



MEADOWBANK DIVISION

Monitoring Program Summary Report

July 2013

Type A Water License 2AM-MEA0815

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SECTION 1 • **BACKGROUND**

As required under Part I, Item 25 of Type A Water License 2AM-MEA0815, this report documents the water management and monitoring activity at the mine site for the month. This includes water usage, Portage Attenuation Pond discharge water quality, Vault Dewatering water quality and sewage treatment plant discharge water quality (to onsite storm water management pond).

In addition, a summary of spills/actions for the month is included.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Freshwater usage for July 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 87,759 m³. The yearly freshwater used exceeds our License limit of 700,000 m³. The total freshwater used to date is 1,268,626 m³. The total amount of reclaim water used in the mill for July was 245,860 m³.

On April 23, 2013 Agnico Eagle Mines (AEM) Meadowbank Division submitted a request to the Nunavut Water Board for an amendment to increase the freshwater use rate at the Meadowbank Gold Project. In July, AEM was notified that a public hearing would be required with technical meetings. The technical meeting is scheduled for September 26th and 27th in Baker Lake.

Table 2-1: Freshwater Usage (m³)

	July
Freshwater Storage Tank	87,546
Emulsion Plant	213
Water Truck	0
Total	87,759
Year to date total	1,268,626

On July 3rd, AEM received a Water License Modification approval from NWB to allow East Dike seepage non contact water to be discharged to Second Portage Lake. On July 9th, AEM is requested direction from Environment Canada as to whether the discharge of the non-contact East Dike seepage would be subject to MMER requirements (should the discharge proceed). On August 7th, AEM received, from Environment Canada, correspondence advising that the effluent from the discharge of the East Dike seepage is subject to the requirements of the MMER. AEM is presently analyzing the situation to see if a discharge of the East Dike seepage into Second Portage Lake will occur or not.

2.2 SEWAGE TREATMENT PLANTS

One (1) effluent wastewater sample was taken from the onsite sewage treatment plants (STP's) in July.

The Seprotech STP results are shown in Table 2.2.1 below; the LJ-Mix STP results are shown in Table 2.2.2. The results of the discharge indicate the system was working well. The effluent is discharged to the onsite storm water pond and is not discharged to the natural environment.

Table 2.2.1: Seprotech Effluent Results

Parameters	Units	9-July-13
Ammonia	mg N/L	0.19
Ammonia-Ammonium	mg N/L	8.6
Total Kjeldahl Nitrogen	mg N/L	14.0
BOD-5	mg/L	19
COD	mg/L	78
Total Suspended Solids	mg/L	31
Nitrate	mg N/L	18.10
Nitrite	mg N/L	0.64
pH *	units	6.9
Fecal Coliform	UFC/100 mL	16
Total Coliform	UFC/100 mL	<1000

*Parameter measured by STP operators

Table 2.2.2: LJ-Mix Effluent Results

Parameters	Units	9-July-13
Ammonia	mg N/L	3.10
Ammonia-Ammonium	mg N/L	15.6
Total Kjeldahl Nitrogen	mg N/L	20.0
BOD-5	mg/L	16
COD	mg/L	69
Total Suspended Solids	mg/L	38
Nitrate	mg N/L	28.10
Nitrite	mg N/L	2.60
pH *	units	6.7
Fecal Coliform	UFC/100 mL	430
Total Coliform	UFC/100 mL	20000

*Parameter measured by STP operators

2.3 PORTAGE ATTENUATION POND EFFLUENT

For the month of July there is no effluent from the attenuation pond ST-9.

2.4 NON CONTACT WATER

In July, there was water discharged through the non-contact water diversion ditches. Portage Area East diversion ditch (ST-5) results are shown in Table 2.4.1 below and Portage Area West diversion ditch (ST-6) results are shown in Table 2.4.2.

TSS results didn't exceed the maximum average concentration (15 mg/L) and maximum allowable grab sample concentration (30 mg/L) permitted by the Water License, Part F, Item 4. Furthermore, to comply with Water License Part D, Item 22, sediment barriers were in

place throughout the month of July and frequent visual inspections were conducted to ensure that entry of sediments into the receiving environment was prevented.

Table 2.4.1: Portage Area East Diversion Ditch (ST-5) Results

Parameters	Units	4-July-13
Total Suspended Solids	mg/l	5

Table 2.4.2: Portage Area West Diversion Ditch (ST-6) Results

Parameters	Units	28-July-13
Total Suspended Solids	mg/l	2

2.5 VAULT DEWATERING

Vault Lake Dewatering began on June 27th. In July, a total of 463,005 m³ of water was discharged to Wally Lake. The total discharge to date is 507,620 m³.

