



October 28th, 2020

Assol Kubeisinova
Technical Advisor
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
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Re: Agnico Eagle's response to Meadowbank and Whale Tail 2019 Annual Report comments

Dear Ms Kubeisinova,

The following information are intended to address regulator's comments regarding the Meadowbank (2AM-MEA1530), the Whale Tail (2AM-WTP1830) and the Meadowbank Advanced Exploration Project (2BB-MEA1828) 2019 Annual Report. Response were provided for each comment as mentioned in the letter dated August 24, 2020 from NWB: *Licences No: 2AM-MEA1530, Meadowbank Gold Mine Project; 2AM-WTP1830, Whale Tail Pit Project; and 2BB-MEA1828, Meadowbank Advanced Exploration Project; Agnico Eagle Mines Limited; 2019 Annual Report Review*. Agnico would like to inform the NWB that complete submission of Agnico Eagle's responses to all the comments received from regulators, as detailed in letter mentioned below, can be found on the NIRB Public Registry.

- Crown-Indigenous Relations and Northern Affairs Canada – July 6, 2020: Crown-Indigenous Relations and Northern Affairs Canada review of Agnico Eagle Mines Limited's Meadowbank Gold Mine Project and Whale Tail Pit Project 2019 Annual Report
- Kivalliq Inuit Association – July 6, 2020: Review of 2019 Meadowbank and Whale Tail Annual Report
- Environment and Climate Change Canada – July 6, 2020: 03MN107/16MN056 – Agnico Eagle Mines Ltd. – Meadowbank Gold Mine and Whale Tail Pit Projects - 2019 Annual Report

Should you have any questions or require further information, please do not hesitate to contact us at the below.

Regards,

Agnico Eagle Mines Limited – Meadowbank Complex



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1 Kivalliq Inuit Association (KivIA)

1.1 Aquatic Environment Technical Comments

1.1.1 Central Dike Seepage - Meadowbank

References: 2019 Annual Report; Section 3.1.1 Meadowbank Site; 3.1.1.1 Performance Evaluation

Comment: Agnico Eagle provides the following description of iron precipitate observed in downstream of the central dike:

“In the summer of 2017 the water in the downstream pond became orange and this was associated with rapid temperature variation. This event was investigated by chemical analysis and was found to be caused by the precipitation of iron oxide from bacterial process. As predicted this event re-occurred in the summer of 2018 and 2019.”

However, no initiatives are described to manage or mitigate the iron rich water downstream of the central dike. While not an immediate concern, seepage through the central dike will eventually influence surface water in the Portage Pit which is intended as future aquatic habitat once in pit disposal of tailings has been completed.

Recommendation 1: Please describe what measures have been implemented to limit iron rich water from flowing from the downstream pond to the current and future receiving environment.

Agnico Eagle’s Response:

The bacterial process occurring in the small pond downstream of Central Dike is only observed in that body of water and not the entire South Cell or North Cell. This is due to the shallow depth of the pond (allowing quick changes in temperature during the summer months) and protection from the elements (it is very sheltered from wave action). As the water level rises in the area due to the completion of in pit disposal it is anticipated that this process will no longer occur. Water testing will continue at the pond throughout operations to confirm this. Water quality modelling predictions for the site will continue to be updated as part of the Annual Report process and reconnection to the natural environment will only be done once water quality objective have been met.

1.1.2 Adaptive Management Plan – Water Level Mammoth Lake

References: 2019 Annual Report; Section 3.1.2 Whale Tail Site; 3.1.2.1 Performance Evaluation

Comment: Agnico Eagle notes the following concern pertaining to potential inflows to Whale Tail Pit:



“In December 2019 the TARP level of Mammoth Dike was increased to yellow due to the water level in Mammoth Lake being over the normal dike operating level. The water level increase was due to pumping of water from Whale Tail Lake South to Mammoth Lake while Mammoth Lake outlet was frozen preventing water from flowing to the nearby lakes. The risk associated with this event is overtopping of the dike liner, possibly causing damage to the dike and allowing water to flow to the Whale Tail Pit area.”

Agnico Eagle has proposed responses to this concern, including:

“Preparation of an action plan linked to a decision tree if the water level are higher than those expected at freshet”.

We note that an Adaptive Management Plan has been developed for the Whale Tail site, but does not include adaptive management thresholds and responses based on water levels in the receiving environment.

Recommendation 2: Please adaptive management thresholds, triggers and responses pertaining to water levels in Mammoth Lake, and incorporate these into the Adaptive Management Plan for the Whale Tail site.

Specific thresholds and action levels are intended to provide clarity as to what measures will be taken and when in response to elevated water levels in the receiving environment.

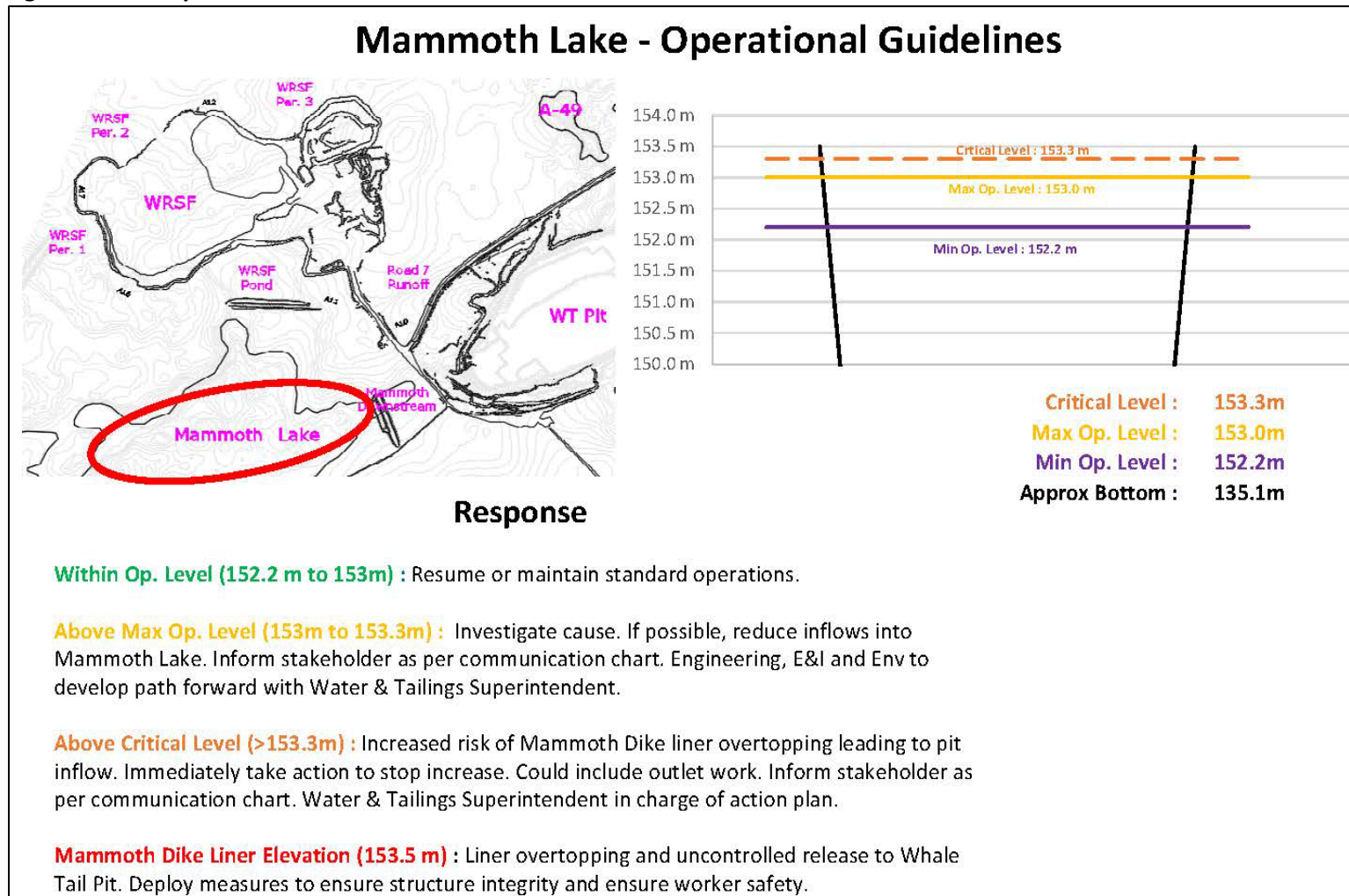
Agnico Eagle’s Response:

Pond operational guidelines have been developed for the lakes and ponds at the Whale Tail site to ensure that freeboard is respected during operation. All pond operational guidelines will be included in the next version of the Whale Tail Water Management Infrastructure OMS Manual. Figure 1 is the pond operational guideline for Mammoth Lake.



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Figure 1. Pond Operational Guideline for Mammoth Lake





1.1.3 Water Quality Forecast - Meadowbank

References: 2019 Annual Report; 4.4.2 Water Balance Water Quality Model Reporting Summary; 4.4.2.1 Meadowbank Site; 4.4.3 Predicted Vs Measured Water Quality 4.4.3.1 Meadowbank Site; Meadowbank ICRP Update 2019; 5.2.4.2 Closure Objectives and Criteria

Comment: “The Water Quality Forecast 2019 (SNC, 2020) provides water quality modelling with updated parameters (including dissolved) to determine the need for potential treatment at closure. The updated water quality forecast model applies to the North and South Cell TSF Reclaim Ponds, and the Portage, Goose, Vault and Phaser Pits. A review of the available water quality data measured in 2019 was undertaken. Treatment may be required for aluminium, arsenic, cadmium, chromium, copper, iron, lead, nickel, selenium, thallium, chloride, fluoride, sulphate, and total ammonia/total nitrogen equivalent, as the pit water quality may exceed CCME limits if the water is not treated, based on the completely mixed assumption.”

We are concerned that treatment may be required in perpetuity to ensure water overlying tailings disposed of in mined out pits will be suitable for aquatic habitat as indicated through current closure planning. This concern is exacerbated by the apparent divergences between predicted water quality and the majority of measured water quality parameters currently measured in all pits at the Meadowbank site.

Recommendation 3: Agnico Eagle should include explicit descriptions and planning for treatment of water in the flooded pits sufficient to meet CCME water quality guidelines and establish aquatic habitat in the 2020 annual report should monitoring and updates to the water quality forecast required for that report continue to indicate treatment may be required for water in the flooded pits.

We further recommend Agnico Eagle explore additional habitat offsetting opportunities should water quality modelling and measurements continue to indicate that the end pit lakes may not be viable habitat in the post closure environment without treatment.

Agnico Eagle's Response:

In-pit deposition of tailings has started as of July 2019 at Meadowbank. The reclaim water stored in Goose Pit and also in Portage Pit are sampled on a regular basis to assess the changes in water quality parameters over time. The data collected are compared against the forecasted values and the water quality forecasting model shall be adjusted accordingly.

It is also Agnico Eagle's intent to start water treatment bench scale testing using the reclaim water stored in the pits. The objective of these bench scale testing shall be to



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assess the most suitable water treatment processes that can be used at closure to treat the reclaim water prior to pit flooding. In next year's report, a plan will be provided describing the general timeline to perform bench scale laboratory testing, on-site testing (if required) and development of design of the water treatment process for closure.

Agnico Eagle does not intend at this moment to explore additional habitat offsetting opportunities. Agnico Eagle's intent is to meet the end pit lake water quality as per our Water License criteria and current ICRP.

1.1.4 Meadowbank WRSF Seepage

References: 2019 Annual Report; 8.5.3.1.7 Portage Rock Storage Facility (ST-16)

Comment: "The KIA requested that Agnico continue monitoring until there is a 5 year period of non-detect cyanide results. In 2018 (5 previous year), the monitoring indicated that yearly average for CN levels does not exceed the CCME guideline, the MDMER or Water License limit for effluent discharge into the environment for NP2, NP1 and downstream lakes, Dogleg and Second Portage. Thus, based on the analysis of the previous results, Agnico Eagle has suspended the current program in 2019. However, ECCC's comment regarding the 2018 Annual Report recommended that Agnico continue to monitor Lake NP-2 on a yearly basis for the same suite of parameters as have been measured since 2014. Water quality results for 2019 ST-16 and NP-2 South can be found in Table 8-19 and 8-20, respectively. Monitoring stations are illustrated on Figure 1."

