AGNICO EAGLE

MEADOWBANK DIVISION

Monitoring Program Summary Report

September 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 September 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 52,046 m^3. The yearly freshwater used exceeds our License limit of 700,000 m^3. The total freshwater used to date is 1,419,897 m^3. The total amount of reclaim water used in the mill for September was 258,872 m^3.

On April 23rd, 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. The technical meeting and pre-hearing conference will be held in Baker Lake on October 16th and 17th, 2013.

Table 2-1: Freshwater Usage (m^3)

	September
Freshwater Storage Tank	51,830
Emulsion Plant	216
Water Truck	0
Total	**52,046**
Year to date total	**1,419,897**

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

Preliminary AEM Report – Seepage Water From Waste Rock Storage Facility – Sample Location ST-16 was sent to the NWB on September 27th, 2013. In September, AEM continue to implement the action plan : a Waste Rock Plug/Dike was constructed August 26th to September 1st and continual sump pumping, increased monitoring and an RFP for third party engineering firm to advise on seepage causes and recommendations for solutions was submitted to a consulting firm. The seepage has been contained within the collection area.

2.3 SEWAGE TREATMENT PLANTS

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

The Seprotech STP results are shown in Table 2.3.1 below; the LJ-Mix STP results are shown in Table 2.3.2. 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 2.3.1: Seprotech Effluent Results

Parameters	Units	September 11, 2013
Ammonia	mg N/L	<0.01
Ammonia-Ammonium	mg N/L	4.2
Total Kjeldahl Nitrogen	mg N/L	8.0
BOD-5	mg/L	7
COD	mg/L	23
Total Suspended Solids	mg/L	19
Nitrate	mg N/L	19.70
Nitrite	mg N/L	0.36
pH *	Units	7.10
Fecal Coliform	UFC/100 mL	180
Total Coliform	UFC/100 mL	1000

*Parameter measured by STP operators

Table 2.3.2: LJ-Mix Effluent Results

Parameters	Units	September 9, 2013
Ammonia	mg N/L	<0.01
Ammonia-Ammonium	mg N/L	17.4
Total Kjeldahl Nitrogen	mg N/L	22.0
BOD-5	mg/L	5
COD	mg/L	27
Total Suspended Solids	mg/L	38
Nitrate	mg N/L	28.60
Nitrite	mg N/L	0.23
pH *	Units	7.00
Fecal Coliform	UFC/100 mL	8
Total Coliform	UFC/100 mL	400

*Parameter measured by STP operators

2.4 PORTAGE ATTENUATION POND EFFLUENT

Four weekly effluent samples were taken from the Actiflo Water Treatment Plant (ST-9) in September. All the results were in compliance with Water License Part F, Item 2 for effluent quality limits.

The sample results are shown in Table 2.4.1 below.

Table 2.4.1: ST-9 - Effluent Monitoring

Date / Parameters	Units	Max. grab conc.	02-Sep-13	09-Sep-13	19-Sep-13	24-Sep-13	Monthly Average	Max. avg. conc.
pH*		6.0-9.0	7.51	6.87	7.02	7.04	7.11	6.0-9.0
TSS	mg/L	30	6	7	3	8	6	15
Turbidity*	NTU	15	1.29	1.41	1.79	2.70	1.80	15

Aluminium	mg/L	1.5	0.81	1.01	0.96	0.93	0.93	1.5
Dissolved Aluminium	mg/L	1.0	0.056	<0.006	0.029	<0.006	0.023	1.0
Arsenic	mg/L	0.6	0.0046	0.0021	0.0032	0.0011	0.0028	0.3
Cadmium	mg/L	0.004	0.00015	0.00006	<0.00002	<0.00002	0.000058	0.002
Cyanide Total	mg/L	1.0	0.186	0.314	0.212	0.335	0.262	0.5
Copper	mg/L	0.2	0.0047	0.0029	0.0029	0.0027	0.0033	0.1
Mercury	mg/L	0.0008	<0.00001	<0.00001	<0.00001	<0.00001	0.000005	0.0004
Ammonia nitrogen	mg N/L	32	11.6	11.3	12	12.1	11.75	16
Nickel	mg/L	0.4	0.0717	0.0647	0.0613	0.0638	0.07	0.2
Nitrate	mg N/L	40	3.3	3.5	3.8	4.2	3.70	20
Plomb	mg/L	0.2	<0.0003	0.0021	<0.0003	<0.0003	0.00064	0.1
Phosphorus	mg/L	2.0	<0.01	<0.01	<0.01	<0.01	0.005	1.0
Zinc	mg/L	0.8	0.014	0.013	<0.001	<0.001	0.007	0.4
Chloride	mg/L	2000	90.8	88.5	87.5	107	93.45	1000
C10-C50	mg/L	6	<0.1	<0.1	0.8	<0.1	0.24	3

