



February 23rd, 2018

Karen Kharatyan,  
A/ Manager of Licensing  
Nunavut Water Board (NWB)  
P.O. Box 119 Gjoa Haven, NU. X0B 1J0

**Re: 2AM- WTP ---- Draft Licence Terms and Conditions**

Dear Mr. Kharatyan,

As per the February 13th, 2018 correspondence with the NWB, attached you will find responses which are intended to address the comments and recommendations provided by Environment and Climate Change Canada (ECCC) and Indigenous and Northern Affairs Canada (INAC) regarding the NWB 2AM-WTP ---- Draft Terms and Conditions for the Whale Tail Pit Project.

Agnico Eagle believes the recommendations and comments that were received from INAC and ECCC were either previously addressed in exhibit 50 memo or through Agnico Eagle's February 9<sup>th</sup> updated draft Type A framework submission. Nevertheless, Agnico Eagle will continue to work with interveners to ensure the comments and requests that were raised have been adequately addressed. Should you have any questions or require further information, please contact the undersigned Jamie Quesnel at [Jamie.quesnel@agnicoeagle.com](mailto:Jamie.quesnel@agnicoeagle.com) M: 819.856.0821, or, Ryan Vanengen at [ryan.vanengen@agnicoeagle.com](mailto:ryan.vanengen@agnicoeagle.com) M:819.651.2974.

Regards,

**Agnico Eagle Mines Limited – Meadowbank Division**

Regards,

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## Indigenous and Northern Affairs Canada

1.1 Comment: INAC recommends that the NWB include in the Water Licence terms and conditions with a view to:

- Update management plans which the NWB deem relevant to the arsenic concerns;
- Require that the Proponent submit a reviewed version of these management plans that incorporate the additional studies and modelling;
- Require approval of these revised management plans by the NWB before excavation of the pit and any other irreversible activities are undertaken.

### Agnico Eagle's Response to 1.1:

Agnico Eagle appreciates INAC's comment and agrees with the recommendations. Table 1 outlines the timeline for updated modelling, management plans and operation of the quarry and pit which was discussed with INAC and their consultants during the September 14, 2017 meeting. Agnico Eagle is committed to hosting a series of workshops with INAC, KIA and NWB to review the modelling results and management plans.

**Table 1 – Tasks and Timeline to address INAC's concerns related to Arsenic concentrations within the reflooded Whale Tail Lake.**

Task	Start Date	Finish Date	Note
Model-Pit Wall Arsenic Diffusion modelling	December 1, 2017	March 15, 2018	As per exhibit 50 and Attachment A in Draft Type A Licence framework.
Conduct a hydrogeological characterization study to validate the hydraulic gradient and potential arsenic diffusion	December 1, 2017	March 15, 2018	As per exhibit 50 and Attachment A in Draft Type A Licence framework.
Evaluation of the evolution of permafrost under the flooded pit, in response to the creation of a pit lake	December 1, 2017	March 15, 2018	As per exhibit 50 and Attachment A in Draft Type A Licence framework.
Hydrodynamic modelling of flooded Whale Tail Pit Lake post closure Arsenic concentrations within the flooded Whale Tail Pit Lake	December 1, 2017	March 15, 2018	As per exhibit 50 and Attachment A in Draft Type A Licence framework.
Host a workshop with KIA, INAC, ECCC and NWB	May, 2018		
Update Management Plans –	March 15, 2018	April 15, 2018	60 days prior to operation of Quarry 2 (if required) and prior to the construction of the Waste Rock Storage Facility Berm.
i) Whale Tail Pit - Water Quality Monitoring and Flow Monitoring Plan to include: include specific WRSF and Pit sump water quality triggers (20% change) during operations; if trigger is exceeded, pit design revised and mitigation options will be reviewed.			
ii) ARD and Metal Leaching Plan to include laboratory leach testing and triggers for adaptive management related to leach			

