharges. Distance to the closest water body is 360 m to Third Portage Lake. Spill Location: 65° 01' 19.0"N 96° 04' 09.4"W Contact information: Samuel Tapp 819-759-3555 EXT.: 460-6744									
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## 2022-11-26 MBK 140L Sewage

GN reference #: 2022-543

Please find the following information as a follow up to the Spill report submitted November 26, 2022, by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

### **Spill Description**

During an inspection of the sewage piping under the Meadowbank Camp, a worker discovered a slow leak of sewage coming from the drain line. Upon further investigation, it was found that the sewage line shifted and loosened the coupling.



Spill Location: 65° 01' 19.0"N 96° 04' 09.4"W.

There were no off-site impacts or discharges. Distance to the closest water body is 360 m to Third Portage Lake.

Sewage line failure due to shifting which caused a loose connection and sewage to leak onto the ground.

#### **Remediation Actions**

The connection was repaired immediately and a Re-inspection of all sewage lines on site was completed. The spill occurred in a confined space under the building. Skirting around the camp will be removed to access the spill in spring once accessible and free of snow buildup. A combination of steaming machine and vacuum truck will be used in the confined space to cleanup the frozen sewage (estimated removal date – May 2023).

#### Corrective measures

Monthly visual inspection of all sewage piping is conducted as part of regular maintenance activities. A camp leveling adjustment campaign is planned to occur annually, to remediate any potential settlement that could be occurring in the wings, which may induce additional stress to associated piping.

#### <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on November 26<sup>th</sup>, 2022. Please contact the undersigned should you have any questions.



Sent from Amaruq


# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Δ	REPORT DATE: MONTH – DAY – YEAR		REPORT TIME			YOBIGINAL SPILL REPORT.				
	11-28-2022			21:00	00		OR		REPORT NUMBER	
В	OCCURRENCE DATE: MONTH – DAY – YEAR 11-28-2022			OCCURRENCE TIME     15:15		UPDATE # TO THE ORIGINAL SPIL	L REPORT	<sup>_</sup>		
С	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE) NWB-2AM-MEA1530						
D	GEOGRAPHIC PLACE NAME ( AWAR - KM87	OCATION								
F	LATITUDE		LONGITUDE							
	DEGREES 64	MINUTES 57	SECONDS 11		DEGREES	96	MINUTES 14	SE	CONDS 41	
F	RESPONSIBLE PARTY OR VESSEL NAME       RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION         AGNICO EAGLE MINES LTD       BAKER LAKE X0C 0A0									
G	ANY CONTRACTOR INVOLVE	ADDRESS	RESS OR OFFICE LOCATION							
	PRODUCT SPILLED DIESEL FUEL	QUANTITY IN LI	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			S U.N. NUMBER <b>1202</b>	U.N. NUMBER 1202			
H	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LI	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			S U.N. NUMBER	U.N. NUMBER		
	SPILL SOURCE	SPILL CAUSE	SPILL CAUSE				AREA OF CONTAMINATION IN SQUARE METRES			
		Equip			over		IBD			
J	FACTORS AFFECTING SPILL	ACTORS AFFECTING SPILL OR RECOVERY DESCRIBE ANY Frozen Ground			ICE REQUIRE	Đ	HAZARDS TO PER	HAZARUS TO PERSONS, PROPERTY OR EQUIPMENT		
	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS									
к	fuel spilled onto the ground below. The estimated volume spilled is 20,000L. Trenches were excavated to contain the spill. Slush and liquid picked up will be disposed in totes. Contaminated solids will be disposed at the landfarm. Contaminated snow will be placed at the stormwater management pond. Contaminated area is being delineated, to ensure remediation work will cover entire potential contamination zone. Remaining fuel in the tanker was transferred into another tanker. Spill Location: 64 57'10.8"N 96 14'40.7"W on IOL There were no waterbody impacted, nearest waterbody: 600m Contact Information: Eric Haley, Environmental General Supervisor 819-651-1010									
L	REPORTED TO SPILL LINE BYPOSITIONEric HaleyEnv. Gen. Supervisor		upervisor	EMPLOYER LO			LOCATION CALLING FF		ELEPHONE 819-651-1010	
Μ	ANY ALTERNATE CONTACT Alex Lavallee	LITERNATE CONTACT POSITION x Lavallee Crit. Inf. Env. Superint.		EMPLOYE AEM	ĒR		ALTERNATE CONTACT	TERNATE CONTACT ALT		
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<b>L</b> .	RECEIVED AT SPILL LINE BY POSITION STATION OPERATOR			EMPLOYE	PLOYER LO		CATION CALLED		EPORT LINE NUMBER	
IN							ELLOWKNIFE, NT		367) 920-8130	
LEAD AGENCY   EC  CCG  GNWT  GN  ILA  INAC  NEB  TC			SIGN	IFICANCE 🗆	Minor 🗆 Ma		R 🗆 UNKNOWN 🛛 FILE STATUS 🗆 OPEN 🗆 CLOSED			
AGENCY CONTACT NAME				CONTACT TIME			REMARKS	REMARKS		
LEAI	LEAD AGENCY									
FIRST SUPPORT AGENCY										
SECOND SUPPORT AGENCY										
тыв	D SUPPORT AGENCY									