Table 8-19 indicates that WAD cyanide decreased between 2014 and 2016, but increased again in 2017. WAD cyanide was again below detection in 2018 and 2019. The intent of the initial request for cyanide monitoring was to demonstrate that the source had been mitigated and cut off. We remain concerned with potential seepage from the tailings facility given that cyanide concentrations as measured at ST-16 are inconsistently low. We therefore concur with ECCC's recommendation to continue monitoring the full suite of parameters as outlined in Table 8-19 until WAD cyanide measured at ST-16 is below the detection limit for 5 consecutive years.

Recommendation 4: Agnico Eagle should continue monitoring water quality at ST-16 and in NP-2 for the full suite of parameters as outlined in Table 8-19 and Table 8-20 until WAD cyanide is measured below the detection limit for 5 consecutive years.

Agnico Eagle's Response:

As per Agnico Eagle's responses to ECCC recommendation provided to NWB regarding the 2018 Annual Report on November 1st, 2019, Agnico will continue to monitor water quality in NP2-South on a yearly basis for the same suite of parameters measured since 2014. Water quality monitoring at ST-16 will also continue to be sampled as per the Water



License 2AM-MEA1530 Schedule 1 Table II Group 1 and will also included the supplemental parameters presented in Table 8-19 of the 2019 Annual Report. Agnico will not commit at this moment on a definitive timeline or threshold (WAD cyanide is measured below the detection limit for 5 consecutive years) for ending the monitoring.

1.1.5 Water Quality Receiving Environment – Whale Tail

References: 2019 Annual Report; 8.5.3.2 Whale Tail Site

Concern: Agnico Notes that “there are no applicable license limits” for several lakes in the receiving environment, including Lake A47 (ST-WT-6), Lake A45 (ST-WT-13), Lake A16 outlet (ST-WT-14), Lake A15 (ST-WT-15). These lakes are in the receiving environment and are potentially or may be in the future, impacted by mine activities. Lakes A45, A16 and A15 in particular are part of the Whale Tail Lake and Mammoth Lake flow paths respectively, and will be impacted by both the impoundment of the Whale Tail south basin, and discharge activities into both Whale Tail South and Mammoth Lake.

While licence discharge limits are not applied to these lakes, comparisons should still be made to CCME water quality guidelines and baseline conditions to understand whether the downstream environment is impacted by mine activities and implement mitigations if they are.

Recommendation 5: Agnico Eagle should compare results from these sites to a) historical monitoring data to identify if water quality is changing relative to the normal range, and b) CCME WQGs for PAL.

Agnico Eagle’s Response:

Agnico Eagle acknowledges KIA’s recommendation and will evaluate the possibility to provide requested comparison and analysis in the 2020 Annual Report.

1.1.6 AP-5 Discharge – Whale Tail

References: 2019 Annual Report; 8.5.3.2.12 Effluent discharged from AP-5 and Trench-water Containment Pond (MEA-4)

Comment: Agnico Eagle notes “On September 10th, Agnico contacted the CIRNAC Inspector to notify that following higher than anticipated precipitation during July and August, discharges from AP-5 were higher than originally estimated, and thus it was anticipated that it will continue to discharge an additional approximately 1,000,000 m³ of compliant water to the tundra over the next few weeks period.... total volume of 1,080,667 m³ of water was discharged to tundra towards



the Nemo watershed from July 11th to September 26th, 2019. No non-compliance were observed during discharge”

Agnico Eagle acknowledge that this discharge was sufficient in volume to qualify under MDMER as a discharge location. We appreciate that water chemistry analysis collected at this location was compared to MDMER discharge criteria. However, results of acute and sublethal toxicity testing was not provided for this location in the Annual Report. While the effluent itself was not discharged directly to the freshwater environment (i.e. water from AP-5 were discharged to the tundra), those discharges have the potential to impact the freshwater environment within the Nemo watershed, thereby warranting those studies.

Recommendation 6: All discharges regulated under MDMER should include acute and sublethal toxicity testing. These tests should be completed for all future discharges deemed to fall under the purview of MDMER by ECCC, and not just those which were predetermined under the water licence and project certificate (i.e. the diffuser in Mammoth and Whale Tail South Basin lakes).

Agnico Eagle’s Response:

As detailed in Section 8.3.2.5 of the 2019 Annual Report, during September 23rd, 2019 ECCC’s MDMER inspection at Whale Tail Site, the Inspector observed a discharge from the A-P5 pond to the tundra towards the Nemo Lake watershed. After investigation, Agnico Eagle was notified on October 3rd, 2019 that the A-P5 discharge to environment met the definition of an effluent and thus must submit to the Minister of the Environment the information required by MDMER Section 9. The requested information was provided on October 31st, 2019. The discharge to environment was stopped on September 26th, 2019 as the discharge pipe had completely frozen. Given that the official decision from ECCC was received on October 3rd, no MDMER and EEM regulatory water sample were taken.

Agnico Eagle acknowledges KIA’s comment and will continue to fulfill the requirements of the MDMER for all the effluent discharges on mine site and not only the one predetermined under the Water License.

1.1.7 Water Management – Whale Tail

References: 2019 Annual Report; 8.5.8.2.4 Subsurface seepage and surface runoff from waste rock piles; Appendix 12 Whale Tail Water Management Plan Version 4; APPENDIX C 2019 Water Balance Report

Comment: Agnico Eagle notes “In July 2019, seepage stream were observed on the downstream toe of Whale Tail Dike. The flow was measured using v-notch weirs at approximately 300 m3/h which is higher than what was anticipated in the water balance. A detailed investigation including



additional instrumentation and geophysics was conducted for a better understanding of the seepage phenomenon at the Whale Tail Dike.”

We are concerned that water balance modelling prepared for the approved project and updated for the 2019 Annual Report (Appendix 12C 2019 Water Balance Report) did not appear to include a sensitivity analysis beyond use of 2019 precipitation data which can be considered a “wet year” scenario. Increased seepage volumes beyond the base case as an increased source of contact water was not considered.

Concerns regarding the lack of sensitivity analysis and corresponding management options were expressed by KIA during the EA and water licence reviews for the expansion project. While we note that the base case was well modelled, we remain concerned that Agnico Eagle may have difficulties managing water should continued divergences from base case modelling persist.

We also note that “FEIS predictions for MAM were exceeded for TDS, lithium, and the ionic compounds calcium and magnesium. Despite early warning triggers and FEIS predictions being exceeded in 2019, the absolute concentrations of these parameters remain low and far lower than concentrations associated with adverse to aquatic life.”

We are concerned that water quality parameters in the receiving environment have also already exceeded FEIS predictions in the first full year of operation.

Recommendation 7: We recommend future iterations of the water quality and load balance models, intended for submission as part of the 2020 Annual Report, include additional sensitivity analysis scenarios focused on the potential for additional contact water. The Water Management Plan should also be updated for the Whale Tail site as part of the 2020 Annual Report to include mitigation options to provide confidence Agnico Eagle can manage contact water volumes in excess of the base case scenario presented in the EA and Water Licence.

Agnico Eagle’s Response:

Agnico Eagle acknowledges KivIA’ comment and will update the water quality forecast as per the recommendation in the 2020 Annual Report.

Mitigation options were presented in the Adaptive Management Plan.



1.1.8 Water Quality Model – Whale Tail

References: Appendix 12 Whale Tail Water Management Plan Version 4; Appendix C 2019 Water Balance Report; Appendix A Project Design Document; Table 11: Water Quality and Chemical Loading Input Parameters

Comment: Table 11: Water Quality and Chemical Loading Input Parameters, indicates that water quality inputs to the water quality model used average concentrations from 2015 and 2016 for:

- “Initial lake concentrations and natural runoff downstream of Mammoth Lake
- Initial Mammoth Lake concentrations and natural runoff
- Initial Whale Tail Lake (North and South Basins) concentrations and natural runoff to Whale Tail Lake (South Basin)
- Nemo Lake concentrations”

However, shallow groundwater input concentrations used the “75th percentile of Meadowbank groundwater quality”

Rationale was not provided as to why average water quality conditions were appropriate for model inputs for Mammoth, Nemo and Whale Tail lakes as opposed to the more conservative 75th percentile. A more conservative model input provides more confidence Agnico Eagle can effectively manage a range of water quality conditions beyond an average “base case” scenario.

Recommendation 8: Please provide rationale as to why average water quality conditions were considered appropriate inputs for the water quality model for Mammoth, Nemo and Whale Tail Lakes as opposed to a more conservative percentile (e.g. 75th) of measurements.

We further recommend that future updates to the water quality and load balance models for the Whale Tail site use the 75th percentile at minimum, and sensitivity analysis using the 95th percentile of measured values in those waterbodies.

Agnico Eagle’s Response:

The inputs used for the Annual Report are consistent with what has been approved for the Phase 1 Permit (Approved Project) and Expansion Project.

The magnitude of variability in the baseline water quality is unlikely to impact projected concentrations in the downstream environment under the influence of the mine discharge, as baseline concentrations are overall low. Conversely, there is some uncertainty surrounding the water quality in the shallow bedrock as little information is available, and it is possible that the inflow of shallow groundwater to site facilities may contribute



sufficient additional mass to alter treated effluent water quality. Therefore, it was deemed a conservative assumption to use the 75th percentile inputs for the shallow groundwater.

As this model and annual report represent operational-level assessments, model inputs should be representative of expected conditions; it is of the opinion of Agnico Eagle that 75th and 95th percentile sensitivities are not necessary, given the modelling is not supporting EA level assessments. Model inputs are updated when sufficient additional data are available from site monitoring programs, and these should be considered most representative of site conditions.

1.1.9 Water Quality Model – Whale Tail

References: Appendix 12 Whale Tail Water Management Plan Version 4; Appendix C 2019 Water Balance Report; Appendix A Project Design Document; Table 11: Water Quality and Chemical Loading Input Parameters

Comment: It is unclear whether interannual loading to the receiving environment is accounted for in the water quality model. Does the model assume complete flushing of Mammoth Lake each year, or has the model been updated based on the commitments made during the Whale Tail expansion licencing process? Specifically, do the initial lake concentrations increase year over year to account for prolonged loading?

Assumed complete flushing of the receiving environment may underpredict future water quality thereby potentially delaying the implementation of management and mitigation measures that may be warranted.

Recommendation 9: Please clarify whether the water quality model assume complete flushing of Mammoth Lake each year (i.e. return to baseline concentrations) or whether the model accounts for interannual loading to the receiving environment. Please ensure that all future water quality models account for interannual loading to the receiving environment.

Agnico Eagle's Response:

The water quality model accounts for interannual loading to the receiving environment and does not assume complete flushing of Mammoth Lake each year. The reader is referred to the water balance report (Golder 2020).

Reference:

Golder (Golder Associates Ltd.). 2020. Whale Tail Pit – Phase 1 Permit, Approved Permit. 2019 Annual Report – Water Balance. Submitted to Agnico Eagle Mines March 2020.



1.1.10 Snow Management and Water Quality Model – Whale Tail

References: Appendix 12 Whale Tail Water Management Plan Version 4; Appendix E 2020 Freshet Action and Incident Response Plan; Section 4 Snow Management

Comment: Pertaining to snow management, Agnico Eagle states “Similarly to the Meadowbank site, a snow management procedure has been developed internally in 2019 and will be updated annually. Temporary snow storage dumps and snow accumulation areas of concern were identified on a map. Removal will be managed accordingly.”

We note that removal of snow from areas of concern as identified in Section 2 of the 2020 Freshet Action Plan to achieve a target cover depth (e.g. the waste rock storage facility) is not an identified activity in Appendix 1, “Freshet Action Plan Procedure”.

Removal of snow to achieve a target cover thickness directly impacts the volume of contact water requiring management. We further note that specifying a target snow cover thickness on areas of concern must be provided so that:

- mine operators understand what duties are expected of them with respect to snow management,
- inspectors may evaluate whether Agnico Eagle has complied with Freshet Action Plan, and
- reviewers may determine whether the volume of contact water runoff used as input into the water balance model is reasonable.