Task	Start Date	Finish Date	Note
testing. iii) Whale Tail Pit - Waste Rock Storage Facility Management Plan detailing the steps involved in waste rock segregation; include location of thermistor and management of			
Conduct additional laboratory leach testing	May 15, 2018	October 15, 2018	As per exhibit 50 and Attachment A in Draft Type A Licence framework.
Operation of Quarry 2 (if required)	May 15, 2018	February 15, 2019	Note: Receipt of Licence expected on May 16, 2018.
Waste Rock Storage Facility Berm Construction	June 15, 2018	February 15, 2019	Note: Receipt of Licence on May 16, 2018. Following a 30 day notice of berm construction, operation will begin
Host a workshop with INAC, KIA and NWB to review updated geochemistry, hydrogeological characterization, hydrodynamic model results, mitigation strategies and management plan updates	October 2018		Intended to review updated management plans and findings;
Submit updated draft management plans to INAC, KIA and NWB	February 1 <sup>st</sup> , 2019		As per exhibit 50, plans will be submitted at least 4 months prior to operations in Q3 2019.
Annual Reporting: Submit updated geochemistry, hydrogeological characterization, hydrodynamic model and updated management plans with new information taken in 2018/2019	January	March 31 <sup>st</sup> , 2019	As per Licence requirements
Whale Tail Pit pre-stripping		Q1 2019	As early as February 2019
Whale Tail Pit operations		Q3 2019	Target date is July 2019

- 1.2 Part B Item 13 – The incorporated Meadowbank condition should not be a straight copy and paste as provided. It should instead be developed with the current plans for Whale Tail and their associated approval dates. There are several plans yet to be approved and these will only be reviewed after issuance of the water licence. Timelines to be specified within the water licence.

**Agnico Eagle's response to 1.2:**

Agnico Eagle appreciates INAC's comment and agrees that the dates should be specific to the Whale Tail Pit Project timeline, but believes the specifics related to waste and water are addressed in the NWB approved management plans.

- 1.3 Part B Item 15 – This Item from the 2AM-MEA1525 Water Licence has been omitted from the proposed draft water licence for Whale Tail. This Item should be a part of any Whale Tail water licence.



**Agnico Eagle's response to 1.3:**

Agnico Eagle appreciates INAC's comments. This was not intended to be omitted and Agnico Eagle agrees with INAC that it should be included in the Whale Tail Type A water licence.

- 1.4 Part B Item 16 – This list should be developed by the NWB and timelines implemented according to the Final and Public Hearing records from the NIRB and NWB respectively. (Exhibit 50 from the NIRB final hearing – coordinated process is attached). AEM refers to the INAC Meeting Notes, Sept. 14, 2017, which were submitted as Exhibit 50 during the NIRB Hearing. However, the commitments contained in this exhibit present different reporting and implementation timelines as proposed here. Similar discrepancies discussed in 6) and 8) below.

**Agnico Eagle's response to 1.4:**

As presented in Table 1 response 1.1, Agnico Eagle is committed to updating relevant monitoring and management plans 60 days prior to operations, will continue to update the data and are proposing to host a series of workshops on March 30<sup>th</sup>, 2018 to review water quality modelling results, revise management plans and repeat this exercise and incorporate additional feed-back from INAC, KIA and NWB on February 1<sup>st</sup>, 2019, and submit updated management plans on March 31<sup>st</sup>, 2018, prior to pre-stripping in Q2 and mining in Q3.

- 1.5 Part C Item 3 – This item should also provide for amendments to the security on application by INAC or the Regional Inuit Association.

**Agnico Eagle's response to 1.5:**

Agnico Eagle agrees with INAC's recommendation for Part C Item 3 and suggests the following:

The Licensee may, at any time, submit to the Board for consideration and approval, a request to change and/or amend the amount of security outlined in Part C, Item 1. The submission shall include supporting evidence to justify the request, and the Minister and the Kivalliq Inuit Association will be consulted by the Board during the Board's consideration of this request.

