

MEADOWBANK DIVISION

Monitoring Program Summary Report

November 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 November 2013 is summarized in Table 2.1 below. Total freshwater used for the month was 59,787 m³. The yearly freshwater used exceeds our License limit of 700,000 m³. The total freshwater used to date is 1,546,422 m³. The total amount of reclaim water used in the mill for November was 223,169 m³.

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. Water license amendment pre-hearing conference and technical meeting was held in Baker Lake on October 16th and 17th. The final hearing will be a written hearing and is planned to be held in January 17th, 2014.

The NWB advised at the Pre Hearing Conference that AEM must hold a Workshop in regard to issues raised at the technical meeting related to annual reporting and final water quality but not related to the water use increase. The Workshop was held by AEM via WebEx on November 28th with AANDC, KIA, NWB and EC. You will find in Appendix 1 minutes of the meeting sent to attendees.

Table 2-1: Freshwater Usage (m³)

	November
Freshwater Storage Tank	59,622
Emulsion Plant	165
Water Truck	0
Total	59,787
Year to date total	1,546,422

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

The RSF seepage has been frozen since October 5th, 2013. In November, weekly inspections were completed at RSF and NP-2 Lake. A monthly sample was also taken in NP-2 Lake. On November 8th, AEM received the AANDC Inspector's Direction (Order) regarding the RSF Seepage into NP-2 and on November 20th, AEM sent a response to this Inspector's Direction (Appendix 2). On November 15th, AEM received an email advising that AANDC Field Operations Division has initiated an investigation in regard to the incident that was discovered during the AANDC July 29 – 30 Inspection. The investigation has been initiated for the purpose of gathering additional information in regard to alleged violations under subsection 12 (1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act. AEM also received, on November 15th, an email advising that Environment Canada Environmental Enforcement Division has initiated an investigation. The investigation has

been initiated for the purposes of gathering additional information in regard to alleged violations under subsection 36(3) of the Fisheries Act. A report will be prepared by an independent engineering firm and submitted to AANDC in response to the Inspector's Direction by December 20th, 2013.

2.3 ASSAY ROAD SEEPAGE

On November 4th, 2013, it was observed that water was seeping thru the road in front of the Assay Lab Road. After investigation, it was determined that the seepage was coming from the process plant (due to the presence of CN, Cu and Fe in sample analysis results). On November 8th, the discharge of seepage was reported to Government Agencies. On November 12th, AEM sent spill report update #1 and #2 to Government Agencies and on November 19th, AEM sent spill report update #3. Sample monitoring indicates that no contamination has reached Third Portage Lake. Please refer to the spill report and update #1 to #3 for more information (Appendix 3). No more seepage has been visible since November 24th. On November 28th, AEM held a meeting with the Baker Lake council to provide an update on this situation.

2.4 SEWAGE TREATMENT PLANTS

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

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	November 11, 2013
Ammonia	mg N/L	<0.01
Ammonia-Ammonium	mg N/L	7.7
Total Kjeldahl Nitrogen	mg N/L	14.0
BOD-5	mg/L	11
COD	mg/L	41
Total Suspended Solids	mg/L	82
Nitrate	mg N/L	25.50
Nitrite	mg N/L	0.20
pH *	Units	5.20
Fecal Coliform	UFC/100 mL	112
Total Coliform	UFC/100 mL	2000

^{*}Parameter measured by STP operators

Table 2.3.2: LJ-Mix Effluent Results

Parameters	Units	November 11, 2013
Ammonia	mg N/L	0.01
Ammonia-Ammonium	mg N/L	13.7
Total Kjeldahl Nitrogen	mg N/L	19.0
BOD-5	mg/L	15
COD	mg/L	62
Total Suspended Solids	mg/L	41
Nitrate	mg N/L	31.00
Nitrite	mg N/L	0.26
pH *	Units	6.50
Fecal Coliform	UFC/100 mL	20
Total Coliform	UFC/100 mL	320

^{*}Parameter measured by STP operators

2.5 PORTAGE ATTENUATION POND EFFLUENT

There was no Portage Attenuation Pond Discharge thru Actiflo Water Treatment Plant (ST-9) in November.

2.6 NON CONTACT WATER

In November, there was no water discharged through the non-contact water diversion ditches due to freezing conditions.

2.7 VAULT DEWATERING

In November, no water was discharged to Wally Lake.

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. Eight (8) spills occurred on site and two (2) were 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
2013-11-01	Coolant	20	Sana Yard in front of garage	Coolant hose broke/crack on tractor.	Contaminated snow/soil was collected and taken to yellow roll off container.	No
2013-11-02	Oil	200	New Transit Lay Down	When removing drums in sea-can, the forklift operator punctured the oil drums.	Ground was scraped with the bucket and materiel was disposed in the yellow roll-off container.	Yes
2013-11-02	Lube oil	40	Maintenan ce Shop East End	An improperly connected fitting at the oil tank inside the lube truck 39 container box. It could be cause by vibration, very rough road.	Mechanic immediately installed absorbent pads to soak up the oil as well as taped and barricaded the area. Mechanic advised supervisor of the incident. The mechanic then inspected the attachment of the oil tank for proper connection. Site Services has been advise to come and pick up the contaminated soil first thing on beginning of day shift.	No
2013-11-04	Coolant	40	Fuel Farm Truck Parking	While machine RH120 was cooling off, a coolant hose clamp became loose causing spill.	Absorbent pads were placed on the ground.	No
2013-11-07	Seepage	> 5000	In front of Assay Lab	Probably Process water	Samples of seep have been taken and sent to accredited lab for RUSH analysis. Investigation continues. Containment is built to hold any further seepage from migrating. Next step will be to create sump to catch any seepage. Once this is completed, the source of the seepage will be delineated. Once source is found, and action plan will be created to stop the source and to clean contaminated ice. (If necessary) Any contaminated ice and snow will be removed and taken to the Tailings Storage Facility. Further follow-up information and updates will be providing as the investigation moves forward.	Yes
2013-11-14	Hydraulic oil	3	Vault heated coverall	Hydraulic Cylinder Seal leaking on the Zoom Boom TL-943.	Scrapped up the contaminated area and disposed into the yellow roll off designed for contaminated soil.	No

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2013-11-18	Transmission Oil	10	Maintenan ce shop	Equipment failure.	Advised Site Services to pick up spill spot.	No
2013-11-29	Glycol	5	6163 Genset 7	Water pump plug let go and the engine glycol went on the floor. Since the floor is not water tight, there is a small quantity that went on the ground by the sump overflow and by the cable hole.	Glycol on floor was cleaned up and plug was put back on equipment.	No

Appendix 1
Workshop Annual Report Minutes Meeting



AANDC, EC, KIA, NWB & AEM – Meadowbank Annual Report Review

Date: November 28, 2013 – 14:00 – 15:30 Subject: Meadowbank Annual report workshop

Location: Hosted by AEM via WebEx

Participants: AEM - Ryan VanEngen (WebEx host), Stephane Robert, Kevin Buck, Marie-Pier Marcil; NWB - Karen Kharatyan, Phyllis Beaulieu; KIA- Luis Manzo; AANDC- David Abernathy,

Murray Ball, Ian Parsons; EC- Anne Wilson, Michael Mohammed

Attachments – see PDF presentation sent to participants on November 27th.

<u>Introduction – Ryan VanEngen</u>

"Round table"; introduction of all parties.

The group reviewed the purpose of the meeting:

- Review Type A water license annual report requirements and the AEM annual report format;
- Respond to issues raised by AANDC in PHC;
- Open discussion about how to proceed with annual reporting.

Review NWB License Requirements for the Annual Report and 2012 Annual Report format– Ryan VanEngen

AEM reviewed the License 2AM-MEA0815: Schedule B – General Condition. This schedule describes what the annual report shall include sections related to Construction, Water, Waste, Spills, Modifications, Monitoring and Closure. Since 2008, AEM has structured the annual report to meet these conditions.

AEM reviewed the Table of Contents of the 2012 annual report and illustrated that all of the requirements stated in Schedule B are presented in the annual report. AEM also stressed the overlap between many of the conditions in the Type A water license, NIRB project certificate, DFO authorizations, KIA annual reporting and federal regulations, that in AEM's opinion are met in the annual report. AEM has provided Table 1.1 that list annual report requirements for all of our licenses and authorizations; this provides a guide to the reader on where to find text that responds to the specific conditions in all of the licenses.



AANDC appreciated the effort that goes into the annual report and feel that AEM is meeting the conditions of the Type A License related to the annual report.