Recommendation 10: Agnico Eagle should include the removal of snow from areas of concern (as defined in Section 2 of the 2020 Freshet Action Plan) as a specified activity in the 2020 Freshet Action Plan. Agnico Eagle should further specify the target snow thickness on each area of concern required to meet the assumptions of the water balance model.

The water quality and load balance models should be updated for the 2020 Annual Report using two scenarios related to freshet management: contact water runoff during freshet using the target snow thickness on areas of concern, and an increase of 50% snow volume and the associated increase in contact water as part of a sensitivity analysis to assess whether water management strategies and infrastructure on site are sufficient to mitigate environmental impacts.

Agnico Eagle’s Response:

Snow accumulation will vary greatly from year to year and determination on removal are made from regular site inspections and monitoring and is identified through water



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management meetings and discussion held on site. It is Agnico belief that a specific snow thickness target is not required to ensure validation of models. A weather station location at both the Meadowbank and Whale Tail site records daily snow and rain fall. This information is integrated within the site water balance model. Safety factors are included towards snow accumulation and the model is revised annually.

Agnico is assessing the possibility of monitoring snow thickness around key areas. This would aim towards adding robustness to the models.

1.1.11 CREMP QAQC

References: Appendix 35 Meadowbank and Whale Tail 2019 CREMP Report; 3.0 QA QC 3.3 Water Chemistry; Appendix A QA/QC; A2.2 Water Chemistry Equipment Blanks

Comment: Agnico Eagle highlights concern in the analytical precision of key nutrient analytics, stating “Of the analytes detected in the equipment blanks, total ammonia, and TKN were routinely given a cautionary flag.”

Appendix A, QA/QC, provides further details: “In July total ammonia (as N) was detected [in equipment blanks] at concentrations greater than 10X DL. Total Kjeldahl Nitrogen (TKN) was also detected at approximately twice the detection limit. No other analytes were detected in July suggesting that the total ammonia and TKN results may be somewhat anomalous; however, both analytes have been flagged for closer scrutiny in the interpretation of the July water quality results.” ... Total ammonia was also at 10X DL in September.

We are concerned that both ammonia and TKN were routinely detected in equipment blanks. Contamination pertaining to these may make it difficult to determine whether the mine, particularly via blasting activities, may be having an impact in the aquatic environment.

Recommendation 11: Agnico Eagle should address sample contamination with a particular focus on ammonia and TKN in the field protocols implemented as part of the 2020 field programs across all sites.

Agnico Eagle’s Response:

There are, on occasion, parameters that are detected in the field blanks (aka the deionized water blanks) and the equipment blanks. In most cases, the detected concentration is less than 5-times the analytical detection limit. The two results for ammonia in July and September that were greater than 10-times the DL were unusual for the CREMP. We acknowledge that measured concentrations for parameters in the equipment blanks,



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particularly when concentrations are greater than 10-times the DL, adds uncertainty to the reliability of the samples collected in during the given sampling event.

If detectable concentrations are measured in the field or equipment blanks, the source of the contamination is investigated. At a minimum, field personnel are asked to review the standard operating procedure for collecting blanks. If the source of contamination is equipment, then either the tubing or pump is replaced. At a minimum, the tubing used to collect water samples is replaced at the beginning of each year.

The field blank and equipment blank results from the March and May sampling events in 2020 came back showing non-detects for ammonia and TKN, indicating the corrective actions were effective at improving the blank results thus far in 2020. Overall, the blank results from the winter 2020 sampling events show no evidence of cross-contamination that could impact the water quality analysis.

1.1.12 CREMP Water Quality Prediction

References: Appendix 35, Section 5 Whale Tail, 5.3.2 Temporal and Spatial Trends; Appendix 12, Sub appendix D, Section 12.4.1.2.2.2 Receiving Environment Water Quality Predictions

Comment: Agnico Eagle appears to have had difficulty operating the project in a manner consistent with the FEIS in its initial year of operation.

Phosphorous “exceeded in seven out of 10 samples for WTS and, unsurprisingly, in 2019 the yearly mean total phosphorous concentrations exceeded the trigger/threshold in WTS. The BACI analysis indicated that the observed change was statistically significant.”

Phosphorus is a significant contaminant of concern associated with Whale Tail project activities; the receiving environment is expected to change trophic states during operations. While exceedances of predicted phosphorus concentrations in the receiving environment are of low concern in the short term, prolonged exceedances in the receiving environment may impact the viability of long-term closure objectives if an alternate steady state scenario becomes more likely.

Other exceedances of predicted concentrations are summarized in Table 5-7 which compares FEIS Screening Predictions for Mammoth Lake to mean measured concentration:



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Parameter	Prediction (mg/L)	2019 Mean (mg/L)
Ammonia (as N)	0.015	0.046
Chloride	6.73	22.4
Calcium	6.32	12.7
Magnesium	1.93	2.48
TDS	54.3	87.1
Aluminum (Total)	0.0050	0.011
Barium (Total)	0.012	0.022
Lithium (Total)	0.0016	0.0037
Strontium (Total)	0.041	0.11

Chloride, aluminum and strontium all exceed the predictions by an order of magnitude, exceeding the model uncertainty which is described by Golder as “model predictions are estimated to be accurate within one order of magnitude”.

Despite these exceedances, no mention is made of the Adaptive Management Plan. We are concerned that the project is not operating as modelled, and Agnico Eagle does not appear to be taking steps to ensure these exceedances are corrected, potentially jeopardizing the feasibility of site closure objectives.

Recommendation 12: Please address the reported divergences from modelled water quality in the project receiving environment as part of the 2020 activities at the Whale Tail site. The 2020 annual report should include

- A summary of mitigation and management measures implemented to address the exceedances including specific references to the Adaptive Management Plan developed for the Whale Tail site, and
- A discussion as to whether closure objectives and timelines are impacted by the observed divergences from modelled water quality.

Agnico Eagle's Response:

In response to this recommendation, it's helpful to provide some background on the water quality model for the Approved Project and how the data should be interpreted relative to operational water quality data. The water quality model for the Whale Tail Pit Project was included as Appendix 6-H of the FEIS (June 2016 submission). The predicted concentrations shown in the Table 5-7 represent the average during the operations period (see Appendix B of Appendix 6-H [page 1107 of Volume 6 of the FEIS]). In this document Golder stated that “a conservative number of assumptions were made in the modelling exercise based



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on literature, good practice, and comparisons between laboratory results and actual water quality data from the Meadowbank Mine and the Meliadine project” (see page 29 of Appendix 6-H in Golder 2016). This chapter of the FEIS is where the authors also state that “the results are considered accurate within one order of magnitude for the conditions and site configuration that were modelled” and that “the prediction of monthly average results implies that concentrations can be higher or lower at any given time during the month.”

The following table was adapted from Table 5-7 to show the results of the 2019 water quality assessment compared to the water quality predictions and the corresponding order of magnitude (i.e., 10-fold) level of uncertainty considered accurate for the conditions and site configuration (all data are reported in mg/L).

Parameter	FEIS Prediction	Prediction x10	2019 Mean	>1 order of magnitude?	Fold increase
Ammonia (as N)	0.015	0.15	0.046	No	3.1
Chloride	6.73	67.3	22.4	No	3.3
Calcium	6.32	63.2	12.7	No	2.0
Magnesium	1.93	19.3	2.48	No	1.3
TDS	54.3	543	87.1	No	1.6
Aluminum (Total)	0.005	0.05	0.011	No	2.2
Barium (Total)	0.012	0.12	0.022	No	1.8
Lithium (Total)	0.0016	0.016	0.0037	No	2.3
Strontium (Total)	0.041	0.41	0.11	No	2.7

For parameters that exceeded the FEIS prediction, the mean concentrations were between 1.3-times (magnesium) and 3.3-times (chloride) the predicted concentrations in the FEIS. The results for 2019 were well below the 10-fold (1 order of magnitude) considered accurate given the uncertainties of the model.

Given the low-magnitude of exceedances and that the concentrations were well below concentrations associated with effects to aquatic life, no mitigation actions were recommended for 2020 beyond routine water quality monitoring as per the CREMP Design for the Whale Tail Pit Project.

The water quality model was updated as part of the EA for the Expansion Project. Water quality data collected in 2020 will be compared to the revised predictions for the



Expansion Project. If chloride, aluminum, strontium, or other parameters exceed modelling results, adaptive management measures may be undertaken if the concentrations also exceed water quality guidelines (thresholds). At present, chloride, aluminum, and strontium concentrations are all well below applicable water quality guidelines published by CCME (Cl and Al) and ECCC (new strontium guideline of 2.5 mg/L as of July 2020).

1.1.13 Mercury Monitoring Report – Whale Tail

References: Appendix 35 Meadowbank and Whale Tail 2019 CREMP Report; Appendix L Whale Tail 2019 Mercury Monitoring Report

Comment: Table L2-1 indicates that Nemo Lake is listed as a reference location. While the watershed has not been flooded (i.e. the watershed has not been inundated and the potential for additional methylmercury generation is low), it may no longer be considered a true reference given discharges of 1,080,667 m³ to tundra were directed into the Nemo watershed from July 11th to September 26th, 2019.

Recommendation 13: Agnico Eagle should provide a discussion as part of the 2020 Mercury Monitoring Report as to whether Nemo Lake is still an appropriate reference site for use in assessing mercury concentrations at the Whale Tail project.

Nemo Lake should no longer be considered a spatial reference location if it continues to receive discharges of contact water in volumes sufficient to qualify as a discharge location under MDMER; Nemo Lake may still be used as a temporal reference.

Agnico Eagle's Response:

Agnico Eagle acknowledges KIA's recommendation and will provide the requested discussion as part of the 2020 Annual Report.

1.1.14 EEM Study Design – Whale Tail

References: Appendix 39 - Whale Tail EEM Cycle 1 Study Design; 8.2.3.2 Water Quality; Table 8-3. Water Quality Detection Limits.

Comment: The proposed EEM study includes ortho phosphate and total phosphate to assess phosphorus concentrations in the receiving environment. We appreciate that ortho phosphate is the biologically available form of phosphorus, and will reflect the phosphorus concentration that may result in biological effects. We are concerned however with Agnico Eagle's ability to consistently meet the 48 hour hold time for orthophosphate analysis given the remote location



of the project. Total phosphorus is a far more stable analysis with a hold time of 28 days and can serve as a backup should hold times for orthophosphate and total phosphate be exceeded.

Evaluation of phosphorus concentrations in the total phosphorus form is seen as a conservative analysis as it includes all forms of phosphorus in the sample.

A consistent and conservative analysis of phosphorus is particularly important at the whale tail site given phosphorus is a contaminant of concern, and project effects are expected to include an increase in trophic status of Mammoth Lake.

We also note that the modelling of environmental effects at the Whale Tail project area was completed using total phosphorus concentrations. Evaluate of total phosphorus further permits the direct comparison of results to predicted water quality as presented in the Final Environmental Impact Statement.

Finally, we note that the Canadian Council of Ministers of the Environment provides guidelines based on total phosphorus measurements to determine shifts between trophic levels.

Recommendation 14: Please add total phosphorus to the analytical suite for the EEM program at the Whale Tail site.

Agnico Eagle's Response:

There was a typo in the design report provided to ECCC. Total phosphorus is currently planned to be analyzed.

1.1.15 Laboratories Detection Limit

References: 2019 Annual Report, 4.4.3 Predicted Vs measured Water Quality

Comment: Many of the measured annual mean concentrations for pit water at Meadowbank for the years 2012-2019 are greater than the predicted values for the probable and possible poor scenarios, and annual average and 25th percentile water quality forecast by greater than +/- 20%. One of the possible reasons given by Agnico Eagle is that "some accredited laboratory water quality measurements have detection limits that are higher than the predicted values. This is particularly true for dissolved metal analysis, such as cadmium, iron, lead, nickel, molybdenum, selenium, thallium and zinc".

