



July 15th, 2016

Manager of Licensing, Nunavut Water Board
P.O Box 119
Gjoa Haven, NU X0B 1J0
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Subject: Management Plan submission prior to new construction (AEM response to DFO comments)

Madam, Sir,

As requested, the following information and comments are intended to address the comments received from DFO for Agnico Eagle's *Management Plan Submission Prior to New Construction*, in a letter dated June 28th, 2016.

Should you have any questions please do not hesitate to contact the undersigned.

Regards,

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Fisheries and Oceans Canada (DFO) - Fisheries Protection Program (the Program) has reviewed the following recent submissions from Agnico Eagle Mines (AEM) and provided comments respectively pursuant to our mandate upon request from the Nunavut Water Board:

- 2015 Annual Report - Meadowbank Gold Mine Project
 - o See attached DFO review comments submitted to the NIRB and AEM on May 13, 2016

Agnico Eagle's Response:

Agnico Eagle would like to thank DFO for the review of the 2015 Annual Report - Meadowbank Gold Mine Project. Agnico will respond to DFO comments along with the other comments that will be transmitted by the NIRB.

- June 18, 2016 Management Plan submission prior to new construction as is required under Part D Item 5 of the NWB Type A Water Licence 2AM-MEA1525 regarding a Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering.
 - o DFO could not locate reference to AEM adhering to DFO's mitigation measures as they apply to Freshwater Intake Screening Guidelines <http://www.dfompo.gc.ca/Library/223669.pdf>; and, <http://dfo-mpo.gc.ca/pnw-ppe/measuresmesures/measures-mesures-eng.html>
 - o DFO requests AEM ensure these measures are adhered to in order to avoid causing serious harm to fish.

Agnico Eagle's Response:

Agnico Eagle will follow DFO's mitigation measures and will ensure these measures are adhered to in order to avoid causing serious harm to fish. The Addendum in Appendix A to this letter has been modified to clarify this commitment.

- June 20, 2016 Modification Vault Pit Review under Part G for Water Licence 2AMMEA1525 regarding water management
 - o DFO agrees with INAC's recommendation #8 to provide for the cost estimate of closure activities including pit reflooding, water quality monitoring, ground contouring and scarifying disturbed areas as they relate to the expansion of the Vault Pit into Phaser Lake. AEM has stated that 'no major additional costs at closure are expected as a result of the planned modification to the Vault Pit and ancillary works.'
 - o AEM provided DFO the following relevant cost estimates in their 2013 NNLP Cost Estimate:
 - Re-flood the Vault Pit \$571,440
 - Breach Vault Dike \$ 146,146
 - Rock excavation \$223,961



o The above listed items total \$941547 plus the cost of water quality monitoring and any other associated items. As the costs associated with the closure and reclamation at Phaser Lake are not insignificant and will be coordinated between INAC and DFO, DFO requests AEM provide this information in the most recent version of RECLAIM.

Agnico Eagle's Response:

Agnico Eagle will continue to work in collaboration with DFO and has agreed to provide suitable contingency amount. A letter of credit (LOC) has been issued to DFO for the Phaser Lake Authorization. Agnico Eagle will also continue to work with DFO on the Offsetting Plan and associated documents.



Appendix A - Water Quality Monitoring and Management Plan for Dike Construction and Dewatering (Version 4, March 2010) - Addendum update

ADDENDUM



Project Name:	Meadowbank Gold Project	
Plan / Version:	Water Quality Monitoring and Management Plan for Dike Construction and Dewatering	Version 4
NIRB Requirement:	Project Certificate No. 004	Condition: not applicable
NWB Requirement:	2AM-MEA-1525	Condition: Part D, Item 5
Addendum:	Version 4; March 2010 (see link for reference below)	
Section Change	Specify: Update or New	Details
Section 5	Update	<p>WATER QUALITY MONITORING AND MANAGEMENT DURING DEWATERING ACTIVITIES</p> <p>In the summer of 2016, Agnico Eagle plans to dewater Phaser Lake to allow for mining activities to occur in Phaser and BB Phaser pits. During dewatering activities, there is potential for sediments to become suspended as exposed substrates slump. Suspended sediments could then enter the water pipe(s) and be discharged to Wally Lake. In addition, the discharge itself could disturb the bottom sediments in the lakes and lead to increased levels of suspended sediments. The following plans will mitigate against possible problems with suspended sediments and other key parameters (i.e., pH and aluminum) during dewatering:</p> <ul style="list-style-type: none"> • Intake pipe(s) will be located at a sufficient distance from shore (minimum 10 meters) and, to the extent possible, in areas with highest water depth. • The discharge will be located in areas of Wally Lake where there is deep, low-value habitat. <p>Monitoring during dewatering will be primarily</p>