# 2022-11-28 MBK Fuel Tanker Diesel

#### GN reference #: 2022-544

Please find the following information as a follow up to the spill report, submitted November 28, 2022 by Agnico Eagle Meadowbank Complex. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c. As required by Section 18(3) of Environment Canada's Environmental Emergency Regulations pursuant to paragraph 201(1)(a) of the Canadian Environmental Protection Act, 1999, the information required in the written report referred to in Schedule 8 of the regulation have been submitted electronically on the Single Window Information Management (SWIM) System on December 16, 2022.

#### **Spill Description**

During operations at the Meadowbank Complex, two fuel tankers operated by Arctic Fuel Services Ltd. met along the All-Weather access road (AWAR). When the tankers crossed each other on the road, the northbound tanker moved to the shoulder of the road but lost sight of the edge of the road and tipped over. Upon the impact with the ground, the reservoir was pierced in 3 locations causing a spill of 29,000L of diesel fuel. The driver was not significantly injured in the accident.



Figure 1. Tanker overturned at KM87 (2022-11-29)



Figure 2. General view of incident from the road (2022-11-29)

Spill location: 64 57'10.8" 96 14'40.7" on IOL.

There was no discharge to any receiving watercourse. Distance to the closest downstream water body is 1 km to the unnamed lake South-East of AWAR Km87 (referred to as Pond A in this report).

#### Cause of Spill

The spill was caused by the damage to the side wall of the reservoir of a fuel tanker sustained when the tanker tipped over. The accident was caused by the loss of control of the northbound fuel tanker from losing sight/awareness of the edge of the road. The northbound tanker reported going 10km/h over the maximum authorized speed in the procedure when meeting oncoming traffic.

# **Remediation Actions**

- Code 1 was immediately called to mobilize the emergency response team, and the emergency response plan was initiated according to the Meadowbank Complex Spill Contingency Plan;
- The time elapse between the initiation of the Code 1 and the arrival on scene of the first responders was approximately 30 minutes;
- An immediate containment plan was initiated to minimize the impact on the environment, following the guidelines outlined in the Spill Contingency Plan, and consisted of:
  - The deployment of spill response material;
  - The delineation of the extent of the spill area (an identified "hot zone" and "cold zone");
  - The excavation of two trenches in the cold zone;
  - The construction of a berm along the edge of the hot zone;
  - The excavation of a trench in the hot zone;
  - The excavation of a sump to ease pumping operation;
  - The pumping of pooling diesel fuel with a vacuum truck;
- Fuel remaining in the damaged reservoir was transferred into an empty tanker;
- The tipped over tanker was then retrieved and brought to the Agnico Eagle maintenance team for evaluation;
- Excavation of contaminated material was initiated on November 29<sup>th</sup>, and is still currently on-going. Contaminated snow and material is being brought to the Meadowbank South Cell tailings storage facility;
- The delineated area by Agnico was presented to a CIRNAC regulatory representative on December 1;
- Downstream area of the spill was monitored with the help of a PID;
- Frequent updates of the remediation efforts to various regulators were initiated following the CIRNAC regulatory representative, on December 2<sup>nd</sup>. These communications are still ongoing;
- Teleconference held with GN, CIRNAC, KIA and ECCC on December 15<sup>th</sup>, 2022. Meeting minutes were sent on December 16<sup>th</sup>, 2022 along with the long term proposed monitoring detailed below.

#### **Excavation and Backfilling path forward:**

- Soils samples will be taken in the remediated area, as well as further downstream of the spill area, and compared to CCME Residential Guidelines;
  - Soil samples will also be taken 1km north of the spill area to confirm CCME Residential Guidelines are appropriate targets. Should undisturbed sample results not meet CCME Residential Guidelines, further discussions with regulatory bodies will take place regarding acceptable remediation level;
- Excavate all contaminated material, or to bedrock and establish collection sump;
- Place geotextile membrane on top of excavated area to avoid contaminating snow, should contaminated material remain in the area;
  - Snow accumulation will be removed in end April/ early May;
- Install a snow fence around the excavated area to protect possible wildlife;
- Further remediation during Freshet may be necessary based on observation.
- Backfill to occur following confirmation of no contamination in the area.