Overall, all participants (EC, AANDC, KIA, NWB) agreed with the format of the 2012 annual report and think it was easy to read.

AANDC suggested that, in consideration of the renewal, terms of reference should be established for the content of the Water Management and Waste Management Plan (separate) (i.e. balance, model predictions, quality info). The main concern from AANDC was that the water management information (balance and water quality predictions) was not presented in the annual report but was found in the SNC (2012) revised water management plan. AANDC noted that their annual reporting concerns and site water management are not related to AEMs freshwater use amendment application and that AANDC does not think the increased freshwater consumption rate will cause significant impacts to local aquatic ecosystem.

Review and discussion of AANDC water license amendment main points/ issues – Ryan VanEngen/ Kevin Buck – refer to AANDC email dated November 18th, 2013.

Issue #1: No stand alone Water Balance and Water Quality Monitoring Reports

Issue #2: Separation of the Mine Waste and Water Management Plan into Two Plans

Issue #3: Part E, Item 7 of the License References a Dated Monitoring Plan

Mine Waste and Water Management Plans

Issue #2: Separation of the Mine Waste and Water Management Plan into two Plans:

AANDC Recommendation stated that the amended water licence should remove any reference made to a Mine Waste and Water Management Plan. Rather, reference should be made to the Mine Waste Management and Water Management Plans that have been implemented by Agnico Eagle. In 2009, Agnico Eagle replaced the 2007 Mine Waste and Water Management Plan with a Mine Waste Management Plan and Water Management Plan. These plans address Part F, Item 16 of the licence. This change in management planning should be incorporated into an amended water licence.

AEM agrees and this will be part of the Type A water license renewal and not part of the actual amendment request.

<u>Water Balance and Water Quality Modeling Reports – Discussion and AEM responses to AANDC's issues.</u>

Issue #1: No stand- alone Water Balance and Water Quality Monitoring Reports



Issue #3: Part E, Item 7 of the License References a Dated Monitoring Plan

Applicable licence conditions were reviewed:

Part E, Item 6: The Licensee shall submit a Water Balance and Water Quality Monitoring Reports to the Board for review, biannually (twice a year) for two years following the commencement of operations and annually thereafter. The Report shall include a comparison of predicted and measured parameters.

AEM presented all of the water balance data (section 4 of the 2012 annual report) and water quality monitoring data (section 8 of the 2012 annual report to meet Part I Schedule I). More specifically collection systems, dewatering, and mine site water quality data are presented in 8.1.2, 8.1.3, and 8.1.5 per type A water license.

Part E, Item 7: The Water Balance and Water Quality Model shall be re-calibrated as necessary in accordance with the action plan outlined in section 3.2.5.2 of the Water Quality and Flow Monitoring Plan (August 2007), and at a minimum of once every two years following the commencement of Operations. The results and implications of the re-calibrated model shall be reported to the Board.

The water balance and water quality model were re-calibrated in 2012 and submitted in the Annual Report.

AANDC appreciated this review but had difficulty to find this information in the 2012 annual report and had concerns that the modelling was not meeting the water license.

AEM will improve the reporting on water balance and water quality in our next annual report.

AEM noted that until 2012, the water management was primarily focused on dewatering and managing freshwater use and reclaim water optimization. As Meadowbank has progressed, our water management has transitioned to optimizing our operations and water management. We now have a dedicated team of water management engineers that routinely update the site wide water balance.

Discussion of Water Quality Modeling

AEM explained the reason for a quality model update in the Water license. Water quality modelling assists AEM (and regulators) to ensure the water will meet discharge criteria. This will assist us in - determining pit water quality, planning water treatment, evaluate discharge timing, etc.



As we approach pit reflooding we will be reviewing our water quality model annually to ensure that CCME criteria to protect aquatic biota prior to breaching the dikes are met. The SNC forecasted water quality predictions for the pit and the downward trend of 2013 water quality data at ST-21, that will be used to predict future water quality in our 2013 model was reviewed as part of this workshop.

AANDC-requested that during the water license renewal the annual reporting conditions is clarified.

AEM agreed to discuss these issues during the water license renewal. AEM requested clarification on what predictions AANDC want AEM to compare to. AANDC asked to compare with the original model and give explanation in the difference between the two models.

KIA needs a comparison and summary table that states why there are differences. This will assist KIA in making a comparison.

AEM will include this information in our 2013 Annual Report – a comparison of results vs. predicted and offer explanations for significant changes.

KIA had some outstanding issues related to freshwater license amendment 1) waste rock use 2) and the effects of increased waste rock tonnage has on water compensation and water use. AEM and KIA will send a joint letter of agreement on compensation to NWB to allow the license amendment to proceed.

Closing – Stephane Robert

AEM is of the opinion that the annual report requirements of Schedule B of the Type A water license were met. All parties (AANDC, EC, KIA, and NWB) agree with the format and did not have specific suggestions on how to improve the annual report.

Separate from this License amendment, EC and AEM suggest that we host a workshop in mid-January (after Jan 17th) to review our water management plan. This would be a technical meeting to review specifics related to water balance and water quality to improve the revision of the plan. EC suggested that DFO also attend.





WORKSHOP AGENDA



Introduction - Stephane Robert

- "Round table" introduction
- Purpose of the meeting

Review NWB License Requirements for the Annual Report – Ryan VanEngen

Schedule B – General Condition: the annual report shall include...

Review 2012 Annual Report – Ryan VanEngen

- Table of Contents
- Ideas for future reports and discussion

Review and Discussion of AANDC water license amendment main points/ issues – Ryan VanEngen/ Kevin Buck

Closing – Stephane Robert

PURPOSE OF THE WORKSHOP



The purpose for hosting this workshop is mainly to:

- Review Type A water license annual report requirements and the AEM annual report format
- Respond to issues raised by AANDC
- Open discussion

NWB TYPE A LICENSE – SCHEDULE B



Schedule B - General Conditions

The Annual Report referred to in Part B Item 5, shall include:

CONSTRUCTION

- For the dikes and dams:
 - An overview of methods and frequency used to monitor deformations, seepage and geothermal responses;
 - A comparison of measured versus predicted performance;
 - A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;
 - As-built drawings of all mitigative works undertaken;
 - Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;
 - Data collected from instrumentation used to monitor earthworks and an interpretation of that data:
 - A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and
 - The monthly and annual quantities of seepage from dikes and dams in cubic metres;

WATER

- Results of lake level monitoring conducted under the protocol developed as per Part D Item 11.
- Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 6 and 7.
- The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility;

WASTE

- Geochemical monitoring results including:
 - Operational acid/base accounting and paste pH test work used for waste rock designation (PAG and NPAG rock):
 - As-built volumes of waste rock used in construction and sent to the Waste Rock Storage Facilities with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal toxicity;
 - All monitoring data with respect to geochemical analyses on site and related to roads, quarries, and the All Weather Access Road;
 - Leaching observations and tests on pit slope and dike exposure;
 - Any geochemical outcomes or observations that could imply or lead to environmental impact;

- Geochemical data associated with tailings solids, tailings supernatant, cyanide leach residue, and bleed from the cyanide destruction process including an interpretation of the data; and
- Results related to the road quarries and the All Weather Private Access Road.
- Volumes of waste rock used in construction and placed in the Rock Storage Facilities;
- An update on the remaining capacity of the Tailings Storage Facility;
- Summary of quantities and analysis of seepage and runoff monitoring from the landfills;
- A summary report of solid waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal;
- 10. Report of Incinerator test results including the materials burned and the efficiency of the Incinerator as they relate to water and the deposit of waste into water;

SPILLS

11. A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken;

MODIFICATIONS

12. A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities:

MONITORING

- 13. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I;
- The results of monitoring under the AEMP;
- Results of monitoring pursuant to the Fault Testing and Monitoring Plan (August 2007);