- 1.6 Part D Item 1 – This Item lists out management plans and timing similarly to Part B Item 13. INAC would like to point out that we have seen many different timelines proposed for some of these management plans (i.e., Waste rock storage facility). In these cases INAC favours the earliest timeline, where there is no prior commitment. Where a commitment has been made, the commitment timeline should be contained within the term and condition.

**Agnico Eagle's response to 1.6:**

As presented in Table 1 response 1.1, Agnico Eagle is committed to updating relevant monitoring and management plans 60 days prior to operations, will continue to update the data and are proposing to host a series of workshops on March 30<sup>th</sup>, 2018 to review water quality modelling results, revise



management plans and repeat this exercise and incorporate additional feed-back from INAC, KIA and NWB on February 1<sup>st</sup>, 2019, and submit updated management plans on March 31<sup>st</sup>, 2018, prior to pre-stripping in Q2 and mining in Q3. As per the Type A Water License, management plans will be reviewed and updated annually.

1.7 General comments: Part E Item 5 – The term and condition proposed does not fully reflect the commitment made by the proponent in terms of content and timing.... The term and condition should reflect the temporal commitments made by the proponent that hydrodynamic modeling and hydrogeological characterisation studies be completed prior to the initiation of excavation of the deposit and construction of the WRSF.

1.7.1 INAC is of the opinion the timeline proposed for updating management plans every two years following operation is inappropriate giving the short operational life of the mine. INAC recommends the updates should be completed every 12 months.

**Agnico Eagle's response to 1.7.1:**

Agnico Eagle agrees with INAC's recommendation and as Per Part E Item 5, will commit to updating the Water quality model and water management plan every 12 months.

1.7.2 INAC recommends the waste rock storage facility and other applicable management plans, when updated, should include, but not limited to:

- Additional hydrodynamic modelling of the waste rock storage facility that characterize downstream impacts under different cover scenarios;
- Monitoring program that verifies if predictions are realized and helps inform an adaptive management strategy if necessary;
- To go along with the monitoring program; continual thermal modelling of the waste rock storage facility that reduces uncertainty surrounding cover thickness and the likelihood that PAG materials will not be completely encapsulated with permafrost, incorporating data obtained from Meadowbank would also be appropriate here, as Meadowbank facilities would have gathered more data over a longer time period; and
- These management plans are to include a section describing/detailing mitigation measures (adaptive management program) that can mitigate and manage a scenario in which seepage water does contain elevated levels of arsenic that is both feasible and can be conducted over a reasonable time frame (not over the very long term).

**Agnico Eagle's response to 1.7.2:**

Agnico Eagle agrees with INAC's recommendation and will integrate these components into the management plans.



1.7.3 INAC recommends the Whale Tail Pit and other applicable management plans when updated should include, but not limited to:

- Hydrogeological modelling and characterization of the pit that reduces uncertainty surrounding the possibility of elevated arsenic concentrations in the pit fill water;
- Models of Water Quality in pit lake;
- The plan should define (confirms) the pits flow gradients. The applicant needs to provide confidence that there are no discharge flow gradients in the pit and specifically within the ultramafic areas of the pit. If this is the case then there could possibly be a problem with elevated arsenic concentrations;
- The plan should include confirmation if stratification will occur in the pit lake and weather that stratification is stable and will contain elevated arsenic water below the thermocline (within the lower strata);
- Monitoring program that verifies predictions and helps inform an adaptive management strategy if necessary; and
- These management plans are to include a section describing/detailing mitigation measures (adaptive management program) that can mitigate and manage a scenario in which fill water does contain elevated levels of arsenic that is both feasible and can be conducted over a reasonable time frame (not over the very long term).

**Agnico Eagle's response to 1.7.3:**

Agnico Eagle agrees with INAC's recommendation and will integrate these components into the updated management plans.