		<p>focused at the water intake pumps or at the outlets of the water treatment plant, but will also include the receiving environment of Wally Lake.</p> <p>During the dewatering of Phaser Lake, daily Total Suspended Solids (TSS) water samples will be analyzed at the onsite laboratory (non-accredited) in addition to the regulatory samples. These samples will constitute a good control method for the environment team to follow the water quality during the dewatering process. These samples will only be used as guidance and will not replace regulatory samples. Turbidity readings will also be taken.</p> <p>Weekly samples will be taken at the water intake pumps or at the outlets of the water treatment plant, and at the receiving environment. These samples will be analyzed by an accredited laboratory.</p> <p>QA/QC practices will be followed during Phaser Lake dewatering activities for the daily and weekly samples. One (1) field duplicate will be collected every ten (10) samples for daily and weekly samples. QA/QC practices will also be applied to the turbidity readings.</p> <p>Agnico Eagle will follow DFO's mitigation measures and will ensure these measures are adhered to in order to avoid causing serious harm to fish during dewatering.</p> <p><u>Dewatering Locations</u></p> <p>Three locations will be used to dewater Phaser Lake (see Figure 1). First of all, pumping will be conducted at location 1 to dewater basin 1. When the water level will reach elevation 138m, basins 2 and 3 will be separated from basin 1. Water intake will then be transferred to location 2 and pumping will continue in basin 2. At elevation 137.4m, basins 2 and 3 will be separated. Dewatering will finally be conducted at location 3 to complete dewatering of basin 3.</p> <p>Water will be discharged to the Vault Attenuation Pond (Figure 2). At this location a Water Treatment Plant (WTP) is installed to</p>
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		<p>treat the water if needed. The WTP will be used when the water quality monitoring from the Vault Attenuation Pond, including water from Phaser Lake, indicates the water does not meet the license criteria. The WTP will be bypassed when the water quality monitoring indicates the license criteria are being met; in this event water will be discharged directly to Wally Lake.</p> <p><u>Standard Operating Procedure for Monitoring And Management During Dewatering</u></p> <p>The Standard Operating Procedure (SOP) for monitoring and management of suspended sediments and other key parameters during dewatering is shown in Figure 12 (version 4, March, 2010), attached to this Addendum. Of mention, the SOP strives for proactive prevention and mitigation of problems. Monitoring will be conducted under the direction of Agnico Eagle's Environmental supervisor on-site. All monitoring results will be included in the Monthly Monitoring Summary Report.</p> <p>LAKE LEVEL MONITORING DURING DEWATERING ACTIVITIES</p> <p>In addition to the monitoring and management of suspended sediments, a hydraulic monitoring plan has been developed to monitor the following components:</p> <ul style="list-style-type: none"> • Water level in Wally Lake will be measured weekly prior to and during dewatering activities. Measurements will be compared with historical data and natural variation (139.3 to 139.7m) and; • Outlet erosion inspections to monitor outlet stability, including potential erosion and/or ice damming within the outlets. <p>Wally Lake water levels will be surveyed at a location of sufficient distance from the outlets to limit potential lake level drawdown effects. Lake water levels will be monitored weekly during dewatering.</p>
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Figure 1. Water intake locations for Phaser Lake Dewatering