CLOSURE

16. A summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling;





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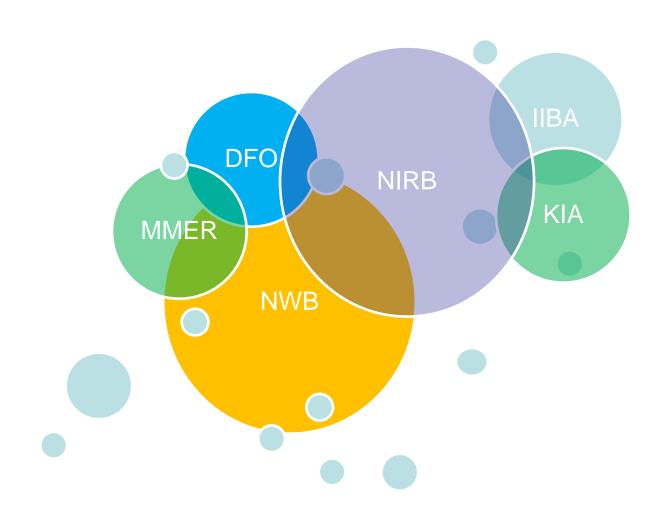
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MERGING NWB, NIRB, KIA, & DFO ANNUAL REPORT REQUIREMENTS





AGNICO EAGLE

AEM ANNUAL REPORT - TABLE 1.1 - EXAMPLE

Table 1.1: List of Reporting Requirements

Authorization Reference	Reporting Requirement	Report Section
NIRB Project Certificate No.004 Condition 4	Take prompt and appropriate action to remedy any noncompliance with environmental laws and regulations and/or regulatory instruments, and shall report any non compliance as required by law immediately and report the same to NIRB annually.	11.2
NIRB Project Certificate No.004 Condition 8	Continue to undertake semi-annual groundwater samples and re-evaluate the groundwater quality after each sample collection; report the results of each re-evaluation to NIRB's Monitoring Officer, INAC and EC	8.1.9
NIRB Project Certificate No.004 Condition 15	Within two (2) years of commencing operations re-evaluate the characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non-metal constituents to confirm FEIS predictions, and re-evaluate rock disposal practices by conducting systematic sampling of the waste rock and tailings in order to incorporate preventive and control measures into the Waste Management Plan to enhance tailing management during operations and closure; results of the re-evaluations shall be provided to the NWB and NIRB's Monitoring Officer	5.1
NIRB Project Certificate No.004 Condition 19	Report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.	5.3.3
NIRB Project Certificate No.004 Condition 23	Ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB; results of analysis shall be provided to the NWB and NIRB's Monitoring Officer	8.1.13
NIRB Project Certificate No.004 Condition 29	Report to NIRB if and when [Cumberland] develops plans for an expansion of the Meadowbank Gold Mine, and in particular if those plans affect the selection of Second Portage Lake as the preferred alternative for tailings management	11.6
NIRB Project Certificate No.004 Condition 32e	Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.	11.3.2
NIRB Project Certificate No.004 Condition 32f	Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of road limited to authorized, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.	11.3.2
NIRB Project Certificate No.004 Condition 32g	Record all authorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road, and collect and report this data to NIRB one (1) year after the road is opened and annually thereafter.	11.3.1
NIRB Project Certificate No.004 Condition 32h	Report all accidents or other safety incidents on the road, to the GN, KivlA [KIA], and the Hamlet immediately, and to NIRB annually.	11.3.2

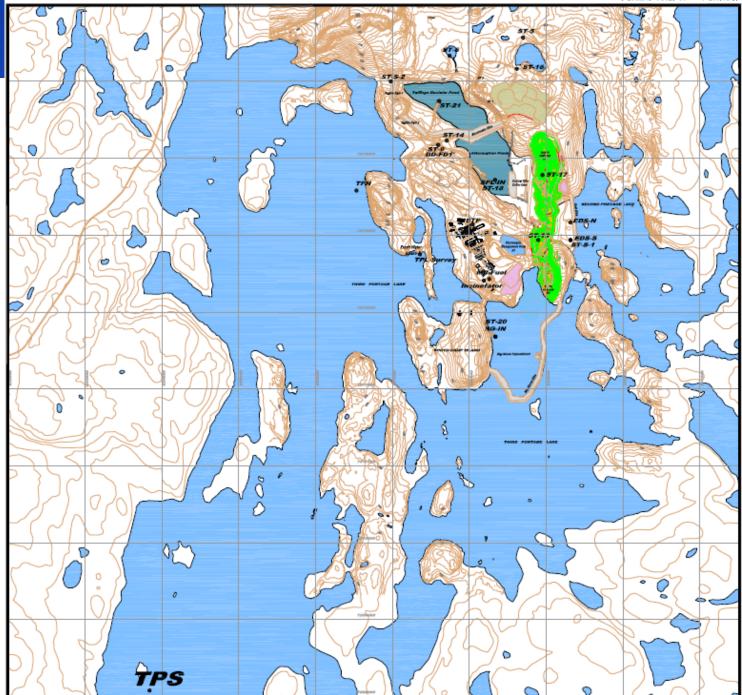


AEM ANNUAL REPORT - TABLE 1.1 - EXAMPLE

NIRB Project Certificate No.004 Condition 75	Provide a complete list of possible accidents and malfunctions for the Project; it must consider the all-weather road, shipping spills, cyanide and other hazardous material spills, and pitwall/dikes /dam failure, and include an assessment of the accident risk and mitigation developed in consultation with Elders and potentially affected communities	7
NIRB Project Certificate No.004 Condition 80	File annually with NIRB's Monitoring Officer an updated report on progressive reclamation and the amount of security posted, as required by KivlA, INAC, and/or the NWB.	9.2.1
NIRB Project Certificate No.004 Condition 82	Monitor the ingress/egress of ship cargo at Baker Lake and report any accidents or spills immediately to the regulatory agencies as required by law and to NIRB's Monitoring Officer annually.	7
NIRB Project Certificate No.004 Condition 85	Develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs	8.1.11
NWB 2AM-MEA0815 Schedule B 1	Construction Details for dikes and dams.	3.1
NWB 2AM-MEA0815 Schedule B 2	Results of lake level monitoring conducted under the protocol developed as per Part D Item 11.	4.1
NWB 2AM-MEA0815 Schedule B 3	Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 6 and 7.	4.2
NWB 2AM-MEA0815 Schedule B 4	The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility.	4.3
NWB 2AM-MEA0815 Schedule B 5	Geochemical monitoring results.	3.1
NWB 2AM-MEA0815 Schedule B 6	Volumes of waste rock used in construction and placed in the Rock Storage Facilities.	5.2
NWB 2AM-MEA0815 Schedule B 7	An update on the remaining capacity of the Tailings Storage Facility.	5.3.1
NWB 2AM-MEA0815 Schedule B 8	Summary of quantities and analysis of seepage and runoff monitoring from the landfills.	6.1
NWB 2AM-MEA0815 Schedule B 9	A summary report of solid waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.	6.2
NWB 2AM-MEA0815 Schedule B 10	Report of Incinerator test results including the materials burned and the efficiency of the Incinerator as they relate to water and the deposit of waste into water.	6.3
NWB 2AM-MEA0815 Schedule B 11	A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.	7
NWB 2AM-MEA0815 Schedule B 12	A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.	11.1
NWB 2AM-MEA0815 Schedule B	The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.	8

SITE FIGURE

Figure- 2



agnicoeagle.com

AANDC WATER LICENSE AMENDMENT- MAIN POINTS / ISSUES



Issue #1: No stand alone Water Balance and Water Quality Monitoring Reports

Issue #2: Separation of the Mine Waste and Water Management Plan into Two Plans

Issue #3: Part E, Item 7 of the License References a Dated Monitoring Plan

ISSUE #2



Issue #2: Separation of the Mine Waste and Water Management Plan into Two Plans -

AANDC Recommendation

The amended water licence should remove any reference made to a Mine Waste and Water Management Plan. Rather, reference should be made to the Mine Waste Management and Water Management Plans that have been implemented by Agnico Eagle.

In 2009, Agnico Eagle replaced the 2007 Mine Waste and Water Management Plan with a Mine Waste Management Plan and Water Management Plan. These plans address Part F, Item 16 of the licence ... This change in management planning should be incorporated into an amended water licence.

AEM agrees and this will be part of the Type A water license renewal

ISSUE #1 AND #3



Issue #1: No stand alone Water Balance and Water Quality Monitoring Reports

Issue #3: Part E, Item 7 of the License References a Dated Monitoring Plan

WATER BALANCE & WATER QUALITY MODELLING REPORT



Applicable licence conditions

Part E, Item 6: The Licensee shall submit a <u>Water Balance and Water Quality</u> <u>Monitoring Reports</u> to the Board for review, biannually (twice a year) for two years following the commencement of operations and <u>annually thereafter</u>. The Report shall include a comparison of predicted and measured parameters.

Presented in the AEM annual report

Part E, Item 7: The Water Balance and Water Quality Model shall be re-calibrated as necessary in accordance with the action plan outlined in section 3.2.5.2 of the Water Quality and Flow Monitoring Plan (August 2007), and at a minimum of once every two years following the commencement of Operations. The results and implications of the re-calibrated model shall be reported to the Board.