We are concerned the analytical capacity to accurately measure monitored parameters has not been achieved, and have highlighted this persistent issue in previous reviews of Meadowbank Annual Reports (i.e., for 2014-2018). If laboratory detection limits are higher than predicted values it is not possible to accurately determine if predictions are being met or exceeded.



Recommendation 15: We request that Agnico Eagle investigate whether any accredited labs are able to overcome the detection limit issue for dissolved metals, so that concentrations below the predicted values can be reliably measured.

Agnico Eagle's Response:

The laboratory services selected by Agnico are conducted by accredited facilities and reach the analysis lower detection limits (LDL) where the results can be compared to the CCME guidelines. Agnico is currently in the process to change the accredited facilities that will perform most of the water quality analyses for Meadowbank and Whale Tail sites and will investigated with them if lower detection limit can be achieved. Agnico Eagle will continue to ensure that the accredited laboratory can reach the required detection limits.

1.1.16 Hydraulic Oil Spill

References: 2019 Annual Report, 7 Spill Management, 7.1.1 Meadowbank Site, Table 7-2; Appendix 31 Meadowbank 2019 GN Spill Reports; 7.1.2 Whale Tail Site, Table 7-4; Appendix 32 Whale Tail 2019 GN Spill Reports

Comment: Hydraulic oil leaks were a common source of spills at both mine sites in 2019, accounting for just under 50% of all reportable spills (45% at Meadowbank and 47% at Whale Tail). The main reasons given for these spills are machinery hitting boulders, failures of hose or hydraulic system, faulty fittings and damaged hose. The corrective measure often given by Agnico Eagle is "routine visual inspection of all systems and hoses is performed during pre-operation checks as part of the preventative maintenance program". The frequency of hydraulic oil spills suggests that the pre-operation checks are not sufficient measures to prevent these accidents.

We are concerned that hydraulic oil leaks are a recurring problem. Why are they so common? How does the high number of this type of spill in 2019 compare with previous years?

Recommendation 16: Please discuss why hydraulic oil spills are so common at both mine sites and demonstrate what proactive steps will be taken in 2020 (beyond just conducting pre-operation checks) to reduce the number of these spills in future. Please compare the 2019 spill rate in comparison with patterns observed in previous years.

Agnico Eagle's Response:

Hydraulic oil is one of the major components involved in the equipment used for mining operation, and thus, it is not surprising that hydraulic spill count for a high proportion of the spills that occurred in 2019. In 2016, the percentage of spills associated to hydraulic oil were 62%. In 2019, the proportion of spill associated to hydraulic oil is 49%. This represent a decrease of 13 % in the hydraulic spill reporting and show that the mitigation



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in place are effective. Agnico Eagle will refer to Section 7 of the 2019 Annual Report for a discussion of mitigation in place. Although the overall percentage of hydraulic oil spills increased in 2019, it is also important to note that a shift in site operations meant that increased hauling is needed to ensure production. Difference in material hardness is also noted from previous Meadowbank operations. Observation from the last year of operation at the Whale Tail have led to changes in practice to reduce overall stress on equipment, specifically during winter times. For example, reduced loads are implemented under certain conditions and loading equipment will be stopped or idled in very low temperature conditions. Startup of equipment under winter conditions was also revised to decrease overall pressures on hydraulic systems.

A spill reduction program is also ongoing and has been identified by management as a key component to understand fully opportunities of improvements under the new reality.

1.1.17 Sulfur Prill Spill

References: 2019 Annual Report, 7 Spill Management, 7.1.1 Meadowbank Site, Table 7-2; Appendix 31 Meadowbank 2019 GN Spill Reports

Comment: On June 26, a sulfur prill bag fell and punctured, spilling 1000 kg of sulfur on the ground. Agnico Eagle reports that the spill was cleaned up and disposed of at the tailing pond, and that there were “no off site impacts or discharge to any receiving watercourses. Distance to the closest lake is estimated at 150 m”.

On September 5, another spill of 40 kg sulphur prills occurred 220 m from the closest lake.

Agnico Eagle does not discuss the possibility that the spilled sulfur prill generated dust which could become airborne and reach waterbodies.

Agnico Eagle states that the corrective measure for both accidents is for operators to follow procedure. Agnico Eagle should indicate what steps will be taken to ensure that operators are properly trained in the safe handling of sulfur prill to avoid future spills.

Recommendation 17: Please discuss the risk of dust being generated from the sulfur prill spills and subsequent clean up, and the possibility that it could become airborne and reach waterbodies.

Please explain what training operators receive in the proper handling of sulfur prill.



Agnico Eagle's Response:

Sulfur spills are cleaned-up immediately on site and transferred to the TSF. While being picked-up, enough material is removed to ensure that prills are enclosed within the contaminated soil. At the TSF disposal location, if the material cannot be submerged within the liquid portion of the tailings, it will be covered with clean material to prevent prills from being airborne or release to the environment. In both cases, risks of dust being generated are infinitesimal and the risk of reaching any waterbody remote.

All operators are trained on the telehandler and/or the forklift prior to have the right to move any reagent bag. A specific 84hrs training for every employee that need to mix reagent (15% in class followed by 85% hands on training), including the transportation of the reagent bag.

1.1.18 STP Exceedance – Whale Tail

References: 2019 Annual Report; 7 Spill Management, 7.1.2 Whale Tail Site, Table 7-4; Appendix 32 Whale Tail 2019 GN Spill Reports

Comment: On March 4, a fecal coliform exceedance (12,000 CFU/100 ml) was reported at the Whale Tail STP. No written report is provided in Appendix 32 detailing the cause or corrective action taken.

Recommendation 18: Please provide details on the cause of and corrective action taken for the March 4 fecal coliform exceedance.

Agnico Eagle's Response:

Agnico Eagle apologize for the missing follow up report regarding the March 4 fecal coliform exceedance. The cause of the exceedance was not determined but was assumed to be a cross contamination during sampling, as the results after March 4 were all below the limit. Technicians were reminded to make sure to eliminate the possibility of cross-contamination during the sampling. A preventative maintenance was done on the unit including cleaning and disinfecting all sampling lines.

1.1.19 Assay Road Seepage - Meadowbank

References: 2019 Annual Report, 8.5.8 Seepage, 8.5.8.1.6 Mill Seepage Meadowbank Site; Appendix 11 – Meadowbank 2019 Water Management Report and Plan Version 8; 3.1.11.1 Mill Seepage Collection



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Concern: Seepage has been observed at the Meadowbank Assay Lab Road since 2013. In 2019, Agnico Eagle reported a significant increase in the volume of seepage pumped back to the mill and attributed this increase (in the Annual Report) to significantly higher rainfall recorded in 2019. However, in Appendix 11, the higher 2019 seepage volumes were “not expected to be reflective of reality” but instead were deemed the result of a flowmeter reading error. It would be helpful if 2019 monthly precipitation levels could be shown to enable an assessment of whether pumped volume increases correspond with increased rainfall. The increased monthly pumped volumes in 2019 were an order of magnitude larger than those recorded in 2018, a scale of increase only seen once before (in June 2015), but which occurred from June – September in 2019.

Table 8-103 Meadowbank Assay Road Seepage pumped volume 2014-2019

Month	Pumped Volume (m³)					
	2014	2015	2016	2017	2018	2019
January	0	871	0	0	0	0
February	0	306	0	0	0	0
March	0	500	0	0	0	0
April	0	680	0	0	0	0
May	2,450	347	0	3,025	0	0
June	1,935	10,803	2,588	3,973	5,095	10,058
July	1,158	6,633	2,270	4,961	4,148	17,273
August	3,979	4,467	3,599	3,782	2,912	22,320
September	2,420	4,584	2,109	6,687	1,490	20,225
October	1,043	1,188	512	549	0	1,740
November	842	164	0	0	0	0
December	871	0	0	0	0	0
Total	14,698	30,543	11,078	22,977	13,645	71,616

Agnico Eagle states in Appendix 11 that it plans to install a calibrated flowmeter and will conduct monitoring so that “any future deviation from previously established annual volume norm will be investigated”. It is not clear if the 2019 deviation was investigated, since two different reasons are given for its occurrence.

Recommendation 19: Please provide monthly precipitation records for 2019. Please clarify the cause of the significant increase in pumped volume in 2019, with evidence (i.e., increased rainfall or instrument error). Please explain when the calibrated flowmeter will be installed and what the monitoring regime will be.

Agnico Eagle’s Response:

Precipitation data are presented below and indicate the average rainfall from June to September 2019 is around 2 time higher than the average of past years while the maximum precipitation is around 5-6 time higher. The flow reported could also be impacted by human error as there is no flowmeter in that system. As this system does not



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discharge to the environment, the flow reported are calculated using the pump curve and the time of operation of the system. Agnico has modified how pumping data are collected to reduce potential for human error during collection of pumping data.

Daily Average Precipitation for Meadowbank Site

Monthly Ave Precipitation	MB 2013	MB 2014	MB 2015	MB 2016	MB 2017	MB 2018	MB 2019
Jan	0.00	0.24	0.97	0.45	0.61	0.58	0.30
Feb	0.00	0.11	0.63	0.18	0.20	0.25	0.18
Mar	0.00	0.11	1.10	0.23	0.57	1.36	1.08
Avr	0.00	0.20	0.38	0.64	0.73	0.24	0.15
May	0.00	0.71	0.55	0.24	0.83	0.49	0.58
Jun	0.60	0.18	1.56	0.67	1.19	0.41	1.74
Jul	0.79	1.41	1.91	0.65	0.73	0.54	2.62
Aug	0.85	0.94	0.24	2.03	0.74	1.60	2.61
Sep	2.21	0.65	2.24	2.06	0.22	1.01	4.01
Oct	0.42	0.14	0.81	1.01	1.27	0.86	2.28
Nov	0.32	0.08	0.54	1.37	1.63	0.72	0.34
Dec	NA	0.13	0.08	0.32	0.21	0.26	0.36

Monthly Maximum Precipitation for Meadowbank Site

Monthly Max Precipitation	MB 2013	MB 2014	MB 2015	MB 2016	MB 2017	MB 2018	MB 2019
Jan	0.00	3.00	20.30	6.00	2.00	2.60	5.40
Feb	0.00	1.95	12.50	3.00	1.35	0.70	0.60
Mar	0.00	1.05	16.85	2.30	10.20	11.00	6.10
Avr	0.00	3.35	4.45	8.40	9.80	1.63	1.70
May	0.00	11.50	9.80	7.30	14.70	1.90	4.40
Jun	6.00	2.00	9.20	6.95	23.45	9.40	26.10
Jul	8.00	13.40	12.80	9.00	10.65	6.30	27.00
Aug	10.00	9.70	5.50	35.50	9.50	5.50	34.50
Sep	23.00	6.00	18.40	16.60	2.95	4.50	13.7
Oct	4.00	1.11	16.15	4.20	10.50	4.00	11.9
Nov	4.00	8.20	8.80	7.05	13.50	3.80	2.1
Dec	NA	8.10	1.00	2.00	1.90	1.1	2.7



1.1.20 Meadowbank and Whale Tail Commitments Table

References: Appendix 1 – Meadowbank and Whale Tail Commitments

Comment: The formatting in the table makes it difficult to read some of the text. For example, the text in column 3 (Regulator’s comment) often runs into column 4, overlapping with that column’s text. Likewise, text in column 4 (Regulator’s recommendation) is sometimes cut off. It would also be helpful to number the comments for easy reference.

Recommendation 20: Please re-format the table to ensure that all text can be read and comments can be easily referenced.

Agnico Eagle’s Response:

Agnico Eagle acknowledges KIA’s comments and has provided an update Appendix A - Meadowbank and Whale Tail Commitments in Appendix 1 of this responses document.

1.1.21 Whale Tail Dike Construction and Dewatering Monitoring Report - QAQC RDP

References: Appendix 1 – Meadowbank and Whale Tail Commitments, Appendix 19 – Whale Tail 2019 Dike Construction and Dewatering Monitoring Report

Comment: We commented in the review of the 2018 Annual Report that 50% is not a standard value for RPD analysis and we recommended that a standard value (such as 20% recommended by the USEPA) be used for QA/QC purposes, or that Agnico Eagle provide a reference to support use of a 50% RPD for comparison. At that time, Agnico Eagle responded that CCME state that a RPD of 40% for surface water field duplicate samples is acceptable. Thus, the CCME guidance does not appear to support using a 50% RPD comparison.