*Parameter measured by Environmental Technicians on field

2.5 NON CONTACT WATER

In September, there was water discharged through the non-contact water diversion ditches. Portage Area East diversion ditch (ST-5) results are shown in Table 2.5.1 below and Portage Area West diversion ditch (ST-6) results are shown in Table 2.5.2.

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, frequent visual inspections were conducted to prevent entry of sediments into the receiving environment.

Table 2.5.1: Portage Area East Diversion Ditch (ST-5) Results

Parameters	Units	9-September-13
Total Suspended Solids	mg/l	4

Table 2.5.2: Portage Area West Diversion Ditch (ST-6) Results

Parameters	Units	9-September-13
Total Suspended Solids	mg/l	8

2.6 VAULT DEWATERING

In September, a total of 784,648 m^3 of water was discharged to Wally Lake. The total discharge to date is 2,019,694 m^3. A third dewatering pump was started on September 29th, 2013. Daily and weekly discharge samples were taken at the intake of the three pumps.

Vault Lake fishout began on July 19th and was completed on September 24th, 2013. In September, 2,283 fish were collected for a total of 3,153 fish since the fishout began. As of September 24th, 56% of the catch was successfully placed into Wally Lake. Mortalities were sent to the community of Baker Lake. On September 20th, DFO verbally agreed that September 24th was the last day of the fishout. DFO agreed with this decision based on:

the high effort that AEM made to remove and transfer fish, the success and the number of fish/ biomass predicted in the CPUE phase, and due to deteriorating weather and safety concerns for the crew.

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: 6.87 / 7.50 (Limit is 6-9 units)
•pH 30 days minimum/maximum: 7.07 / 7.21 (Limit is 6-9 units)
•Al 24 hour maximum concentration: 0.110 mg/L (Limit is 3.0 mg/L)
•Al 30 days maximum concentration: 0.029 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: 7.04 NTU (Maximum Limit is 30 NTU)
•TSS 24 hour maximum concentration: 16.0 mg/L (Maximum Limit is 22.5 mg/L)
•NTU 30 days mean maximum concentration: 1.94 NTU (Maximum Limit is 15 NTU)
•TSS 30 days mean maximum concentration: 2.59 mg/L (Maximum Limit is 15 mg/L)

Table 2.6.1 summarizes the dewatering monitoring results for pH, aluminum, turbidity and TSS for the month.