Recently reported in SNC (2012) water management plan. We will complete this annually as requested

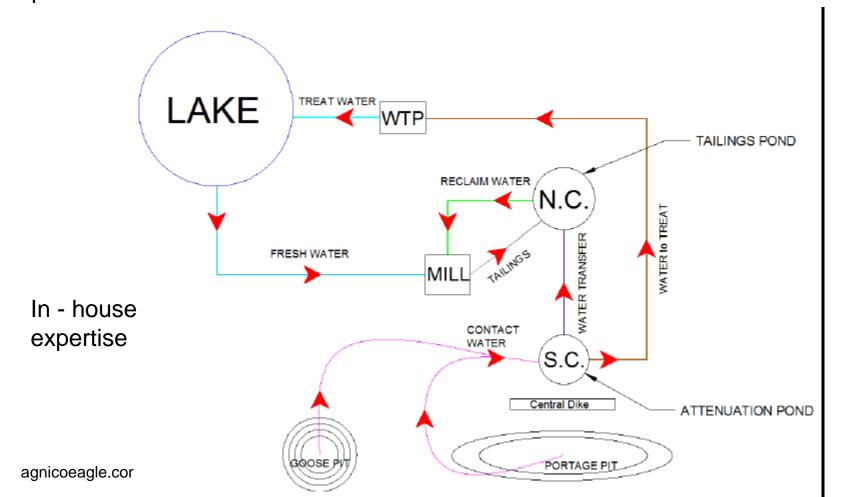
Schedule B - General Conditions, Item 3, of the water licence requires Annual Reports to include "summaries of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E Items 6 and 7."

WATER BALANCE



As Meadowbank has progressed, our water management has transitioned from construction/ dewatering to optimizing our operations and water management.

We now have a dedicated team of water management engineers that routinely update the site wide water balance.



WATER QUALITY MODELING REVIEW



Why is there a requirement for a water quality model update in the Type A water License?

To develop discharge criteria for the Type A water License.

To assist AEM in ensuring that the water quality will meet discharge criteria. This will assist us in- determining pit water quality, planning water treatment, evaluate discharge timing, etc.

AEM has met Type A License limits prior to discharging.

As we approach pit reflooding we will be reviewing our water quality model annually and ensure we meet CCME limits to protect aquatic biota prior to breaching the dikes.

WATER QUALITY MODELLING REVIEW

4.2.2 Forecasted Concentrations in Reclaim Pond: North and South Cells

Table 4-2 summarizes the observations noted in Figures 4-1 to 4-14, specifically for the forecasted concentrations in the Reclaim Pond (North and South cells).

Table 4-2: Summary of Forecasted Concentrations in Reclaim Pond

PARAMETER		WATER LICENSE			
	RECLAIM POND (NORTH CELL)		RECLAIM POND (SOUTH CELL)		PART F (CCME)
	July 2012 (initial)	July - August 2014 (end)	July - August 2014	2014 to 2019	(mg/L)
Total Cyanide (CN)	39.26	Decrease to 14	13	Fluctuate from 8 to 11	0.5 (free CN 0.005)
Copper (Cu)	19.58	Increase to 30	25	Fluctuate from 18 to 25	0.1 (0.002)
Iron (Fe)	7.4	Increase to 14	12	Fluctuate from 8.4 to 12	n/a (0.3)
Ammonia (NH ₃)	1.0	Increase to 14 (mg N/L)	11 (mg N/L)	Fluctuate from 8 to 11	16 (0.86) (mg N/L)
Nitrate (NO ₃)	8.6	Decrease to 6.6 (mg N/L)	5.7 (mg N/L)	Fluctuate from 3.8 to 5.7	20 (2.9) (mg N/L)
Chloride (CI)	626	Decrease to 490	420	Fluctuate from 420 to 280	1000 (120)
Sulfate (SO ₄)	1457	Increase to 1600	1360	Fluctuate from 920 to 1600	Solubility limit of CaSO₄ at 10°C ~1800 mg/L

WATER QUALITY MODELLING REVIEW

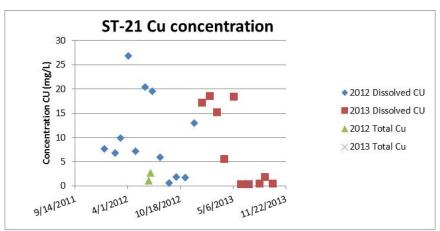


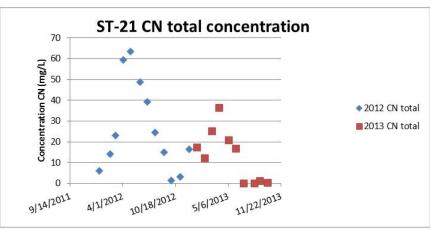
Table 4-3: Summary of Forecasted Concentrations in Portage and Goose Pits

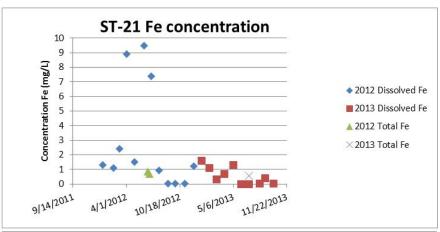
PARAMETER	FC	WATER LICENSE			
	PORTAGE PIT		GOOSE PIT		PART F (CCME)
	Mar. 2015 ⁽¹⁾ (initial)	Jan. 2025 ⁽²⁾ (end)	Jan. 2017 ⁽¹⁾ (initial)	Jan. 2025 ⁽²⁾ (end)	(mg/L)
Total Cyanide (CN)	5	0.63	3.5	1.06	0.5 (free CN 0.005)
Copper (Cu)	10.2	1.4	7.8	2.3	0.1 (0.002)
Iron (Fe)	4.9	0.6	3.3	1.1	n/a (0.3)
Ammonia (NH ₃)	4.7	0.6	3.2	1.0	16 (0.86) (mg N/L)
Nitrate (NO ₃)	2.3	0.3	1.6	0.5	20 (2.9) (mg N/L)
Chloride (CI)	117	22	115	37	1000 (120)
Sulfate (SO ₄)	560	72	380	120	Solubility limit of CaSO ₄ at 10°C ~1800 mg/L

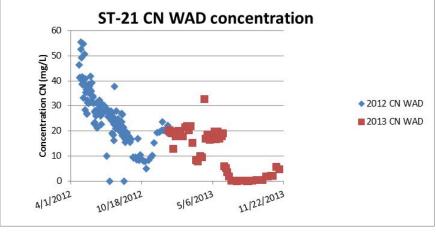
EG. RECLAIM WATER QUALITY RESULTS













CONSIDERATIONS FOR FUTURE ANNUAL REPORTS

AEM is of the opinion that we meet the annual report requirements of Schedule B of the Type A water license

Are AANDC and KIA in agreement with the format of the annual report?

Is there a need to Restructure Schedule B? (This could be done as part of the NWB type A license renewal)

We propose to host a workshop to review our water balance and water quality modeling in the first quarter of 2014.

QUESTIONS, DISCUSSION AND CLOSING











Appendix 2

AANDC Inspector's Direction

AEM response to AANDC Inspector's Direction



INSPECTOR'S DIRECTION

Pursuant to section 87(1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (SC 2002, c. 10), as amended.

To:

Agnico-Eagle Mines Ltd. 555 Burrard. Suite 375. Box 209, Two Bentall Centre Vancouver, British Columbia, V7X 1M8

November 8TH, 2013

- Inspector's Direction -

I, Christine Wilson, a duly designated Inspector under section 85(1) of the *Nunavut Waters and* Nunavut Surface Rights Tribunal Act ("the Act"), have reasonable grounds to believe that waste has been and may continue to be deposited in contravention of section 12(1) of the Act and that there has been a failure of a work, related to the deposit of waste, and that the adverse effects of such deposit and failure are causing, or may cause, a danger to persons, property or the environment.

REASONABLE GROUNDS FOR BELIEF

I have personal knowledge of the matters set out herein, except where I have stated these to be based upon my information and belief, and where so stated, I believe the same to be true.