The 50% standard is again being used in the 2019 Report (Appendix 19), but no reference is provided.

Recommendation 21: Please clarify why 50% is an appropriate standard for RPD analysis of surface water samples, given that both USEPA and CCME recommend lower values.

Agnico Eagle’s Response:

Agnico recognizes this error in internal communication and will use an RPD value of 40% for future surface water quality analyses, according to CCME guidelines.



1.1.22 Water Quality Forecast TSF Reclaim Pond - Meadowbank

References: Appendix 11 – Meadowbank 2019 Water Management Report and Plan Version 8, Appendix C – 2019 Meadowbank Water Quality Forecasting Update, 2.3.1 Measured vs. Forecasted Concentrations

Comment: The forecasting model does not incorporate possible geochemical reactions that could promote metal precipitation of the water column for the North and South Cell TSF Reclaim Ponds. As a result, some forecasted values may be higher than measured values for some parameters (such as total iron and total nickel).

Including metal precipitation in the model would strengthen forecasting calculations.

Recommendation 22: Agnico Eagle should incorporate metal precipitation into the forecasting model for the TSF Reclaim Ponds.

Agnico Eagle's Response:

In the Meadowbank Water Quality Forecasting Update for the 2019 Water Management Plan report, section 4.2.4, the water quality in the pits are forecasted assuming a conservative water/mass balance approach. SNC also performed geochemical equilibrium simulation using the software PHREEQC to assess which parameters could precipitate out of solution and which parameters could remain in solution. The equilibrated solution is then compared against CCME guideline.

In the 2020 annual water quality forecast report, Agnico will continue to use a conservative water/mass balance approach to assess the water quality parameters in the pits and then perform a geochemical equilibrium simulation to evaluate the best case scenario if some of the parameters were to precipitate out of solution.

1.1.23 Water Quality Forecast - Meadowbank

References: Appendix 11 – Meadowbank 2019 Water Management Report and Plan Version 8, Appendix C – 2019 Meadowbank Water Quality Forecasting Update, 2.4.1 Additional Mill Effluent Water Quality Results

Comment: Agnico Eagle states that mill effluent concentrations (not including the Whale Tail contribution) are similar in 2019 to 2015-2018 levels for all parameters except nickel and selenium. In 2019, average nickel concentrations were two orders of magnitude greater than in 2018 (2.661 vs. 0.026 mg/L), while selenium average concentrations were two orders of magnitude smaller than in 2018 (0.007 vs. 0.131 mg/L).



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Table 2-4: Mill Effluent Concentrations Sampled in 2019

PARAMETER	MILL EFFLUENT CONCENTRATION (mg/L)						SOUTH CELL (mg/L)
	Average 2015	Average 2016	Average 2017	Average 2018	Average 2019 w/o Whale tail	Average 2019 Whale tail	Average 2019
Total Cyanide (Cnt)	18.2	9.3	20.4	6.263	11.730	11.780	0.95
Total Aluminum (Al)	0.629	0.326	1.541	2.249	0.394	109.533	0.10
Total Arsenic (As)	0.036	0.026	0.018	0.025	0.034	9.007	0.02
Total Cadmium (Cd)	0.0020	0.0003	0.0072	0.0004	0.0002	0.0035	0.0001
Total Chromium (Cr)	0.002	0.001	0.009	0.005	0.002	3.496	0.001
Total Copper (Cu)	11.0	3.6	5.3	0.161	3.925	9.149	1.61
Total Iron (Fe)	5.9	2.8	6.9	6.533	5.575	401.733	0.42
Total Nickel (Ni)	0.423	0.024	0.982	0.026	2.661	7.664	0.10
Total Selenium (Se)	0.131	0.166	0.076	0.131	0.007	0.143	0.005
Ammonia (NH ₃ -NH ₄)	127	105	79	84	64	75	22.3
Nitrate (NO ₃)	15.9	13.3	12.7	8.978	10.030	12.867	-
Chloride (Cl)	775	558	630	515	660	767	206.3
Fluoride (F)	0.545	0.645	0.335	0.680	0.565	0.297	0.422

What were the possible reasons for these deviations in mill effluent concentrations for nickel and selenium in 2019?

Recommendation 23: Please discuss possible reasons for the deviations from previous year average concentrations measured in mill effluent for nickel and selenium in 2019.

Agnico Eagle's Response:

With regard to Total Nickel concentration in the mill effluent measured in 2019, one sample showed a high concentration of total and dissolved nickel concentration. The higher concentration of nickel present in the mill effluent could be the result of a change in the operating parameters in the mill process plant which created a condition that did not favour the precipitation of nickel.

As for selenium, it is possible that the nature of the ore being processed leached a lower concentration of selenium in the process water.

1.1.24 Water Quality Forecast - Meadowbank

References: Appendix 11 – Meadowbank 2019 Water Management Report and Plan Version 8, Appendix C – 2019 Meadowbank Water Quality Forecasting Update, 6.2 Results Summary and Treatment



Comment: The SNC-Lavalin Water Quality Forecasting Update makes several recommendations, to improve the predictive ability of the model for the Reclaim Pond and Portage and Goose Pits, all of which Agnico Eagle commits to implementing. One of the recommendations is to

“Perform a bench scale water treatment test to evaluate containment removal efficiency using treatment approaches such as lime neutralization, coagulation/flocculation with aluminum sulphate or ferric sulphate, and coagulation/flocculation with proprietary coagulants designed for metal removal as well as alternate treatment options.”

Agnico Eagle should discuss when it plans to test different treatment options, as the preferred approach should be well established prior to closure.

Recommendation 24: Please discuss when different treatment options will be tested for the Reclaim Pond and Portage and Goose Pits.

Agnico Eagle’s Response:

Please refer to response provide in Section 1.1.3 above.

1.1.25 WT Dewatering TSS Exceedance

References: Appendix 19 – Whale Tail 2019 Dike Construction and Dewatering Monitoring Report, 4.2 Dewatering

Comment: Several samples of daily effluent sampling during Whale Tail Lake dewatering exceeded turbidity or TSS limits, but Agnico Eagle considered them isolated events.

On May 29, TSS was estimated at 45 kg, given the change in concentration measured between 9:00 h and 9:50 h (30 to 80 mg/L) and total flow of 500 m³. No possible reason is given for this spike.

On August 18, TSS was recorded at 30 mg/L, above the short-term maximum limit of 22.5 mg/L. Agnico Eagle state that it was “of the opinion that the high result is related to a punctual event given the results before and after August 18”. What is a punctual event?

On October 10, TSS was measured at 91 mg/L (exceeding the short-term limit of 22.5 mg and the MDMER limit of 30 mg/L). On October 28 turbidity was measured at 80.1 NTU (above the short-term limit of 30 NTU), and on October 29 TSS was measured at 26 mg/L (above the short-term limit of 22.5 mg/L). What were the causes for these elevated concentrations in October?

Recommendation 25: Please explain why TSS exceeded limits in May, August and October, and why turbidity exceeded limits in October. Please clarify what a punctual event is.



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Agnico Eagle's Response:

Agnico will refer to the complete explanation found in the follow up report (Appendix 32 of the 2019 Annual Report). Below is a summary of the finding:

- *May 29: The dewatering of Whale Tail North Basin was planned to be stopped on May 29, 2019 to extend the dewatering pipe into a deeper portion of the North Basin to avoid creating a disturbance of the lakebed sediment. The daily readings/samples did not indicate a significant increase in water quality but it is assumed that as the water level decreased a small amount of sediment was being disturbed and entered the dewatering pipe.*
- *August 18: No formal cause identified – punctual event*
- *October 10: After further investigation, it was assessed that the elevated TSS result was related to very high wind and blizzard conditions exposing the pumping area to these elements. Once wind had subsided, TSS levels had decreased significantly.*
- *October 28-29: The Whale Tail Dewatering Discharge effluent was sampled on October 28th, 2019 at 6:40 CT for parameters to be shipped to our external accredited laboratory. In-field turbidity is also completed to follow water quality being discharged. During this sampling turbidity was measured at 15.94 NTU. The subsequent turbidity result taken around 11:30 was found to have increased at 80.10 NTU. The additional internal field turbidity readings are taken during the day to monitor potential variations in the discharge. At that moment strong blizzard conditions prevented further safe sampling from being completed. Additional sampling was completed on October 29th as required. Blizzard conditions had a very significant impact on the discharge as the water source was still in open water condition. With ice conditions increasing the covering of the area, thus reducing exposure, future similar event would not impact water quality in the same manner. Refer to spill follow up for a complete review of the investigation.*

A punctual event is an isolated incident for short duration that was not expected.

1.1.26 Northeast Pond Pumping – Whale Tail

References: Appendix 20 – Whale Tail Serious Harm Mitigation Report

Comment: Water was pumped from the Northeast Pond in August to manage high water levels. During pumping, several ninespine sticklebacks “were impinged and killed on the intake screen of one of two pumps”. DFO was notified and pumping ceased until mitigation measures were put in



place, which consisted of daily inspections of the intake pump and downstream lake area, and moving the pump intake location to limit access by smaller fish.

Did Agnico Eagle consider reducing the flow rate as a mitigation measure (e.g., to below the swimming speed of smaller fish)?

Recommendation 26: Please discuss whether reducing the flow rate (to below the swimming speed of stickleback) would be a feasible mitigation measure to prevent future harm to fish.

Agnico Eagle's Response:

Agnico Eagle acknowledges KIA's recommendation. Flow reduction was one of the possibilities to be used as mitigation measures to prevent further impingements. The initial modification on the actual pumping setup showed to be very efficient in this case. Specifically, an exclusion zone is created around the suction to prevent fish from being drawn into the flow created. Once modifications were done, no further impacts were noted. In 2020, pumping of the Northeast Pond was ongoing and no fish incident were observed and thus, Agnico Eagle is confident that mitigation put in place were efficient.

1.1.27 Meadowbank 2019 Groundwater Management Monitoring Report - QAQC

References: Appendix 46 – Meadowbank 2019 Groundwater Monitoring Report, 2.3 QA/QC

Comment: Agnico Eagle conducted a charge balance calculation to check the accuracy of the groundwater quality analysis, and reported that a calculated error <5% indicates that “the analysis is assumed to be good”. The charge balance results generated 39% samples with <5% error, while 55% had an error between 5-13%, and one sample had an error >13% (44%). They concluded “that the quality of the analytical data is quite good”. However, since more than half of all samples had >5% error, we are concerned that the quality of much of the data is marginal, suggesting that confidence in the results may not be very high.

Recommendation 27: Please explain why the quality of the data is deemed to be good, even though more than 55% of samples did not meet this quality criterion.

Please provide a discussion of the implications low precision groundwater quality data may have on the water quality predictions for the site.

Agnico Eagle's Response:

The observed concentrations are low in the water sampled in the wells. As the charge balance is a relative error calculation between cations and anions concentrations, small deviations in these values can lead to significant differences in charge balance calculation



results. This is the main reason why, for these low-concentration samples, a maximal 15% charge balance error is considered as acceptable. The presence of turbidity in samples may also affect the result of the calculation since some elements might be absorbed on the suspended particles.

1.1.28 Meadowbank 2019 Groundwater Management Monitoring Report

References: Appendix 46 – Meadowbank 2019 Groundwater Monitoring Report, 3.2 Water Quality Results and Criteria

Comment: Agnico Eagle concludes that groundwater samples from well MW-IPD-07 suggest that water quality “does not seem to have been impacted by the in-pit tailings deposition which was started in July 2019 in Goose Pit only”, since many parameters have similar or lower mean annual concentrations as those measured in 2018. However, Agnico Eagle acknowledges that “the Total cyanide value is slightly higher in 2019 than 2018 but the difference is not significant enough for interpretation”.