Figure 3. Collection sump established (2022-11-29)



Figure 4. Pumping to totes (2022-11-29)

# **Volumetric Summary**

- Recovered fuel inside the damaged reservoir:
  - o **10,800L**
- Volume spilled:
  - o **29,000L**
- Contaminated material recovered to date:
  - o **1,000m**<sup>3</sup>
- Contaminated liquid recovered from ground:
  - o **21,800L**

#### Monitoring plan

- Ice profile and water analysis will be collected downstream of the spill area at Pond A and Pond B;
- Downstream receptor (Pond A & B) to be sampled weekly during freshet; Additional sampling points closer to the spill may be identified during monitoring;
  - Compare to CCME Guideline;
  - As communicated by the Inspector, a new license monitoring may be added downstream of the spill 2022-544. Further details will be communicated by the Inspector in this regard;
- Alternate-day visual inspection of the contaminated zone and sump (including using petroleum test strips in ponding water, and PID meter);
  - Collection sumps will be emptied during freshet with vacuum truck if sheen is present or test strip are positive;
  - Increase in monitoring if unexpected results (positive hits) & flow observation;
- Initiate a round of soil sampling during thaw season (June-July-August-September in 2023);
  - Compare to CCME Guideline;
  - Remediate if required
  - Review frequency based on results;
- Add monitoring plan to the 2023 Freshet Action Plan.

## Corrective measures

- 1. An investigation into the root causes of the incident was launched;
- 2. Review the current AWAR traffic procedure to address any deficiencies especially regarding crossing equipment, right of way and winter conditions;
- 3. Until procedure is reviewed, all southbound tankers/tractor trailers must come to a complete stop when meeting a northbound tanker/tractor trailer, giving the right-of-way;
- 4. Road safety study to be completed;
  - This includes the review of building or restoring larger pullouts;
- 5. Agnico will install reflectors on the East side of the road (opposite side of flags) in critical areas identified by Arctic Fuel services to improve road edge awareness;
- 6. Review and reinforced road safety policies, procedure, and practice with all AWAR drivers;
- 7. Area to be backfilled with Non-Acid Generating (NAG) material once the area has been deemed remediated.

## <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank Complex on November 28, 2021 and the remediation & monitoring activities. Please contact the undersigned should you have any questions.



Samuel Tapp Environment Coordinator

samuel.tapp@agnicoeagle.com Direct 819.759.3555 X4606744

Agnico Eagle Mines Limited - Meadowbank Division, Suite 540 - Baker Lake, Nunavut, Canada X0C 0A0

agnicoeagle.com

# **Figures**



Figure 5. Aerial sketch of spill & tested areas



Figure 6. Aerial sketch of downstream receptor (pond A & B)



Figure 7. Damaged areas of tanker - 2022-11-30



*Figure 8. Access ramp - 2022-11-30* 



Figure 9. Surface drainage trenches -2022-12-02



Figure 10. Excavation of Sump - 2022-12-04



Figure 11. Overview of spill area - 2022-12-04



Figure 12. Snow testing with PID after removal - 2022-12-06



Figure 13. Spill zone delineated for snow removal after blizzard and additional excavation 2022-12-07