My reasonable grounds for belief are as follows:

- 1. It is my information and belief that:
 - Agnico Eagle Mines Ltd. ("AEM") operates the Meadowbank Gold Project; a surface gold mine and gold production mill in Kivalliq Region of Nunavut.
 - AEM holds a type 'A' water licence# 2AM-MEA0815, issued by the Nunavut Water Board on June 9th, 2008, which specifies permitted uses of water and deposits of waste relating to this project.
 - AEM, under the authorization of the water licence, mines, mills and processes ore for the purpose of gold production. By-products from the mining and milling process are stored in the Tailings Impoundment Area. This area consists of two separated facilities- the Tailing Storage Facility (TSF) for fine tailings and Portage Waste Rock Storage Facility (PWRSF) for coarse rock tailings.
 - AEM, under the authorization of the water licence, extracts rock from open pits and segregates it into waste rock and ore. Waste rock is then further delineated into potentially acid generating and non-potentially acid generating. This methodical delineation defines the location of the waste rock in the PWRSF



and/or use at the mine site. Ore is delineated further by grade and then stock piled for processing in the onsite mill. By-products of the milling process are deposited at predetermined locations in the TSF via pump and piping systems from the milling plant.

- AEM operates the Tailings Impoundment Area at the Meadowbank Gold Project.
- 2. On July 29th and 30th, 2013, I conducted a scheduled inspection of AEM's Meadowbank Gold Project. I was accompanied by Inspector Erik Allain and Inspector in Training Atuat Shouldice.
- 3. During the July 29th and 30th, 2013, inspection, Jeffery Pratt with AEM's environment division, accompanied me while conducting the inspection.
- 4. In the course of the July 29th and 30th inspection, I made the following observations:
 - I observed cloudy, red-colored water on the south shore of a fish bearing lake referred to in the 2005 final environmental impact statement as North Pole 2 ("NP-2") Lake.
 - I observed cloudy red-colored water within the PWRSF's sump, commonly known as -by AEM staff- and referred to in the 2AM-MEA0815 water licence table two (2) as sampling stations 16 ("ST-16").

The following two sets of samples were collected at NP-2 Lake and ST-16 location as a split sample between AEM and AANDC.

NP-2 Lake

- one 500mL wide mouth plastic bottle for parameters of pH, total alkalinity, hardness, color, nitrates and nitrites as nitrogen, calcium, chloride, magnesium, sodium, sulphates and potassium;
- one 500mL wide mouth plastic bottle for the parameters of total suspended solids, ammonia and oil & grease (visible in the sample);
- one 250mL narrow mouth bottle for the parameter of total metals.

ST-16

- one 500mL wide mouth plastic bottle for testing of pH, total alkalinity, hardness, color, nitrates and nitrites as nitrogen, calcium, chloride, magnesium, sodium, sulphates and potassium;
- one 500mL wide mouth plastic bottle for the parameters of total suspended solids, ammonia, ortho-phosphate as phosphorus and oil & grease (visible in the sample);
- one 250mL narrow mouth bottle for the parameter of total metals.

A spilt sample is collected by filling one container and separating or splitting it into two or more samples. The split samples are then submitted to the sampling participants' laboratories, as individual samples, for analysis.

The AANDC samples were secured within plastic bags, placed in a cooler and shipped to Taiga Environmental Laboratory ("Taiga"), Yellowknife in the Northwest Territories, for analysis.

The AEM samples were sent separately to their associated laboratory for analysis.

- 5. On August 19th, 2013, I received a lab analysis report from Taiga for the samples collected by AANDC on July 30th, 2013, at the ST-16 and NP-2 Lake sampling locations. The lab analysis report indicated that the samples taken at ST-16 and NP-2 Lake sampling locations had elevated levels of metals when compared to samples collected the previous years at these locations. Metals such as iron, copper, manganese, arsenic and nickel, as well as elevations in magnesium, sulphates, hardness, nitrite and nitrates. Many of these elevated parameters were well above the Canadian Council of Ministers of the Environment ("CCME") guidelines for protection of aquatic life. More significant, were the levels of copper (3350 μg/L), and nickel (1330 μg/L), in the NP-2 Lake sample.
- 6. On August 27th, 2013, I attended the Meadowbank Gold Project accompanied by Environmental Officers Curtis Didham and Ian Rumbolt for Environment Canada ("EC") and Inspector Andrew Keim for AANDC, to collect samples to confirm the sampling results of the July 29th and 30th inspection.
 I collected the following three sets of samples in duplicate at three predetermined locations the south shore of NP-2 Lake (sample name NP-2); at the mouth of the east drainage ditch connecting NP-2 Lake to NP-1 Lake (sample name NP-2 to NP-1); and on the west side of PWRSF sump (sample name ST-16):
 - one 500mL wide mouth plastic bottle for testing of pH, total alkalinity, hardness, color, nitrates and nitrites as nitrogen, calcium, chloride, magnesium, sodium, sulphates and potassium;
 - one 500mL wide mouth plastic bottle for the parameters of total suspended solids, ammonia, ortho-phosphate as phosphorus and visible oil & grease (visible in the sample);
 - one 250mL narrow mouth bottle for the parameter of total metals;
- 7. On August 28th, 2013, I received a letter from AEM's Environmental Superintendent for the Meadowbank Gold Project, Kevin Buck, which detailed a possible source of the contaminated water, found at the ST-16 location, as the TSF. This letter also discussed how this may be a possibility;
 - A hydraulic gradient exists between the TSF and ST-16 location.
 - The TSF and ST-16 location were, prior to mine development, linked via a
 watercourse which led from NP-2 Lake to the North West arm of Second
 Portage Lake where the TSF is located.

- 8. On September 12th, 2013, I received a lab analysis report from Taiga for the samples I collected on August 27th, 2013, at ST-16, NP-2 Lake, and NP-2 to NP-1 sampling locations. The report confirmed the results from the July 30th, 2013, samples.
- On September 12th, 2013, I requested a review of the August 27th, 2013, lab analysis
 report by Anne Wilson a water quality specialist with EC. I was provided the following
 information;
 - The presence of cyanide in ST-16 and NP-2 Lake samples indicates a link between the tailings storage facility and ST-16 location.
 - NP-2 Lake concentrations of ammonia at 9.51mg/L and total cyanide at 31.0mg/L would be expected to be acutely toxic.
 - Numerous metals in NP-2 are at concentrations which are associated with chronic to acute toxicity.
 - Determinations should be made whether there has been fish mortality.
 - Determinations should be made as to what form of cyanide is present in NP-2 Lake. Free cyanide is the most toxic, with acute toxicity at < 1mg/L.
 - NP-2 to NP-1 sample has ammonia concentrations at 2.56mg/L which could be moderately toxic, depending on temperature and pH; cyanide and metals are at levels which would contribute to toxicity.
- 10. It is my belief that waste was released from the ST-16 location which migrated into NP-2 Lake.
- 11. It is my knowledge and belief that there may be a failure of a work that is designed to retain waste within the PWRSF and prevent the migration into NP-2 Lake. This work is referred to in the report titled Preliminary AEM Report Seepage water RSF V3 Final as the Waste Rock Plug. The failure of this work may lead to further deposit of waste into NP-2 Lake.
- 12. It is my belief that waste has been and may continue to migrate from the ST-16 location into NP-2 Lake, which may, based on the toxicity of the waste, cause adverse effects to general water quality, and affect the biota of NP-2 Lake.

MEASURES TO BE TAKEN

Under the authority given to me, pursuant to section 87(1) of the *Act*, I hereby direct AEM to immediately:

• Conduct an investigation into the release of waste from ST-16 location into NP-2 Lake which includes determining the source of the contaminated water in ST-16 sump.

- Conduct an investigation, in consultation with an independent engineering firm, into the
 possible failure of the Waste Rock Plug that is designed to prevent waste from migrating
 out of ST-16 location into NP-2 Lake.
- Develop a Plan in consultations with an independent engineering firm:
 - 1. corrective measures that will be taken to immediately stop the release of waste;
 - 2. long term corrective measures that will be taken to secure waste in the future.
 - 3. counteraction and/or remediation of the adverse impacts of the prior releases.

This Plan should be submitted to the inspector for review and include the consulting engineering firm's review with recommendations. This Plan shall include an implementation schedule and may be developed and submitted in stages, with priority placed on the immediate measures in item 1. above.

AEM will contact the inspector in the next 30 days to discuss the first submission dates of the Plan.

THE AUTHORIZING ACT

Nunavut Waters and Nunavut Surface Rights Tribunal Act (SC 2002, c. 10), as amended.

