

Appendix G4

Document: *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 Bental 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.
9. 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 [Canada Water Act](#), 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.

“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
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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.

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Baker Lake Office:
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Tel: 867-793-4610 Fax: 867-793-4611

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.

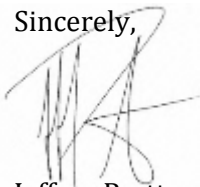
Engineering personnel from Golder Associates have subsequently travelled to Meadowbank to conduct their own investigations of this issue. They are now preparing a formal engineering report that will include their findings and provide recommended actions for AEM to take to resolve this issue on a permanent 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

jeffrey.pratt@agnicoeagle.com

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



AGNICO EAGLE

Date	NP2 South				NP2 East			NP2 West		
	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									

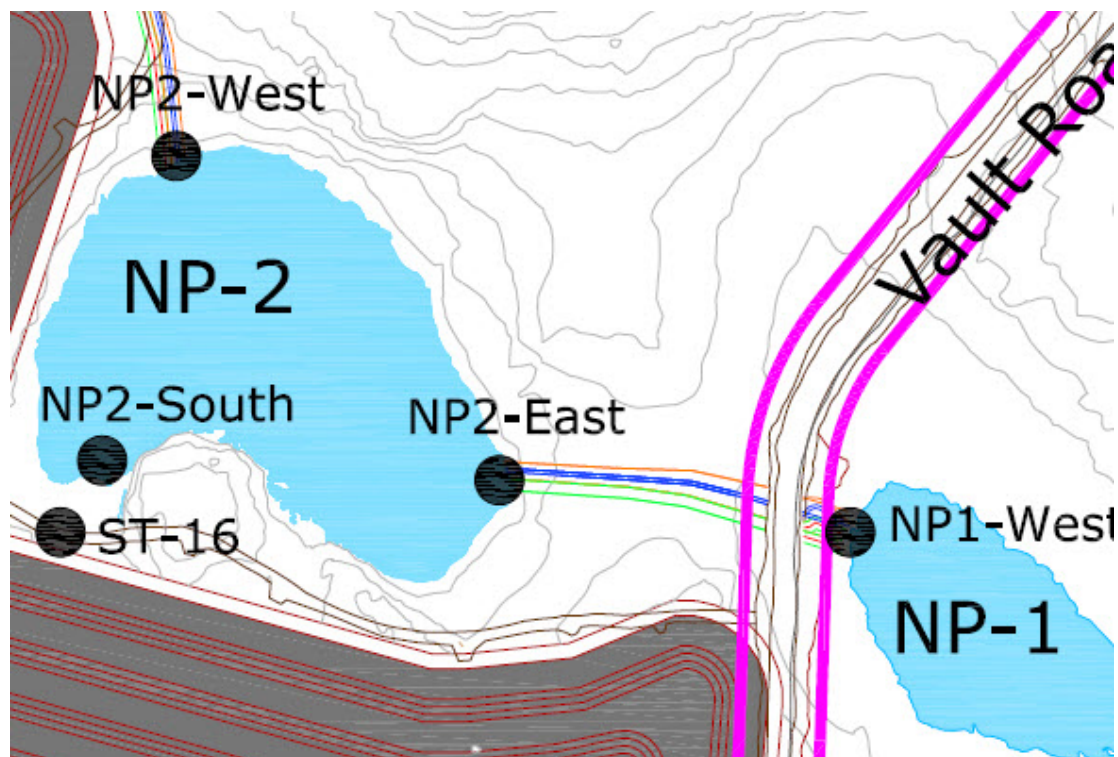
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AGNICO EAGLE

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									



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