Based on the results presented in Table 3-5 we are concerned that the increase in cyanide warrants more attention:

Table 3-5: Comparison of mean annual concentrations at MW-IPD-07 for selected parameters

Parameter	Units	2018	2019
Chloride	mg/L	4.85	3.45
Sulphate	mg SO ₄ /L	29.5	23.6
Total arsenic	mg/L	0.00985	0.00495
Total copper	mg/L	0.00025	0.000375
Total cyanide	mg/L	0.00075	0.00175
Total iron	mg/L	1.315	0.4625
Total phosphorus	mg/L	0.075	0.035

The change in total cyanide concentration between 2018 and 2019 represents an 113% increase.



Recommendation 28: Please discuss why there was 113% increase in total cyanide mean annual concentrations in groundwater samples between 2018 and 2019 and whether this indicates an effect of in-pit tailings deposition on groundwater quality.

Agnico Eagle's Response:

The measured total cyanide concentrations at well MW-IPD07 are very low and close to the detection limit (DL) of 0,001 mg/L. The four measured values in 2017-2018 were between below DL and 0,003 mg/L. The most recent total cyanide concentration value obtained for the 2019 October sampling campaign was below DL. Such variability close to the DL might be due to the analytical method inaccuracy at such low concentrations.

With regards to a potential effect of in-pit deposition on groundwater quality, it not possible to date to identify trends for the following reasons:

- *More than two years of monitoring results are required to identify trends, if any.*
- *If an effect of the in-pit deposition was to be identified, it would impact several chemical parameters that are specific to tailings porewater quality (i.e. chlorides, sulfates, etc.) and not only Total cyanides parameter. The mean annual concentration for chlorides and sulfates (Table 3-5 above) doesn't seem to show an effect of the in-pit deposition between 2017 and 2018.*

1.1.29 Whale Tail Haul Road 2020 Work Plan (lease KVRW15F01; January 2020) – Appendix 4

References: S 4.4 Dust Suppression

Concern: The dust suppression section indicates that under certain conditions "...the road supervisor will arrange mitigation measures as appropriate. This could involve actions such as grading of the road surface, placement of new coarser topping, and/or watering of the road surface" and that "chemical dust suppressants will be only used as a last resort" (pg 10). Dust creation from road traffic is a concern because of road visibility, impacts to fish habitat and/or water quality, and caribou habitat. A best management practices document should be developed that more clearly lays out the rules and mitigation measures that can be used to reduce dust generation from the Whale Tail haul road.

Recommendation 41: Agnico Eagle should develop a road dust best management practices document that lays out the rules and mitigation measures that can be used to reduce dust generation from the Whale Tail haul road.



Agnico Eagle's Response:

The Meadowbank and Whale Tail Air Quality and Dustfall Management Plan (Version 5, March 2020) can be found in Appendix 62 of the 2019 Annual Report. Section 5 of this management plan detailed the road dust best management practices currently undertaken at Meadowbank and Whale Tail. More specifically, Table 4 in section 5 of this management plan detailed the numeric thresholds based on the Alberta Ambient Air Quality Guidelines for dustfall that will be used to determine when mitigation measures need to be initiated.

1.1.30 WT WRSF Seepage

References: Annual Report, Construction Earthworks; Section 3.0; pages 44-48; Appendix 10, pages 4, 11, 21-22; and Appendix C, pages 21-22.

Comment: One of the recommendations by SNC Lavalin regarding the TARP was to raise the alert level more rapidly once an anomaly is detected or inferred. This approach would have likely prevented the August 28th, 2019 discharge of contact water from the WRSF pond to Mammoth Lake. Especially given that ponding of water was noted downstream of the WRSF dam on June 28th, 2019; and on July 7th, 2019 the water level was at 155.86masl, which was 0.46masl higher than the operational water level of 155.4 masl.

Recommendation 44: The KIA would like to know how much more rapidly the alert level has been raised once an anomaly is detected or inferred at the WRSF, especially given the close proximity (ie. 50 metres) to Mammoth Lake.

Agnico Eagle's Response:

Since the events in 2019 at the WRSF Dike, many measures have been taken to ensure early warning of rising water levels in the WRSF pond. A piezometer has been installed to allow constant remote monitoring of the water level, including alarms when critical and maximum operational levels are reached. Additional pumps and pipelines are also in place in case a rapid drawdown of the pond level is required. Frequent inspection of the area is performed by a variety of qualified personnel, especially during periods of high flow to the area (freshet, rainfall events, etc.). Pond operational guidelines integrated with the TARP of each structure have been developed for the lakes and ponds at the Whale Tail site to ensure the freeboard of the Dewatering Dikes and South Whale Tail Diversion Channel is respected. All pond operational guidelines will be included in the next revision of the Whale Tail Water Management Infrastructure OMS Manual.

Agnico would also like to clarify that an authorisation from the designer was obtained in 2019 to temporary store water above the operational level of the structure and that the



incident was not caused by a delay in raising the alert level of the structure. The designer at the time re-evaluated the maximum operational water level after freshet and identify that there was no risk to temporarily increase storage in the structure as the snowmelt period had passed.

1.1.31 Blast Monitoring – Whale Tail

References: Annual Report; Monitoring; Section 8.6 Blast monitoring, pages 390-392; Appendix 53.

Comment: Three (3) of the eight (8) PPV exceedances at Whale Tail were related to higher explosives quantity being used on the same delay for the pre-shear blast. These three exceedances occurred between May 17th and June 15th, 2019.

Recommendation 45: The KIA would like to know how the additional explosives may have impacted water quality in the contact water ponds for the open pits and WRSF. In particular, the ammonia content.

Agnico Eagle's Response:

The amount of additional explosive in these three blast will have a negligible impact on the ammonia content and the water quality as it represents a very small portion of the total explosive content used during a year.

2 Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

2.1 Geotechnical Design Processes

Background / Rationale: With respect to the Whale Tail Pit Project, the 2019 performance of some of the water management structures deviated from their design intent as the four dikes at the Whale Tail site performed below expectations, including:

1. Whale Tail Dike – High seepage rates observed through the foundation.
2. Mammoth Dike – Water levels in Mammoth Lake were above their normal operating levels.
3. Waste Rock Storage Facility (WRSF) Dike – A degradation of the thermal condition in the keytrench of WRSF Dike was observed in the summer of 2019 leading to high seepage and uncontrolled discharge to Mammoth Lake.
4. Northeast Dike – The dike is incapable of diverting non-contact water from the Whale Tail Lake watershed to the Nemo Lake watershed, as intended.

Recommendation 1: AEM identified these performance issues with the dikes and implemented measures to mitigate the concerns. CIRNAC recommends that AEM conduct an assessment of its



design for the Whale Tail Pit Project water retention structures to identify and improve these designs, construction, and operational process that may have contributed to the lower than expected performance at the Whale Tail site.

Agnico Eagle's Response:

Agnico Eagle appreciates CIRNAC's recommendation. As noted in CIRNAC's comment submitted to NIRB, underperformance of some component for a new mining project can be expected and Agnico Eagle was able to successfully identify and mitigate issue in a timely manner. Three of the mentioned above structure (Mammoth, NE and WRSF Dike) now have a Green TARP status (normal operating condition) and data seem to suggest that the mitigation measure at Whale Tail Dike had a positive impact on the seepage rate.

Agnico already performed a lesson learned assessment exercise on water management in winter 2020 to improve operational procedure related to water management. For the design of the expansion project infrastructure, Agnico is leveraging the site experience from the first year of operation in the design and is working closely with the MDRB, designer, third-party reviewers, and internal experts to ensure that the structures will meet their design intent.

2.2 Permafrost Degradation

Background / Rationale: According to the Thermal Monitoring Report 2020, the thermal monitoring results from thermistor number WTD 0+710 U/S for Whale Tail Project indicated permafrost degradation. The report (AEM, March 2020, pg. 7) states:

A degradation of the permafrost at the Eastern abutment of Whale Tail Dike was observed following flooding of the area in the summer of 2019 (0+710 U/S). This was predicted to occur eventually based on the thermal model of the structure but not within such a short timeframe.

Recommendation 2: CIRNAC recommends that AEM continue analysis of the thermal monitoring, mine waste and cover systems, and any permafrost degradation to update their thermal modelling predictions, and the Waste Rock and Tailings Management Plans for Meadowbank and Whale Tail sites. The result should be reported in the 2020 annual report and subsequent annual reports.

Agnico Eagle's Response:

Agnico will continue to report and analyse thermal monitoring results in the Annual Report as per the License condition.



2.3 Water Quality

Background / Rationale: The Whale Tail 2019 Dike Construction and Dewatering Monitoring Report indicated that there were more than four events of exceedance in Total Suspended Solids for May, August and October during Whale Tail Lake Dewatering. These exceedances are in non-compliance with the Water Licence Part D Item 7.

Recommendation 3: CIRNAC recommends that AEM continue to monitor dike dewatering, especially between May and October, to identify the cause of the high TSS, and implement prevention measures to prevent TSS exceedances in the future.

Agnico Eagle's Response:

The dewatering of the Whale Tail North Basin was completed in 2020. Agnico Eagle acknowledges CIRNAC's recommendation and will continue to closely monitor further dewatering activities on site as per the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering (Version 3, May 2020). Agnico is currently looking at the possibility to install an online turbidity reader to increase the response time to a potential TSS exceedance. It should also be noted that identification of the cause for TSS exceedances is part of Agnico Eagle's best practices and results of the investigation is used to put in place preventive measures. In this view, Agnico will refer to the complete explanation found in Section 1.1.25.

3 Environment and Climate Change Canada (ECCC)

3.1.1 Pore Water Sampling

References: Appendix 23 Pore Water Quality Monitoring Program Section 4.1 Sample Collection and Frequency; Section 4.4 Data Analysis

Comment: The Pore Water Quality Monitoring Program (PWQMP) report Section 4.1 states that:

"Once Goose Pit has reached its full storage capacity, pore water samples will be collected directly from the in-pit tailings, once it is safe to do. Agnico will sample in-pit tailings for two

(2) subsequent years. If year two is within 20% or lower of year one, and within our prediction, then no further sampling in-situ will be performed."

The purpose for the pore water sampling is to identify the potential for poor-quality water to migrate upwards through the tailings, primarily in connection with upwelling groundwater. Once the pit is filled and thus acting to reduce the hydraulic head of the groundwater, this will limit the potential for groundwater to flow into the bottom of the pit. It is not clear how far ahead of the



pit reaching its final water fill elevation that the tailings deposition will be finished. If there is still the potential for groundwater upwelling to move pore water upwards during pit re-watering, the monitoring should continue. Two years of such monitoring may not be sufficient to identify changes and impacts.

Section 4.4 Data Analysis notes that the chemistry of the tailings effluent pore water and reclaim water will be compared to Water Licence effluent limits, to identify potential risks for impacts to biota during closure and post closure. Acknowledging that there will be a delay in obtaining in situ pore water quality data, it would be useful to outline how that data will be used. The front-end information will help with flagging parameters of concern, but the purpose of the monitoring program is to identify the risk to biota at closure; that will require ongoing monitoring of pore water quality and movement, and a focus on changes in chemistry at the tailings-water interface.

Recommendation 4: ECCC recommends that the proponent base the duration of pore water monitoring on the potential for further movement of contaminants, as well as monitoring results, rather than a fixed time frame.

ECCC recommends that the PWQMP include a description of the purpose and data analysis for the future in situ pore water monitoring data.

Agnico Eagle's Response:

Agnico Eagle agrees with ECCC that the monitoring should be based on expected conditions and not a fixed timeframe. The sampling program will only stop if water quality is meeting the prediction and a significant (i.e. 20% or more) decreases in constituent concentrations are observed in the pit. If there is only a small decrease in concentrations (i.e. 10%), or conditions deviate from the prediction, then monitoring will continue.

As noted in the Pore Water Quality Sampling Plan, Section 3.1, the worst-case water quality that could be in the pit will be the mill effluent. This lower end bracket of water quality will provide the earliest possible indication of water quality in the pit as geochemical weathering of the tailings will not occur underwater. Any upwelling of porewater by groundwater will only be at a lower concentration than the mill effluent water quality.

The pit will be full prior to the installation of any instrumentation in the pit that can sample porewater directly. As a result, the hydraulic head is expected to be at a steady state once in-situ sampling begins and the in-situ sampling program is unlikely to miss potential water quality risks.