Definitions

- 4. "waste" means any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means, and includes
 - (a) any substance or water that, for the purposes of the <u>Canada Water Act</u>, is deemed to be waste:
 - (b) any substance or class of substances specified by the regulations;
 - (c) water containing any substance or class of substances in a quantity or concentration that is equal to or greater than that prescribed by the regulations; and
 - (d) water that has been subjected to a treatment or change described by the regulations.

[&]quot;waters" means, except for the purposes of subsection 41(2), inland waters, whether in a liquid or solid state, on or below the surface of land.

Prohibitions

Deposit of Waste

- 12. (1) Subject to subsection (2) and except in accordance with the conditions of a licence, no person shall deposit or permit the deposit of waste
 - (a) in waters in Nunavut; or
 - (b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut.

Duty to report deposits

12. (3) Where waste is deposited in contravention of this section, every person who owns or has the charge, management or control of the waste, or who caused or contributed to the deposit, shall, subject to the regulations, without delay report the deposit to an inspector.

Remedial measures

- 87. (1) An inspector may direct any person to take such reasonable measures as the inspector may specify, including the cessation of an activity, to prevent the use of waters or the deposit of waste or the failure of a work related to the use of waters or the deposit of waste, or to counteract, mitigate or remedy the resulting adverse effects, where the inspector believes, on reasonable grounds,
 - (a) that
 - (i) waters have been or may be used in contravention of subsection 11(1) or of a condition of a licence,
 - (ii) waste has been or may be deposited in contravention of subsection 12(1) or of a condition of a licence, or
 - (iii) there has been, or may be, a failure of a work related to the use of waters or the deposit of waste, whether or not there has been compliance with any standards prescribed by the regulations or imposed by a licence; and
 - (b) that the adverse effects of that use, deposit or failure are causing, or may cause, a danger to persons, property or the environment.

Powers of inspector

87. (4) Where a person fails to comply with a direction given under subsection (1), the inspector may take the measures referred to in that subsection and may, for that purpose, enter any place in Nunavut, other than a place that is designed to be used and is being used as a permanent or temporary private dwelling-place.

Recovery of Her Majesty's costs

87. (5) Any portion of the reasonable costs incurred by Her Majesty in right of Canada under subsection (4) that is not recoverable from the security furnished and maintained under section 76 may be recovered as a debt due to Her Majesty from the person to whom the direction was given.

Offences and Punishment

- 90. (1) Any person who contravenes subsection 11(1) or section 12, or fails to comply with subsection 11(3) or with a direction given by an inspector under subsection 87(1), is guilty of an offence and liable on summary conviction to a fine not exceeding \$100,000 or to imprisonment for a term not exceeding one year, or to both.
- 90. (2) A licensee holding a type A licence who
 - (a) contravenes any condition of the licence, where the contravention does not constitute an offence under section 91, or
 - (b) fails, without reasonable excuse, to furnish or maintain security as required under subsection 76(1)

is guilty of an offence and liable on summary conviction to a fine not exceeding \$100,000 or to imprisonment for a term not exceeding one year, or to both.

Continuing offences

90. (4) Where an offence under this section is committed on or continued for more than one day, it is deemed to be a separate offence for each day on which it is committed or continued.

Action to enjoin not prejudiced by prosecution

93. (1) Notwithstanding that a prosecution has been instituted in respect of an offence under section 90, the Attorney General of Canada may commence and maintain proceedings to enjoin conduct that constitutes an offence under that section.

Civil remedy not affected

93. (2) No civil remedy for any act or omission is affected because the act or omission is an offence under this Part.

CONCLUSION

This Direction is **WITHOUT PREJUDICE** to any further course of action that Inspectors may take with respect to any contravention of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, including an amended or subsequent Inspector's Direction, prosecution or injunction under any Act.

Inspectors will be conducting further inspections of the site to verify compliance with this Inspector's Direction.

This Direction is issued in accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. The complete text of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* is available at the Department of Justice website: http://laws.justice.gc.ca/en/search.

If you require further information, have any questions or concerns, or wish respond to the alleged facts contained in this Direction, please call or write to the undersigned at (867) 975-4296 or Christine.Wilson@aandc.gc.ca. Your comments will be considered, and where appropriate, a response provided. Any comments you make, as well as AANDC's response, will be maintained on file with this Direction in AANDC's records.

Christine Wilson Inspector

Original signed by Christine Wilson Inspector's Signature

Scanned copy saved in CIDMs.

Cc: Phyllis Beaulieu, Manager of Licensing, Nunavut Water Board Ian D. Gray, Regional Director General, AANDC Erik Allain, Manager of Field Operations, AANDC



November 20, 2013

Christine Wilson
Water Resource Officer- Kivalliq Region
Field Operations Unit
Aboriginal Affairs and Northern Development Canada
Nunavut Regional Office
P.O. Box 100
Iqaluit, Nunavut X0A 0H0
Ph:867-975-4296

Fx: 867-979-6445

Christine.Wilson@aandc.gc.ca

RE: INSPECTORS DIRECTION – IQALUIT # 752612

Ms. Wilson,

Through this, letter Agnico Eagle Mines Ltd. (AEM) acknowledges receipt of **Inspector's Direction #752612**, dated November 08, 2013, issued under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, relating to your observed release of possibly contaminated water into Lake NP-2 at our Meadowbank Mine. I want to assure you that AEM takes this issue very seriously and immediately following your site inspection visit of July 29th and 30th; AEM had initiated our own investigation into the observed occurrence. An interim report on these investigations was provided by AEM to AANDC and the NWB in September of 2013.

The following is a brief summary of the immediate actions taken by AEM:

- By August 04th, AEM had pumped down the containment sump at Sample Point ST-16. This
 immediately controlled the seepage to Lake NP2 and it also allowed AEM to confirm that Rock
 Storage Facility (RSF) seepage was ongoing at this location. Ponded RSF seepage water at this
 location was subsequently redirected to the Tailing Storage Facility (TSF) North Cell by Pumper
 Truck:
- AEM constructed a till plug on the upstream slope of the RSF periphery road to restrict seepage reporting to Lake NP2;
- AEM changed its tailings deposition to promote the development of a tailings beach against RF1 to restrict hydraulic flow at this location.

In addition to the above AEM did contact an independent engineering firm with appropriate expertise and understanding of the design and operation of the tailings and waste rock storage facilities at the Meadowbank Mine. AEM has subsequently retained the services of Golder Associates to assist in our investigation and to conduct their own analysis and to provide appropriate remedial recommendations.

Baker Lake Office:



Based on our initial investigations, with the assistance of Golder Associates, we believe that given the evolution of water quality at ST-16 and the hydraulic gradient that exists between the TSF North Cell and the NP Lake, it is likely that seepage water at ST-16 contains tailings process water from the TSF. This interpretation led to the initiation of the immediate action plan described above.

Engineering personnel from Golder Associates have subsequently travelled to Meadowbank to conduct their own investigations of this issue. They are now preparing a formal engineering report that will include their findings and provide recommended actions for AEM to take to resolve this issue on a permanent basis. We expect that this report will be delivered to you, the NWB and other parties by December 20, 2013. In the interim the immediate actions that were taken by AEM have in our opinion halted any further release of contaminants at this point. Also with the onset of winter conditions there appears to be no further release of seepage.

AEM is committed to implementing the necessary actions to ensure that no seepage is released into Lake NP2 with the 2014 spring freshet.

As an aside, I wish to bring to your attention a significant variance between your field sampling results and those taken by AEM during its field investigations; specifically in your directive (under Reasonable Grounds for Belief -item #9) you indicate that the AANDC field sampling returned a total Cyanide concentration of 31.0 mg/L. During our subsequent field investigations AEM sampled at the same location as sampled by AANDC on Aug 27 and our measured CN Total concentration (NP-South) was 0.007mg/L. In addition throughout our field investigation and monitoring program conducted throughout Aug/Sept /Oct of 2013 we never received any Total Cyanide concentration of the magnitude in NP 2 reported by AANDC. See attached our table of results.

We offer this letter in response to the specific directions that you have ordered under the "Measures to be Taken" section of your Inspector's Direction. We continue to work with our consulting engineer to complete the "Plan" to address the "long term corrective measures to be taken to secure waste at this location in the future" and to address the "counteraction and/or remediation of the adverse impacts of the prior releases". Should you have any questions or concerns please feel free to contact me at (867) 793-4610 ext. 6728 or by email at jeffrey.pratt@agnicoeagle.com.