Table 2.6.1: Vault Lake Dewatering Monitoring

Date	ST-DD-3				ST-DD-4				ST-DD-5				Both pump							
	Turbidity	TSS	pH	Total Aluminium	Turbidity	TSS	pH	Total Aluminium	Turbidity	TSS	pH	Total Aluminium	NTU 24-hour Mean	NTU 30-day Mean	TSS 24-hour Mean	TSS 30-day Mean	pH 24-hour Mean	pH 30-day Mean	Al 24-hour Mean	Al 30-day Mean
	NTU	mg/L		mg/L	NTU	mg/L		mg/L	NTU	mg/L		mg/L	30	15	22.5	15	6.0 - 9.0	6.0 - 9.0	1.5	3.0
2013-09-01	0.26	0.8			0.61	0.6							0.44	0.54	0.71	1.27		7.18		0.026
2013-09-02	0.07	0.0			0.25	0.3							0.16	0.52	0.13	1.23		7.18		0.026
2013-09-03	0.44	0.2	7.39		0.64	0.6	7.50						0.54	0.52	0.42	1.07	7.45	7.20		0.026
2013-09-04	0.66	2.0	7.32	0.006	0.63	0.6	7.36	<0.006					0.65	0.53	1.32	1.01	7.34	7.21	0.006	0.021
2013-09-05	0.68	1.2	7.10		0.61	0.6	7.04						0.65	0.53	0.91	1.00	7.07	7.20		0.021
2013-09-06	1.07	1.1	6.93		1.04	1.0	6.91						1.06	0.50	1.07	1.01	6.92	7.18		0.021
2013-09-07	1.16	1.0	6.87		Not in operation								1.16	0.52	1.00	1.02	6.87	7.17		0.021
2013-09-08	1.95	0.8			1.56	1.6							1.76	0.56	1.18	1.04		7.17		0.021
2013-09-09	1.10	0.8	6.96		Not in operation								1.10	0.55	0.80	1.04	6.96	7.18		0.021
2013-09-10	1.27	1.4	6.95		1.11	1.1	6.87						1.19	0.59	1.26	1.07	6.91	7.16		0.021
2013-09-11	Not in operation				Not in operation									0.60		1.10		7.16		0.021
2013-09-12	0.99	1.0		NA	1.12	1.1		NA					1.06	0.63	1.06	1.12		7.18		0.021
2013-09-13	2.01	4.3	6.94		2.24	2.2	6.97						2.13	0.69	3.27	1.23	6.96	7.17		0.021
2013-09-14	2.66	1.7			3.10	3.1							2.88	0.78	2.40	1.31		7.15		0.017
2013-09-15	1.96	2.0			2.01	2.0							1.99	0.85	2.01	1.38		7.14		0.017
2013-09-16	1.84	0.7			1.80	1.8							1.82	0.88	1.25	1.37		7.14		0.017
2013-09-17	1.24	1.2			1.80	1.8							1.52	0.92	1.50	1.40		7.12		0.017
2013-09-18	1.94	10.0	6.93	0.023	2.11	2.1	7.04	0.020					2.03	0.96	6.06	1.61	6.99	7.11	0.0215	0.018
2013-09-19	7.04	12.0			2.30	2.3							4.67	1.12	7.15	1.85		7.11		0.018
2013-09-20	4.15	16.0			2.42	2.4							3.29	1.22	9.21	2.12		7.11		0.018
2013-09-21	Not in operation				Not in operation									1.25		2.17		7.12		0.020
2013-09-22	3.72	7.5			4.60	4.6							4.16	1.37	6.05	2.33		7.12		0.020
2013-09-23	1.88	4.5	7.14		2.29	2.3	7.13						2.09	1.43	3.40	2.38	7.14	7.08		0.020
2013-09-24	1.90	3.5	7.02		1.87	1.9	7.26						1.89	1.49	2.69	2.46	7.14	7.08		0.020
2013-09-25	1.33	1.0		<0.006	3.21	3.2		0.110					2.27	1.56	2.11	2.52		7.08	0.0580	0.029
2013-09-26	2.95	2.0			3.84	3.8							3.40	1.67	2.92	2.56		7.08		0.029
2013-09-27	2.11	3.0			2.37	2.4							2.24	1.73	2.69	2.59		7.08		0.029
2013-09-28	2.47	5.5			2.59	2.6							2.53	1.80	4.05	2.41		7.08		0.029
2013-09-29	3.55	1.0	6.91		3.33	3.3	6.95		Pump Started				3.44	1.85	2.17	2.45	6.93	7.07		0.029
2013-09-30	2.10	2.4			1.79	1.8			3.92	3.6			2.60	1.94	2.60	2.53		7.07		0.029

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. Six (6) spills occurred on site and one (1) 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
2013-09-04	Oil	25	Hazmat Storage Area	When moving sea cans for hazmat sorting, Hyster operator noticed oil on ground underneath	Soil with oil was collected and brought to yellow roll-off, 3 buckets of loader was collected.	No
2013-09-04	Glycol	85	Back Entrance to gym	When opening the valve for the wing, the hose inside the tank came out of the tank the moment the pressure was turned on.	Valve was closed and repaired so hose would not come out of tank when pressure was turned on.	No
2013-09-04	Oil	35	Hazmat Storage Area	When moving pallets of oil drums for hazmat sorting work, a 40 liter pail fell at the back of the sea can. Lid was not closed properly and product leaked inside sea can. 20 liters inside sea can – 15 liters outside	Absorbent pads were placed inside and outside of sea can to contain and collect spill.	No
2013-09-18	Petroleum products	80	Baker Lake fuel farm	Overflow while filling the tanker	Stop the pump and pick up the contaminated soil	No
2013-09-24	Diesel	200	Open Pit	Tanker's fuel tank punctured by a rock	Repair the fuel tank and pick up the contaminated soil and brought it to the soil pad	Yes
2013-09-28	Mill Slurry	<100	Outside leach can, near sea can	Hole in a pressured line, sprayed out	Remove contaminated material and brought back into the circuit.	No