3.1.2 Monitoring Results at ST-16

References: Meadowbank Gold Project 2019 Annual Report Section 8.5.3.1.7 Portage Rock Storage Facility (ST-16) Table 8-19 (page 225)

Comment: Table 8-19 provides a compilation of chemistry for station ST-16, which is the sump adjacent to NP-2 Lake. ECCC has the following points for clarification for the data:

1. It appears that Total Dissolved Solids (TDS) and Total Suspended Solids (TSS) results have been transposed. Confirmation of this is requested, or if that has not happened, then an explanation for the very high TSS values.
2. Total Organic Carbon (TOC) results for 2019 are lower than the Dissolved Organic Carbon (DOC) values. ECCC requests confirmation of these results.
3. Total Aluminum has been averaged for 2019, and it appears the result is reported in ug/L rather than mg/L. The proponent should confirm or corrected these values.
4. The 2018 results for Total and Dissolved Manganese appear to represent ug/L rather than mg/L. The proponent should confirm or correct these values.

Recommendation 5: ECCC requests clarification or correction of the data anomalies identified for Table 8-19.

Agnico Eagle's Response:

Agnico Eagle will pay closer attention to reporting values in the 2020 annual report. Below is the explanation for the four items highlighted by ECCC:

- 1. After review, Agnico Eagle confirms that Total Dissolved Solids (TDS) and Total Suspended Solids (TSS) results have been transposed in Table 8-19. This will be corrected in the 2020 Annual Report.*
- 2. Agnico Eagle reviewed the laboratory certificates for the three samples taken in 2019 and confirms that results from Total Organic Carbon (TOC) results are lower than the Dissolved Organic Carbon (DOC) values.*
- 3. Total Aluminum average for 2019 is 0.022167 mg/L. This will be corrected in the 2020 Annual Report.*



4. The 2018 results for Total and Dissolved Manganese were miss reported. The average for Total Manganese should be 0.0535 mg/L and the one for Dissolved Manganese should be 0.0451 mg/L. This will be corrected in the 2020 Annual Report.

3.1.3 Recommendation(s) for future groundwater monitoring

References: Meadowbank Gold Project 2019 Groundwater Monitoring Report

Comment: Section 6.2 (Recommendations for future groundwater monitoring) provides a number of technical recommendations for future groundwater monitoring

Recommendation 6: ECCC recommends that the proponent include a discussion of whether the recommendations provided in Section 6.2 (Recommendations for future groundwater monitoring) of the 2019 Groundwater Monitoring report will be implemented in the next groundwater monitoring report.

Agnico Eagle's Response:

Section 6.2 (Recommendations for future groundwater monitoring) mainly provides equipment requirements for the 2020 groundwater sampling campaign. As such, Agnico will implement most of these recommendations for the 2020 groundwater sampling campaign. As for the last recommendation about additional parameters to analyse, the addition of new parameters to the existing list of analysed parameters would only be done to investigate specific issues if arising. For the 2020 groundwater sampling campaign the analytical parameter will be the same as in 2019.

3.1.4 References to Canadian Council of the Ministers (CCME) of the Environment Guidelines

References: 2019 Water Management Report and Plan, Section; 2.3 North and South Cell TSF Reclaim Ponds (ST-21); 2.3.1 Measured vs Forecasted Concentrations

Comment: This section variously refers to the CCME guidelines as “discharge guidelines” or criteria for discharges. Table 2-2 refers to the CCME guideline for copper as a discharge criterion (footnote 4), and refers to the various parameters’ CCME guidelines as a “limit” in the text, on the figures, and in Table 2-3.

Recommendation 7: For clarity, the proponent should refer to the CCME guidelines as guidelines rather than limits or criteria, which implies a regulatory basis. As guidelines or objectives, the CCME concentrations provide a yardstick for the evaluation of parameters of concern. Also, they should be kept in the context of being receiving environment guidelines.



Agnico Eagle's Response:

Agnico Eagle will ensure the CCME guidelines are referred to as guidelines in future Annual Reports.

3.1.5 Reclaim Water Treatment

References: 2019 Water Management Report and Plan V. 8 Appendix C. Meadowbank Water Quality Forecasting Update for the 2019 Water Management Plan, SNC Lavalin, Apr. 2020

Comment: Section 3.2 of the Forecasting Update notes that “The main source of cyanide, copper, iron, selenium, other metals, ammonia (i.e. via the hydrolysis of cyanate), nitrate, chloride, sulfates and total dissolved solids in the TSF Reclaim Pond is the Mill Effluent.” Many of the parameters were observed to be substantially higher than originally predicted due to the geochemistry of the Amaruq ore, and the mill effluent concentrations have been adjusted to account for this. The modeled predictions presented in Section 4.3 indicate that treatment may be required for heavy metals, fluoride, arsenic, selenium and total nitrogen, as well as for suspended solids. The report states that treatment could be done of water in the pit at the end of tailings deposition, or in the TSF South Cell Reclaim Pond.

Treatment processes may involve the use of reagents (e.g. aluminum sulphate, ferric sulphate) which can increase sulphate, which is already predicted to exceed objectives at closure. If the full volume of reclaim water is to be treated at closure, then treatment residuals should be factored into the predicted pit water quality to be managed. The proposed use of ion exchange treatment to remove TDS (chloride, sulphate) is suggested in the report as an option at closure. However, this technology is costly and has volume limitations. Planning for treatment at closure may have obstacles that could be reduced with earlier treatment implementation.

Figure 4.21 outlines the Water Treatment Decision Flow Process for implementing treatment, and includes the option of treating reclaimed water during operations. This has not been presented in the 2019 Annual Report as an option being actively considered. However, it would make sense in respect of reducing contaminants at source rather than treating much larger water volumes later at closure. In addition, given that the Amaruq expansion will be proceeding there may be higher loadings of the contaminants of concern over the remaining life of mine, and earlier treatment reductions would reduce that environmental liability.

Recommendation 8: ECCC requests that the proponent provide a discussion of the feasibility of treating reclaimed water earlier in the mine operations, e.g. segregating high-concentration water and treating to remove contaminants.



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Agnico Eagle's Response:

The main contaminants that reports to the reclaim water comes from the processing of the ore in the mill. Thus, the focus of treatment should be on the mill effluent discharged with the tailings to the pit.

As part of the development of the treatment strategy for closure, one avenue that could be explored is to evaluate the feasibility of performing treatment during operation. Treatment of the mill effluent could be considered using existing equipment in the mill. Treatment of the reclaim water stored in the pit could also be considered.

However, before moving forward with such an approach, bench scale testing should be planned and undertaken at site to evaluate suitable water treatment approach that could be implemented during operation and/or at closure.

A more detailed discussion on water treatment of the mill effluent, and any other individual streams, during operation shall be provided in the 2020 Annual Forecast Report.

3.1.6 CCME Guidelines – Dissolved Manganese and Zinc

References: Appendix 22 Meadowbank predicted water quantity and quality (2012-2019)

Comment: The proponent has provided predictions for the dissolved form of metals for comparison to measured dissolved metals, with reference to the CCME guidelines (for total fractions) for comparison. Dissolved zinc (<http://ceqg-rcqe.ccme.ca/download/en/360>) and manganese (<http://ceqg-rcqe.ccme.ca/download/en/361>) guidelines are now available and would be relevant to include in the tables.

Recommendation 9: ECCC recommends including the dissolved guidelines for zinc and manganese in the tables in Appendix 22.

Agnico Eagle's Response:

Agnico Eagle acknowledges ECCC's comment and will included CCME guidelines for dissolved zinc and manganese in the comparison table in next year's report.



Appendix 1

Revised Appendix A Commitment Table 2019



Authority	Site	Document reference to comments	Regulator's Comment	Regulator's Recommendation	Agnico's Response to initial comments	Additional information requested by NIRB following call on December 16, 2019	2019 Annual Report Section where comments are addressed
CIIRNAC	MBK	2018 Annual Report Section 4.2.1	Turn Lake water levels are not being monitored. As per Section 4.2.1, AEM indicated Turn Lake water level monitoring will be initiated during the 2019 open water season and the results will be reported and compared to predictions in the next annual report.	CIRNAC looks forward to reviewing the 2019 Annual Report to confirm changes in Turn Lake water levels	Agnico will provide Turn Lake water level monitoring in the 2019 Annual Report.		Section 4.2.1 of the 2019 Annual Report
CIIRNAC	MBK/WT	2018 Annual Report	<p>CIRNAC recommended that AEM include a meaningful discussion of the results from the permafrost monitoring in the Annual Report. FEIS predictions should be compared with monitoring results and be clearly presented. AEM should present the updated modeling supporting their conclusions that the conceptual plans for thermal encapsulation of the Tailing Storage Facility and the Waste Rock Storage Facility remain effective to prevent and control deleterious seepage over long term. Finally, if results show discrepancies from the predicted values, AEM should discuss the management actions that should be implemented to address the risk.</p> <p>AEM notes the following in Section 7-2 of the Waste Rock and Tailings Management Plan (Appendix 17 of the 2018 Annual Report): “Mandate with consultant ongoing - more details to be provide in future annual report”.</p>	CIRNAC re-iterates the importance of implementing the abovementioned recommendations and looks forward to reviewing the requested information in the 2019 Annual Report.	<p>As mentioned in Section 8.2 of the Waste Rock and Tailings Management Plan the capping of the both Cell of the Tailings Storage Facility (TSF) are currently active with ongoing tailings deposition. The current thermistors installed in the TSF allow the gathering of data on the thermal regime of the tailings during operation. Progressive capping is ongoing, but its surface area is limited and there are few thermistors installed within the capping. As a result, limited data is available on the tailings thermal regime when capped. A capping study will be undertaken to implement the CIRNAC recommendation at closure once more instruments will have been installed in the TSF capping. In the 2019 annual report a meaningful discussion on the thermal data during operation will be included and compared to the conceptual thermal modelling results.</p> <p>As mentioned in Section 8.3 of the Waste Rock and Tailings Management Plan a study is ongoing with a consultant to calibrate the thermal model and develop an instrumentation plan to assess the cover performance of the Whale Tail WRSF. This mandate is soon over and Agnico will initiate in 2019 a similar approach at the Meadowbank RSF to review the available data, compare thermal results to FEIS prediction, identify data gap and propose new instruments location for closure. This mandate is expecting to be recurrent over the year with the ultimate objective of updating the modelling supporting the conclusion that the cover design is effective to comply with the water quality objective of the project at closure. Initial data from this study should be available to be presented in the 2019 annual report.</p>		2019 Annual Report Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail
CIIRNAC	MBK	2018 Annual Report	CIRNAC recommended AEM provide more information on the nature and extent of research efforts, results of the research and a discussion of how the proposed cover design has been influenced by these results. In Section 5.4.1 of the 2018 Annual Report, AEM indicates that in 2018, the Research Institute in Mine and Environment (RIME) continued to collect and analyze data on the cover field trial and on the long-term performance of ultramafic rockfill as a cover material. Studies are ongoing and no additional data are available to be shared at the moment. Publications are expected in 2019.	CIRNAC re-iterates the importance of implementing the abovementioned recommendations and looks forward to reviewing results of the cover trials in the 2019 Annual Report.	Study with the RIME is ongoing and publications are expected to be available in 2019. The 2019 annual report will provide reference to literature published by the RIME on this subject in 2019 (if any). Agnico will also comment in the 2019 annual report how these results will influence the cover design of the TSF and RSF.		2019 Annual Report Section 5.4.1
CIIRNAC	MBK	2018 Annual Report	<p>CIRNAC recommended that 2018 updates to Interim Closure and Reclamation Plan (ICRP) include more details on progressive reclamation such as: areas of Tailings Storage Facility (TSF) and Waste Rock Storage Facility (WRSF) facilities covered in 2017 and total areas to date, along with the volumes associate with these areas, amongst others.</p> <p>In the 2018 Annual Report, AEM noted that the 2018 ICRP update was submitted to NWB on August 22, 2018. Following the authorities’ review period of this plan, no comments were received regarding the current CIRNAC’s recommendation. In the 2018 updated version, information regarding the progressive closure of TSF and WRSF can be found in Section 6.2 of the report, however it does not include all the details requested by CIRNAC. Agnico may consider adding some of this information in the next ICRP revision. The annual report will continue to include detailed progressive closure completed during the year.</p>	CIRNAC recommends that the next ICRP revision, including updates requested by CIRNAC, be presented in the 2019 Annual Report.	<p>Agnico acknowledges CIRNAC’s comment and may consider adding some of this information in the next ICRP update. However, this updated version including additional information on progressive closure may not be provide via the 2019 Annual Report.</p> <p>In a mean time, future annual report will continue to include detailed progressive closure completed during the year.</p>		Appendix 55 - ICRP Update
CIIRNAC	MBK/WT	2018 Annual Report	CIRNAC recommended that AEM provide a summary statement on findings of all inspections and if and where necessary, provide a list of issues that have been identified and the status of these issues. AEM in Section 11.5 of the 2018 Annual Report provided summary statements on findings for some (e.g. TC, ECCC, CIRNAC), but not all, of the inspections that occurred during the year, notably no comment on NIRB inspection findings.	CIRNAC recommends that in addition to providing the list of items discussed as per Section 11.5.1.4 of the 2018 Annual Report, AEM should provide high level statements as to whether or not there are any issues associated with each of the areas of discussion.	<p>It is Agnico’s intent to continue to refer directly to the NIRB Monitoring Report to capture the whole essence of the interpretation of the report. Also, the NIRB letter: ‘2017-18 Annual Monitoring Report for the Meadowbank Gold Project and the Whale Tail Pit Project with Board’s Recommendations’, received each year, already include a summary of the findings that resulted from monitoring of the mine. Agnico provided in Appendix 54 of the 2018 Annual Report the responses to the NIRB recommendations.</p> <p>Agnico has improved Section 11.5 Inspection and Compliances Report in the 2018 Annual Report. It is also Agnico’s belief that a summary of the inspections completed in the year is already provided. However, Agnico will continue to improve information reported in this section in future annual reports, if it’s possible to extract the information from the report without removing the context of the findings.</p>		Section 11.5 of the 2019 Annual Report