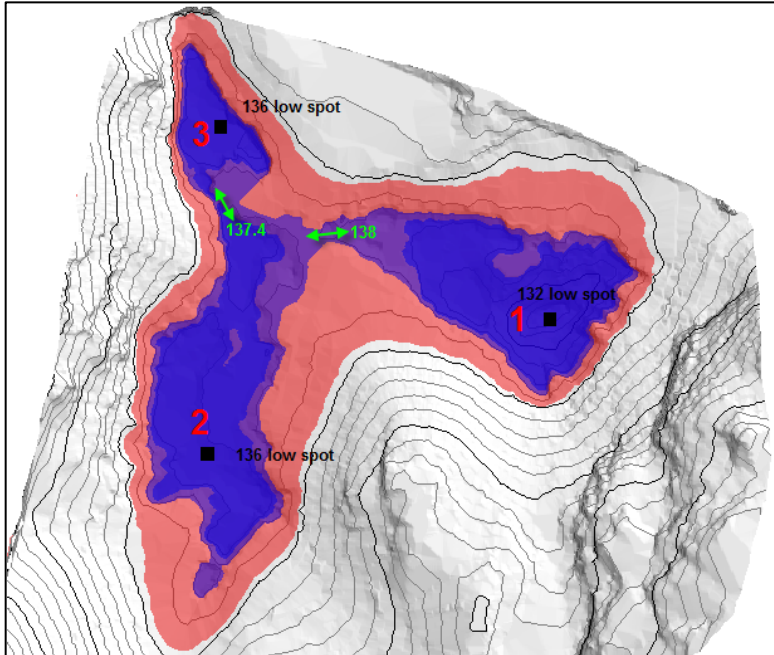
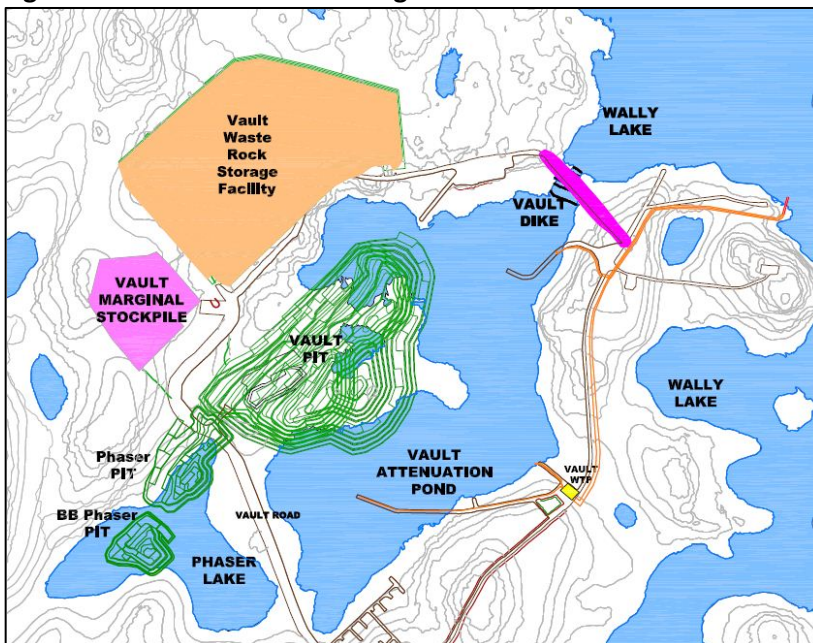