Figure 14. Spill area after snow removal 2022-12-08



Figure 15. Excavation of spill area 2022-12-12



Figure 16. Excavation of spill area 2022-12-12



# **NT-NU SPILL REPORT**

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Α	REPORT DATE: MONTH – DAY – YEAR 12-24-2022			REPORT TIME 16:00			)	XORIGINAL SPILL REPORT,		REPORT NUMBER	
D	OCCURRENCE DATE: MONTH - DAY - YEAR			OCCURRENCE TIME					<del>_</del>		
Ъ	12-23-2022			21:0	21:00						
С	AND USE PERMIT NUMBER (IF APPLICABLE)				WATER LICENCE NUMBER (IF APPLICABLE) NWB-2AM-MEA1530						
П	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCAT					ATION REGION					
E	DEGREES 65 M	5 MINUTES 01 SECONDS 09				DEGREES 96 MINUTES 03 SECONDS 13					
F	RESPONSIBLE PARTY OR VESS AGNICO EAGLE M	OR VESSEL NAME     RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION <b>BAKER LAKE XOC 0A0</b>									
G	ANY CONTRACTOR INVOLVED	VOLVED CONTRACTOR ADDRESS OR OFFICE LOCATION									
	PRODUCT SPILLED	QUANTITY IN LI	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			U.N. NUMBER					
H	SECOND PRODUCT SPILLED (IF APPLICABLE) QUANTITY IN L			ITRES, KILOGRAMS OR CUBIC METRES				U.N. NUMBER	U.N. NUMBER		
	SPILL SOURCE SPILL CAUSE							AREA OF CONTAMINATION IN SQUARE METRES			
	GLYCOL HEATING	DAMAGE	DAMAGED PIPE				40 m2				
J	FACTORS AFFECTING SPILL OR	ACTORS AFFECTING SPILL OR RECOVERY DESCRIBE ANY			ANCE R	EQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT			
	ADDITIONAL INFORMATION, CO	MMENTS, ACTIONS PROP	OSED OR TAKEN T	O CONTA	AIN, RE	COVER OR DISPO	OSE OI	SPILLED PRODUCT	AND CONTA	MINATED MATERIALS	
K	adjacent corridor that connects the camp facilities to the warehouse was dismantled to prevent the propagation of the fire to the campsite causing the glycol present in the heating system to leak onto the ground of the pad. The contaminated material will be collected and brought to the Meadowbank tailing storage facility once the scene is unfrozen. There were no off site impacts or discharges. Distance to the closest water body is 360 m to Third Portage Lake. Spill Location: 65° 01' 15.6"N 96° 04' 08.65"W Contact information: Samuel Tapp 819-759-3555 EXT.: 460-6744								orevent the to leak onto eadowbank n to Third		
L	REPORTED TO SPILL LINE BY	POSITION Env. Coordir	OSITION Env. Coordinator		EMPLOYER Agnico Eagle Mines			LOCATION CALLING FROM		ELEPHONE 819-759-3555	
Μ	ANY ALTERNATE CONTACT Eric Haley	NY ALTERNATE CONTACT POSITION Eric Haley Env. Gen. Superv		rvisor Agnico Eagle Mines			es L	ILTERNATE CONTACT A Meadowbank OCATION		ALTERNATE TELEPHONE 819-651-1010	
			REPORT LIN	E USE O	ONLY		I		! 		
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LEAD AGENCY											
FIRST SUPPORT AGENCY											
SECOND SUPPORT AGENCY											
THIRD SUPPORT AGENCY											



# 2022-12-23 MBK 1000L Glycol

#### GN reference #: 2022-561

Please find the following information as a follow up to the Spill report submitted December 23, 2022, by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c.

#### **Spill Description**

During operations at the Meadowbank complex, a code 1 was initiated after visible flames were observed at the warehouse and the Emergency Response Team was called to put out the fire. The adjacent corridor that connects the camp facilities to the warehouse was dismantled to prevent the propagation of the fire to the campsite causing the glycol present in the heating system to leak.



Photo 1: Taken facing Southeast of the Fire



Photo 2: Taken facing North of the Fire



Spill Location: 65° 01' 15.6"N 96° 04' 08.65"W IOL

Photo 3: Taken facing South of the Fire



Photo 4: Taken facing Northeast of the Fire

There were no off-site impacts or discharges. Distance to the closest water body is 360 m to Third Portage Lake.

# Cause of Spill

Due to the fire at the dome warehouse, the corridor that connected the warehouse to the main camp had to be dismantled to prevent the propagation of the fire to the camp facilities, damaging the glycol heating system. It was determined by the investigators that the cause of the fire was an electrical equipment failure.

## **Remediation Actions**

- Code 1 was initiated to mobilize the emergency response team.
- The building maintenance team was called immediately to shutdown the heating glycol system and electricity that was feeding the section of the camp affected by the fire.
- The adjacent corridor that connects the camp facilities to the warehouse was dismantled to prevent the propagation of the fire to the campsite causing the glycol present in the heating system to be vaporized into the fire area.
- The time elapse between the call of the maintenance team and the complete shutdown of the glycol system was approximately 35 minutes.
- The zones that were accessible around the incident perimeter were assessed by the environment to evaluate the extend of the contaminated area.
- The visual assessment confirmed the witness's statement that the majority of the glycol had been consumed in the fire and that the remaining contaminant had been mixed with the water used to extinguish the fire, which, ultimately froze around the southern portion of the warehouse.
- Difficulty encountered in establishing a clean-up path forward and starting the decontamination due to the scene being frozen by the WSCC until March 7<sup>th</sup>.

#### Decontamination path forward:

- An external firm was hired and is scheduled to come on site in the beginning of April to support AEM field operations in the disassembling of the warehouse structure.
- A plan of the warehouse was designed, illustrating where material such as batteries were stored to ease the waste sorting throughout the dismantling phase.
- Excavate all contaminated material in the surrounding area.
- The debris sorting and contaminated material excavation will be executed under the supervision of the environment department to ensure they are disposed as per AEM management plans (e.g., snow/ice containing glycol will be brought to the tailing storage facility).

#### Corrective measures

- 1. Investigation of all work areas for potential fire hazards completed by Health and Safety team
- 2. Independent fire investigation conducted by specialized firm GESPRO to identify the cause of the fire
- 3. New temporary warehouse location was inspected prior to use to identify fire hazards
- 4. Independent fire risk assessment of all Meadowbank Complex buildings was conducted by specialized firm GESPRO

## <u>Closure</u>

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank site on December 23<sup>rd</sup>, 2022. Please contact the undersigned should you have any questions.



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