Vault Lake fishout began on July 19th. A total of 462 fish were collected during the month. As of July 31, 45% of the catch was successfully placed into Wally Lake. Mortalities were sent to the community of Baker Lake.

As per Water License Part D Item 16, the effluent from Vault Lake pit dewatering shall not exceed the following quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids	15.0 mg/L	22.5 mg/L
Turbidity	15 NTU	30 NTU
pH	6.0 to 9.0	6.0 to 9.0
Total Aluminium	1.5 mg/L	3.0 mg/L

The pH and Aluminum concentrations at the water intake pump were as follows:

- pH 24 hour minimum/maximum: 6.37 / 7.81 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 7.37 / 7.49 (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.038 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.034 mg/L (Limit is 1.5 mg/L)

The turbidity and Total Suspended Solids (TSS) concentrations at the water intake pump were as follows:

- NTU 24 hour maximum concentration: 3.35 NTU (Maximum Limit is 30 NTU)
- TSS 24 hour maximum concentration: 5.0 mg/L (Maximum Limit is 22.5 mg/L)
- NTU 30 days mean maximum concentration: 1.74 NTU (Maximum Limit is 15 NTU)
- TSS 30 days mean maximum concentration: 1.33 mg/L (Maximum Limit is 15 mg/L)

Table 2.5.1 summarizes the dewatering monitoring results for pH, aluminum, turbidity and TSS for the month.

Table 2.5.1: Vault Lake Dewatering Monitoring

Date					License Requirements			
	Turbidity	Lab TSS	pH	Total Aluminium	NTU 30-day Maximum	TSS 30-day Maximum	pH 30-day Maximum	Al 30-day Maximum
	NTU	mg/L		mg/L	NTU	mg/L		mg/L
2013-07-01	2.80	1.3						
2013-07-02	1.45	0.5						
2013-07-03	3.35	2.1	7.54	0.034				
2013-07-04	1.20	0.8	7.38					
2013-07-05	1.12	1.6						
2013-07-06	1.03	0.0						
2013-07-07	0.82	0.4						
2013-07-08	0.85	0.4						
2013-07-09	0.57	0.4	6.37	0.038				
2013-07-10	0.71	0.4	7.62					
2013-07-11	Not pumping							
2013-07-12	0.70	1.0	7.22					
2013-07-13	0.67	0.5	7.56					
2013-07-14	0.59	1.5	7.36					
2013-07-15	0.53	1.5	7.37					
2013-07-16	0.81	1.0	7.80					
2013-07-17	0.64	1.0	7.11	<0.006				
2013-07-18	0.60	0.5	7.39					
2013-07-19	1.85	5.0	7.68					
2013-07-20	0.50	1.0	7.55					
2013-07-21	0.40	0.5						
2013-07-22	0.49	1.5						
2013-07-23	0.68	1.0	7.81					
2013-07-24	0.41	1.0		0.025				
2013-07-25	0.79	1.5						
2013-07-26	0.60	5.0						
2013-07-27	0.89	1.5			1.74	1.22	7.49	0.034
2013-07-28	0.49	1.5			1.05	1.24	7.49	0.034
2013-07-29	0.25	1.5			1.03	1.24	7.41	0.026
2013-07-30	0.37	0.5			0.93	1.24	7.41	0.026
2013-07-31	0.22	3.5	6.82	0.015	0.88	1.33	7.37	0.024

SECTION 3 • SPILL MANAGEMENT

AEM has developed a system of tracking spills on-site. Table 3.1 summarizes the AEM spill reports for the month. Three (3) spills occurred on site and none (0) was reported to the GN spill hotline. AEM contained and cleaned up all the spills.

Table 3-1: Summary of AEM Internal Spill Reports

Date of Spill	Hazardous Material	Quantity (L/Kg)	Location	Cause of spill	Clean-up action taken	Reported to Spill Hot Line
2013-07-14	Jet A	100	Baker Lake Temporary Jet A Pad	Cause of spill is unknown. During the construction of the new Jet A pad - fuel odors were present when the Jet A tanks and steel footings were removed.	Material is being shipped to the contaminated soil pad at Meadowbank	No
2013-07-15	Sulphur prills	65	Overpad	An operator punctured a seacan containing sulphur prills	Clean-up of contaminated material	No
2013-07-24	Diesel	400	Spill containment Baker Lake Tank Farm Tank #3	Due to expansion by hot weather, pipe moved and put pressure on the flex pipe causing it to brake	Installed 2 caps on the pipe, to be evaluated next day. A new flex pipe installed	No