Figure 2. Phaser Lake Dewatering Area



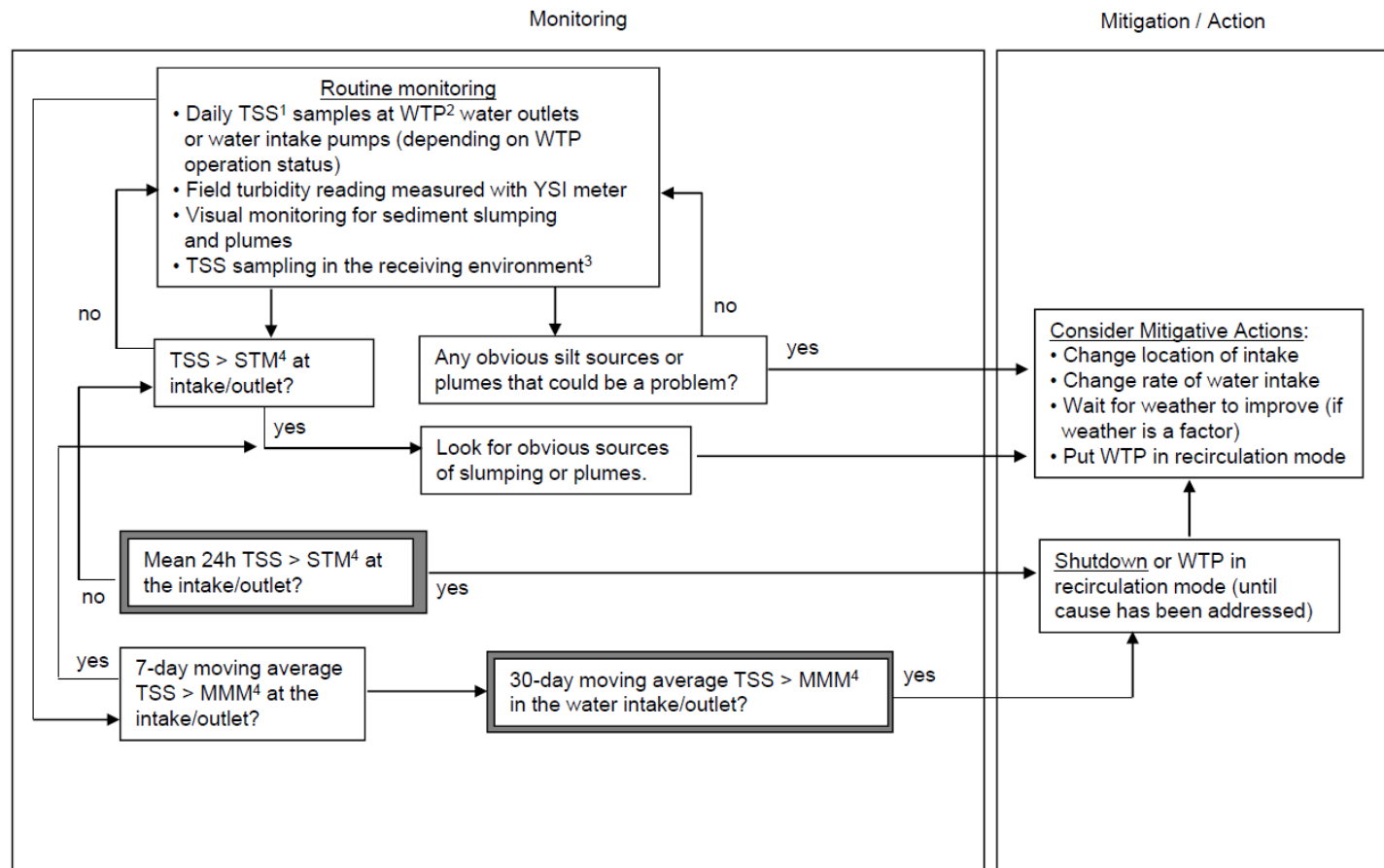
Link to the NWB ftp website to refer to the original document:

Water Quality Monitoring and Management Plan for Dike Construction and Dewatering (Version
4, March 2010

[http://www.nwb-oen.ca/public/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEA1525%20Agnico/3%20TECH/5%20CONSTRUCTION%20\(D\)/D11%20Water%20Quality%20Monitoring%20Dike/100504%20AM-MEA0815%20D11%20Water%20Quality%20Monitoring%20and%20Mgmt%20Plan%20Ver%204-ILAE.pdf](http://www.nwb-oen.ca/public/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEA1525%20Agnico/3%20TECH/5%20CONSTRUCTION%20(D)/D11%20Water%20Quality%20Monitoring%20Dike/100504%20AM-MEA0815%20D11%20Water%20Quality%20Monitoring%20and%20Mgmt%20Plan%20Ver%204-ILAE.pdf)

Water Quality Monitoring and Management Plan for Dike Construction and Dewatering

Figure 12: Standard Operating Procedures for Suspended Sediment Monitoring and Management During Lake Dewatering



Notes: 1. TSS will be measured using turbidity as a surrogate 2. WTP = Water Treatment Plant 3. Monitoring on a weekly basis 4. STM = short term maximum concentration of TSS; MMM = maximum monthly mean TSS concentration

**For Phaser dewatering; Daily TSS will be analyzed at the onsite laboratory instead of using turbidity as a surrogate*

Source: Water Quality Monitoring and Management Plan for Dike Construction and Dewatering (Version 4, March 2010)