Sincerely,

Jeffrey Pratt

Environmental Coordinator Agnico Eagle Mines Ltd. Meadowbank Division (867) 793-4610 ext. 6728

Regional Office: 93, Rue Arseneault

Bureau 202 Val d'Or, Quebec J9P 0E9 Tel: 819-825-3744 **Baker Lake Office:**

P.O. Box 540



jeffrey.pratt@agnicoeagle.com

CC: Kevin Buck –AEM Stephane Robert – AEM Erik Allain – AANDC Phyllis Beaulieu – NWB Jeff Tulugak – KIA Luis Manzo – KIA



		NP2	South			NP2 Eas	st	NP2 West			
Date	CN WAD	CN Total	CN Free	Ammonia Nitrogen NH3-NH4	CN Total	CN Free	Ammonia Nitrogen NH3-NH4	CN Total	CN Free	Ammonia Nitrogen NH3-NH4	
8/21/2013		0.069									
8/27/2013		0.007			0.012						
8/28/2013											
8/29/2013	0.2930										
8/30/2013	0.0810				0.018			0.010			
8/31/2013	0.0694										
9/1/2013	0.0247										
9/2/2013	0.0671										
9/3/2013	0.0120										
9/4/2013	0.5440										
9/5/2013	0.0204										
9/7/2013	0.0289										
9/10/2013	0.3320	0.013	1	3.4	0.011	1	3.2	0.017	3	3.1	
9/13/2013	0.0247										
9/15/2013	0.0289										
9/17/2013	0.0723										
9/19/2013	<0.01										
9/21/2013	0.0600										
9/23/2013	<0.01	0.014	1	3.6	0.014	<1	3.8	0.015	<1	3.6	
9/25/2013	0.0162										
9/27/2013	<0.01										
9/29/2013	0.0332										

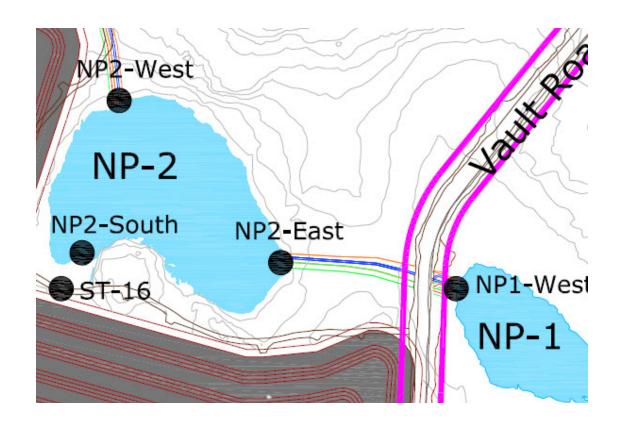
Regional Office: 93, Rue Arseneault Bureau 202 Val d'Or, Quebec J9P 0E9 Tel: 819-825-3744

Baker Lake Office:

P.O. Box 540



10/1/2013	0.0341									
10/2/2013	0.0772	0.030	1	3.9	0.014	1	3.9	0.017	1	3.8
10/8/2013	0.0482									
10/11/2013	0.0553									



Appendix 3
Assay road seepage spill report
Assay road seepage update #1
Assay road seepage update #2
Assay road seepage update #3





NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

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

REPORT LINE USE ONLY

Α	REPORT DATE: MONTH – DAY	AR	REPC	EPORT TIME O			ORIGINAL SPILL REPO	REPORT NUMBER						
В	OCCURRENCE DATE: MONTH	l – DAY	Y – YEAR		occi	JRRENC	CE TIME		JPDATE # THE ORIGINAL SPILL	REPORT	-			
С	LAND USE PERMIT NUMBER	(IF AP	PLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)								
D	GEOGRAPHIC PLACE NAME (OR DIS	STANCE AND DIRECTION	N FROM NAMED L	OCATI	REGION ADJACENT JURISDICTION OR OCEAN								
Е	LATITUDE					LONGITUDE								
	DEGREES		DEGREES MINUTES SECONDS											
F	RESPONSIBLE PARTY OR VE	SSEL	RESPONSIBLE	SPONSIBLE PARTY ADDRESS OR OFFICE LOCATION										
G	ANY CONTRACTOR INVOLVED	D		CONTRACTOR ADDRESS OR OFFICE LOCATION										
	PRODUCT SPILLED			QUANTITY IN LI	TRES,	KILOGF	RAMS OR CUBIC METR	RES	U.N. NUMBER					
H	SECOND PRODUCT SPILLED	QUANTITY IN LI	TRES,	KILOGF	RAMS OR CUBIC METR	RES	U.N. NUMBER							
I	SPILL SOURCE		SPILL CAUSE				AREA OF CONTAMINATION IN SQUARE METRES							
J	FACTORS AFFECTING SPILL (DESCRIBE ANY	ASSIS	STANCE	REQUIRED	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT								
K														
L	REPORTED TO SPILL LINE BY	1	POSITION		EMPL	OYER		LO	CATION CALLING FRO	T MC	ELEPHONE			
М	ANY ALTERNATE CONTACT		POSITION		EMPL	OYER			TERNATE CONTACT ALTERNATE TELEPHONE					
				REPORT LIN	E USE	LOCATION USE ONLY								
N I	RECEIVED AT SPILL LINE BY		POSITION						CATION CALLED	F	REPORT LINE NUMBER			
N	STATION OPERATOR							YE	LLOWKNIFE, NT	(867) 920-8130			
EAD	EAD AGENCY EC CCG GNWT GN ILA INAC NEB TC						ANCE - MINOR - MA	AJOF	R 🗆 UNKNOWN	FILE STATU	JS □ OPEN □ CLOSED			
AGEN	ICY		CONTACT TIME			TTIME REMARKS			ARKS					
EAD	AGENCY													
FIRS	SUPPORT AGENCY													
SECC	OND SUPPORT AGENCY													
THIR	O SUPPORT AGENCY													

Assay Road Seepage – Actions/Planning

Nov 4/13

• Seepage Reported in area in front of Assay Lab

Nov 5/13

 Meeting held with Mill staff, Env, and Manager to try to determine source The following was checked; leach pad (appears to be no leakage), reclaim and tailings line (no apparent leaks).
 Determine there is a two inch sump line from Assay Lab to mill, new underground freshwater drain pipe, and freshwater line from lake goes under road; freshwater line to camp in same area as fire protection line.

Nov 6/13

- Senior Env Tech determines seep still evident. Meeting held with Mill, Mine, Env, Manager. Mill
 reports that there is no leakage from Assay Lab sump line. Will test freshwater overflow pipe.
 Env to sample seepage for Copper, Iron, CN to be submitted to on and off off site labs. Possibly
 excavate freshwater line Nov 7 to check for leaks depending on overflow line test.
- Freshwater drain checked for leakage with flow test appears to be no leak. Investigation to continue Nov 7 with check of Fire Protection water line and fresh water line from barge for leakage.

Nov 7/13

- Meeting held 0930 Site Service, Power Plant, Mill, Env, Mine, Manager. Excavation around freshwater line will commence, JHA will be done. To determine if freshwater is leaking out.
- Env to submit samples to Multi Lab Cu, Fe, CN Total of seep and leach tank overflow RUSH analysis requested.
- Pressure test on fire protection line near freshwater tank at mill no leakage confirmed by SS.
 Also testing freshwater line to camp.

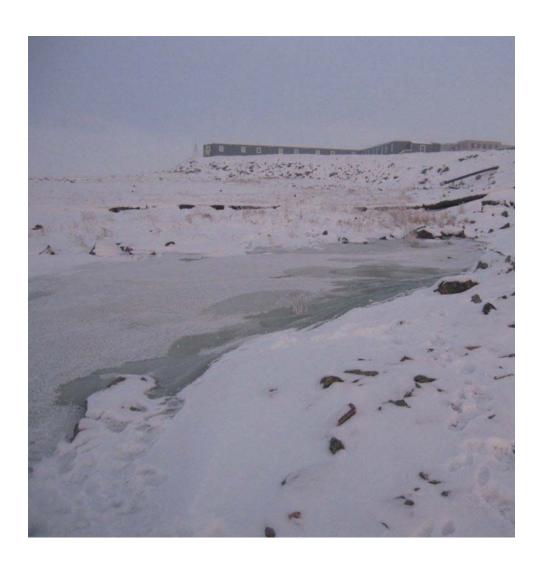
Nov 8/13

- Freshwater line to camp checked no leakage found
- Meeting held 0900 Site Service, Power Plant, Mill, Enviro, Eng., Mine, Manager.
- Installation of containment to hold back any further seepage from migrating forward joint effort between S.S., Mine, Enviro, Eng., also electrician present to watch utilities.
- Once containment is in place delineation of seepage source to take place. This will not take
 place without input from all associated departments. Meeting will take place shortly after
 containment is finalized.