1.8 Other – One item that seems to have not been reflected in the draft water licence is the treatment of contaminated soils. INAC defers to the NWB to add a term and condition regarding treatment/containment of contaminated soils.

**Agnico Eagle's response to 1.8:**

Agnico Eagle intends to ship contaminated soil to the approved landfarm at Meadowbank and will adhere to Type A 2AM MEA1525 Part F Item 18. If needed, Agnico Eagle defers to the NWB to add a term and condition regarding treatment/containment of contaminated soils.



- 1.9 Schedule B – General Conditions – The schedule should be developed to include the sampling/testing of waste rock for ARD/ML potential, as well as elsewhere as appropriate. Any schedule relating to monitoring and/or monitoring program should be submitted to the board for review and approval as frequency and nature of sampling will be very important to the project in providing confidence or not to the assumptions stated by the applicant.

**Agnico Eagle's response to 1.9:**

Agnico Eagle agrees with INAC's recommendation and will integrate these components into the updated management plans.

- 1.10 Schedule I – Monitoring – INAC requests that the NWB develop this schedule in conjunction with any and all comments related to the monitoring plans.

**Agnico Eagle's response to 1.10:**

Agnico Eagle agrees with INAC's recommendation and will integrate these components into the updated management plans.

- 1.11 Attachment A – Second commitment regarding meromixis – This timeline should be 4 months prior to operations. Since this commitment was made during a meeting held September 14, 2017 and was presented at hearing as exhibit 50 (attached).

**Agnico Eagle's response to 1.11:**

Agnico Eagle agrees with INAC's recommendation. As presented in Table 1 response 1.1 Agnico Eagle will submit an updated version of the management plans 60 days prior to operation of Quarry 2 and again, update modelling and revise the management plans for submission to INAC, KIA and NWB 4 months prior to operations.



## Environment and Climate Change Canada (ECCC)

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- 2.1 Part C: Conditions Applying to Security: The Proponent has indicated that Part C, Item 3 was revised following final hearing discussions with ECCC, Indigenous and Northern Affairs Canada and the Kivalliq Inuit Association (KIA). ECCC would like to reiterate its original comments provided on the Water Monitoring Reduction Framework. ECCC would also like to indicate its support for the comments and recommendations made by the KIA on the framework document.

### **Agnico Eagle's Response to 2.1:**

Agnico Eagle appreciates ECCC's comment and agrees with the recommendation.

- 2.2 Part E: Conditions Applying to Water Use and Management: It is important to consistently compare the predicted water quality within the pit to measured water quality to verify predictions. This will also help ensure that any adaptive management/mitigation measures taken are appropriate for the situation ECCC recommends modifying Part E, Item 6 to include the following additions (bolded text), in order to align with term/condition with comparable text (i.e. Part E, Item 9) in the Meadowbank water licence. *The Licensee shall, on an annual basis during Operations and Closure, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the predicted base case values and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified and the implications of the difference shall be assessed and reported to the Board.*

### **Agnico Eagle's Response to 2.1:**

Agnico Eagle appreciates ECCC's comment and agrees with the recommendation.

- 2.3 Schedule B: General Conditions . ECCC notes that the last bullet point under the Water section does not indicate how frequently the reporting results for the Water Balance and Water Quality model are required. It should be revised (see below) in order to align this term/condition with comparable text (i.e. Schedule B) in the Meadowbank water licence. ECCC recommends adding "in Part E, Items XX" after as required, where XX refers to the items in the Whale Tail Pit water licence that are comparable to the Meadowbank water licence Part E, Items 7-9.

### Water

- Monthly and annual volume of fresh Water obtained from Nemo Lake.
- Results of lake level monitoring conducted under the protocol developed as per Part D Item XX for Whale Tail Lake (South Basin).
- Summary of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E, Items XX.

### **Agnico Eagle's response to 2.2:**

Agnico Eagle appreciates ECCC's comment and agrees with the recommendation. As Per Part E Item 5, will commit to updating the Water quality model and water management plan every 12 months.