Area of Concern

















November 12, 2013

RE: Update to Meadowbank Spill - Report #13-379 - Assay Lab Road Seep

Good afternoon,

This letter is intended to give an update to the spill report that was submitted on November 8, 2013. This spill report is GN Spill Report 13-379.

- No material has reached lake
- Confirm spillage is from the process plant due to CN analysis on site CN present, samples sent to off-site accredited lab for analysis results not available yet
- A bermed area was erected around the area which had the frozen seepage fluid. Once the bermed area was created
- All contaminated ice was removed from the area and was taken to the Tailings Storage Facility
- AEM will continue to remove any build of ice in this area on a regular basis.
- AEM has developed a drilling program to identify exact area of leakage sources that will be checked include area around leach tank containment (concrete containment), area In front of mill in conjunction with testing of sumps in mill for leakage
- An updated will be provided when drilling program completed







Should you have any questions or concerns please feel free to contact me at (867) 793-4610 ext. 6728 or by email at jeffrey.pratt@agnicoeagle.com.

Sincerely,

Jeffrey Pratt
Environmental Coordinator
Agnico Eagle Mines Ltd.
Meadowbank Division
(867) 793-4610 ext. 6728
jeffrey.pratt@agnicoeagle.com

CC: Kevin Buck –AEM Stephane Robert – AEM Marie-Pier Marcil – AEM



November 12, 2013

RE: Update #2 to Meadowbank Spill – Report #13-379 – Assay Lab Road Seep

Good morning,

In response to the information requested by Christine Wilson, Water Resource Officer for AANDC, please find the questions below in bold and AEM's response following:

• The coordinates for the seepage ponds (contaminated area). As mentioned ALL spills forms must have the correct coordinates.

The coordinates for the spill are as follows:

North 14W 0637900 7213863 and South 14W 0637920 7213842

When will the drill program ensue?

Currently the drill program is scheduled to begin Friday November 15, 2013.

• From the seepage pond to the lake, what is the approximate distance?

The approximate distance from the outside of the berm is around 150 meters, so from the seep to the lake is around 165 meters.

Has the rate of flow been established?

The rate of flow is estimated at ~2 Liter per hour. In addition to I would like to add that there has been approximately 5 m3 of ice removed from the seepage containment area.

Baker Lake, Nunavut X0C 0A0 Tel: 867-793-4610 Fax: 867-793-4611

Baker Lake Office:

P.O. Box 540



Also as mention previous the contact information on all reporting forms must be
correct with the extension. In an emergency situation the lead agency must be able to
contact the reporter directly and not go through the office in Baker Lake. In some
cases, such as this spill, I was not the person to receive the report and the phone
number on the form was incorrect (and previous forms ...clerical error I am sure).

AEM extends its sincerest apologies for this. The number will be corrected on all future spill reports. Thank you for bringing this to our attention.

Should you have any questions or concerns please feel free to contact me at (867) 793-4610 ext. 6728 or by email at jeffrey.pratt@agnicoeagle.com.

Sincerely,

Jeffrey Pratt

Environmental Coordinator Agnico Eagle Mines Ltd. Meadowbank Division (867) 793-4610 ext. 6728

jeffrey.pratt@agnicoeagle.com

CC: Kevin Buck –AEM Stephane Robert – AEM Marie-Pier Marcil – AEM



November 19, 2013

RE: Update to Meadowbank Spill - Report #13-379 - Assay Lab Road Seep

Good morning,

This letter is intended to give a resume of the spill report GN Spill Report 13-379 that was submitted on November 8, 2013

On October 8, 2014 a spill was reported to the GN Spill Line and to AANDC Inspector Christine Wilson.

On November 4, 2013 a seepage was reported in area in front of Assay Lab, at the Meadowbank Mine site. Coordinates for spill North 14W 0637900 7213863 and South 14W 0637920 7213842. The distance to the lake from the spill location is approximately 165 meters. The rate of flow was estimated at ~2 Liter per minute. A meeting was held and decision made to go forward with an installation of containment to hold back any further seepage from migrating. A bermed area was erected around the area which had the frozen seepage fluid. Once the bermed area was created, all contaminated ice was removed from the area and was taken to the Tailings Storage Facility. The following areas were checked; leach pad (appeared to be no leakage), reclaim and tailings line. Many lines were sampled, all lines that ran through the area where the seepage was occurring no leaks were found on any of these. Environment sampled seepage for Copper, Iron, CN – to be submitted to AEM lab – results would indicate if it is leach pad water. AEM Lab results of Copper/Iron sampling Cu at 4+ ppm and Fe at 1.2 ppm - similar to tailings. CN is also present at average 12.6 ppm. A pressure test on fire protection line near freshwater tank at mill was performed, no leakage confirmed. Also, testing was performed on the freshwater line to camp. The freshwater line to camp was checked, no leakage found. A drilling program was then planned by Engineering and Environment to determine the source of the seepage and to possibly delineate any plume. At the same time the mill began checking sumps in the mill for seepage.

Tel: 819-825-3744



Update from November 10 –November 18, 2013.

- No process water has reached lake (contain in the berm area)
- Investigations took place through-out the mill area to determine where the source of process water was leaking from
- A drilling campaign took place Nov 15 17, with a total of 21 holes being drilled the seep location and the mill area (see figure 1). Out of the 21 holes,
 - 4 holes were wet and sample water was obtained (blue)
 - 4 holes were drilled and wet and no sample could be obtained
 - 13 holes were drilled dry (green)
- To try and determine the source of the leakage, water was added to the sumps with tracer dye within the Mill. By doing this, the location of the seepage was determined to be in the CIP sump.



- The seepage area increased due to the testing of the sumps and water seeped out of the previous reported location as well as an adjacent area at the base of the assay lab road. Another containment berm was immediately constructed, this water was sampled (CN WAD taken at our on-site assay lab = 4.23ppm Copper = 2.55, Iron = 1.64). Please note the attached diagram for reference. Additional samples will be sent to our off site accredited lab on Monday Nov 18. Samples were also taken in Third Portage Lake using AEM's on site assay lab. Results to date indicate "no detect" in the lake. See attached table of sample results and location.
- Crews removed any build of ice in this area and continue to remove it on a regular basis.



- AEM is now working on a plan to properly seal the CIP sump, in the meantime all water has been removed from this sump to prevent any further seepage and allow for repairs.
- The bermed containment area is to prevent access to wildlife and unauthorized personnel.

Should you have any questions or concerns please feel free to contact me at (867) 793-4610 ext. 6728 or by email at jeffrey.pratt@agnicoeagle.com.

Sincerely,

Jeffrey Pratt

Environmental Coordinator Agnico Eagle Mines Ltd. Meadowbank Division (867) 793-4610 ext. 6728 jeffrey.pratt@agnicoeagle.com

CC: Kevin Buck –AEM Stephane Robert – AEM Marie-Pier Marcil – AEM

CN WAD Results from Drilling Campaign

Hole ID	1A	4D	201	202	203
Date	CN ppm				
Nov 15	1.09	4.19			
Nov 16				7.45	0.967
Nov 17			16	9.45	1.98



					Assay la	b results									
Date	Assay road seep North		Assay road seep South			Drinking Water Raw water			2nd Berm			TPL			
	CN WAD (ppm)	Cu (ppm)	Fe (ppm)	CN WAD (ppm)	Cu (ppm)	Fe (ppm)	CN WAD (ppm)	Cu (ppm)	Fe (ppm)	CN-WAD (ppm)	Cu (ppm)	Fe (ppm)	CN-WAD (ppm)	Cu (ppm)	Fe (ppm)
11/4/2013				8.94											
11/5/2013	8.77			17.9											
11/6/2013	6.73	3.68	20.1	17.6	4.05	1.68									
11/7/2013															
11/8/2013	39			36.1											
11/9/2013	47.2														
11/10/2013	28.9														
11/11/2013	43.8														
11/12/2013	17														
11/13/2013	17.1						<0.01								
11/14/2013	25.9														
11/15/2013	19.7	8.06	1.13				<0.01	0.02	0.04						
11/16/2013	4.78	2.24	1.27				<0.01	0.03	0.13	4.23	2.55	1.64	<0.01	0.04	0.06
11/17/2013	7.5	3.86	1.09				<0.01	<0.01	0.02						