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CIIRNAC	MBK	2018 Annual Report	<p>Evaluation of Impact Predictions - CIRNAC recommended that AEM include a temporal analysis identifying trends over time in the data interpretation.</p> <p>In its response to this comment, AEM indicated the following: “It is Agnico’s belief that a comprehensive update is not warranted as part as the PEAMP. According to the proponent’s responsibilities identified under Appendix D of the Project Certificate, examinations are provided as required in individual monitoring reports. As such, trending analyses would also not be required under the aforementioned responsibilities. Agnico is confident that these discussions reference any potential impacts observed. In addition, the annual report is based on an extensive review of the FEIS throughout its content.</p> <p>Nonetheless, Agnico, is committed on improving identification of noted effects within the PEAMP summary report in this section and intends to highlight any trends observed for VEC’s exceeding predictions with the 2018 Annual report and moving forward.” AEM’s interpretation of Appendix D of the Project Certificate is to discuss trends only when impacts are observed, and thus AEM believes that the condition is being met and further interpretation is not necessary.</p>	CIRNAC recommends that AEM include a temporal analysis identifying trends over time in the data interpretation.	<p>Agnico will reiterates its position and is available to discuss the current concern with CIRNAC and NIRB at their convenience.</p> <p>It is Agnico’s belief that a comprehensive update is not warranted as part as the PEAMP. According to the proponent’s responsibilities identified under Appendix D of the Project Certificate, examinations are provided as required in individual monitoring reports. As such, trending analyses would also not be required under the aforementioned responsibilities. Agnico is confident that these discussions reference any potential impacts observed.</p> <p>In addition, the annual report is based on an extensive review of the FEIS throughout its content and individual monitoring report provided in appendix. Agnico’s interpretation of impact, trending and comparay to FEIS are provide for, among other, water quality, level and quantity, wildlife, noise, air, socioeconomic.</p> <p>Nonetheless, Agnico, is committed on improving identification of noted effects within the PEAMP summary report in this section and intends to highlight any trends observed for VEC’s exceeding predictions with the 2019 Annual report and moving forward.</p>		Section 12 of the 2019 Annual Report
CIIRNAC	MBK	2018 Annual Report	<p>CIRNAC recommended that AEM analyze the thermistor monitoring results against early thermal modelling predictions and update its Waste Rock and Tailings Management Plans if large discrepancies are observed between the monitoring results and model predictions in the 2018 Annual Report. AEM acknowledged CIRNAC’s comment and indicated that this task has been assigned to the consultant and that the requested information will be provided in the 2019 Annual Report.</p>	CIRNAC re-iterates the importance of implementing the abovementioned recommendations and looks forward to reviewing these results in the 2019 Annual Report	Agnico will refer to answer to comment 3.1.2 above.		2019 Annual Report Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail
CIIRNAC	MBK/WT	Section 3 of 2018 Annual Report, Appendix 7 and 11	<p>Golder 2018 Geotechnical inspections continue to flag some areas of potential concern related to some site features both on the mine sites and at off-site locations such as the all-weather road and at the Baker Fuel facility. In particular, CIRNAC notes that Golder has recommended that “... consideration should be given to expand AEM’s monitoring program to include all culverts and bridges along the road in order to assess whether they are providing adequate capacity during the freshet and following large precipitation events”.</p> <p>In the cases of bridges and culverts, these concerns have been raised before and AEM’s ongoing response to these concerns is that the bridges and culverts are being monitored on a regular basis as required. In other cases, concerns are new items and commitments have been made to assess and address them including:</p> <ol style="list-style-type: none">1. Standing water downstream Saddle Dam 3 and Saddle Dam 4;2. Unstable blocks and loose rocks at Quarries 3, 7, 9, 10, 12, 16 and 23;3. North access Esker 3 ramp undercut;4. Granular fill erosion off geomembrane at Tanks 1, 3, 4, 5 at Baker Lake;5. 300 mm hole in geomembrane at Tank 1 at Baker Lake;6. Bituminous geomembrane liner damage at 20 Jet A fuel tanks; <p>AEM has provided responses to all items noted in Appendix 11. While responses have been provided to issues raised as noted above, in the case of those associated with repeat inspection recommendations, it is concerning when items are flagged on a year over year basis, without any actual field work being done to correct the concern. In the case of the new items raised, some of the responses are conditional and lack specific commitments for action or when actions may be undertaken.</p>	<p>CIRNAC requests that AEM address the continued ongoing issues of culvert obstruction, blockage, or not being properly located. If continued monitoring is proposed, AEM should undertake a risk assessment of potential impacts associated with failure of the culverts during freshet or major storm events.</p> <p>CIRNAC also requests that no unsafe hazard conditions resulting from physical works (e.g., unsafe slopes, loose rocks, etc.) be left “as-is” once such conditions have been identified. AEM should list all such conditions and set out a timeline for addressing them.</p>	<p>The recommendation from the annual report are listed with a priority level (P1 to P4). Some of these recommendations are high priority item (P1, P2) while other are best management practices or event where a single occurrence of deficiency would not result in any impact (P3, P4). For this reason, it is possible that some recommendations get repeated from year to year without representing a concern to safety of worker or to the environment.</p> <p>It is Agnico’s opinion that the implementation plan is sufficient to address the recommendation of the annual geotechnical inspection and that no unmanageable unsafe condition is left outstanding from the 2018 annual inspection. For future annual inspection, Agnico will add the priority level of the recommendation in the implementation plan with a timeline.</p>		Implementation Plans in Appendix 15 and 16 of the 2019 Annual Report for priority level explanations
CIIRNAC	WT	NIRB Project Certificate No. 008, Conditions 48; 2018 Annual Report, Section 11.11.11	<p>Pursuant to Condition 48 of the Whale Tail NIRB Project Certificate (No. 008), AEM is required to submit staff schedule forecasts to the NIRB six months prior to the commencement of each project phase (i.e., construction, operations, and closure). AEM states that its Construction Phase staff schedule was sent to the NIRB on May 2, 2018 and the schedule will be updated before the project's Operations Phase.</p>	<p>To streamline the submission of staff schedule forecasts, future annual reports should include copies or hyperlinks to staff schedule forecasts to demonstrate compliance with the project certificate.</p>	<p>Agnico acknowledge CIRNAC comment. If a staff schedule update is required as per Condition 48, the staff schedule will be hyperlinked or included in the annual report for the respective year.</p>		Appendix 54 - Operation Staff Schedule



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CIIRNAC	WT	NIRB Project Certificate No. 008, Conditions 49; 2018 Annual Report, Section 11.11.12	Pursuant to Condition 49 of the Whale Tail NIRB Project Certificate (No. 008), AEM is required to collaborate with the Government of Nunavut's Career Development Officer, Regional Manager of Career Development, and Director of Career Development on a range of career development related topics. At a minimum, semi-annual calls are to be held and summary information provided to the NIRB in annual report submissions. In its annual report, AEM states it will initiate discussions with the Government of Nunavut on the requirements of this project certificate condition in 2019.	To ensure compliance with the project certificate, CIRNAC recommends that AEM provide written summaries of meetings it has with the Government of Nunavut on career development initiatives specific Nunavummiut in future annual report submissions.	Agnico will include a description of the points of discussion and outcomes from the semi-annual calls in the annual reports.		Section 11.11.1.2 of the 2019 Annual Report - Semi-Annual Call with Regulators. The meeting is also registered in the NWB Consultations and Engagements table (Appendix 74 to the 2019 Annual Report)
CIIRNAC	WT	NIRB Project Certificate No. 008, Conditions 61; 2018 Annual Report, Section 11.11.6	Pursuant to Condition 61 of the Whale Tail NIRB Project Certificate (No. 008), AEM is to "collaborate with the Government of Nunavut and the Nunavut Housing Corporation to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options in the Kivalliq region. The Proponent should provide access to financial literacy, financial planning, and personal budgeting as part of the regular Life Skills Training and/or Career Path Program." In its annual report, AEM indicates that it has been unsuccessful in collaborating with the Nunavut Housing Corporation to date but it will continue to reach out to this organization to address home ownership and affordable housing options.	To ensure compliance with the project certificate, CIRNAC recommends that AEM to continue its efforts to coordinate with relevant Government of Nunavut departments on training efforts. Measures taken to address this project certificate condition should be summarized in future annual reports.	Agnico acknowledges CIRNAC's comment and will continue to make efforts to comply with Condition 61.		Section 11.11.1.2 of the 2019 Annual Report - Semi-Annual Call with Regulators
CIRNAC	MBK	Section 3.1, Meadowbank Gold Project 2018 Annual Report; Appendix 7, appendix 8, Appendix 17	High seepage rate through the bedrock foundation of the Central Dike of the Tailings Storage Facility (TSF), observed since 2014, persisted in 2018. The Second Portage Fault under the Central Dike was identified by AEM as a potential pathway for the seepage. Tension cracks have been observed along the Stormwater Dike of the TSF since 2016. These two issues have been flagged with yellow Trigger Action Response Plan (TARP) levels. In addition, in 2018, the Meadowbank Dikes Review Board noted the unusual linear settlement features in the tailings surface and determined that further study and explanation would be required. CIRNAC notes the potential structure integrity concerns associated with the referenced issues and echoes the technical recommendations made in the 2018 Annual Geotechnical Inspection Report and the Meadowbank Dikes Review Board Report #24 on these issues.	CIRNAC recommends that the recommendations made in the 2018 Annual Geotechnical Inspection Report and the Meadowbank Dikes Review Board Report #24 be implemented and the results be reported and discussed in the 2019 Annual Report.	Response to the MDRB #24 comments were provided to the MDRB and they were satisfied with Agnico's plan to address their recommendations. MDRB #25 is scheduled late November and an update on the situation will be presented to the MDRB. This information will be made available in the 2019 annual report.		Appendix 13 and 14 - MDRB #25 Reports
CIRNAC	MBK	Section 3.1 and 5.1, Meadowbank Gold Project 2018 Annual Report; Appendix 1	<p>The 2018 Annual Report stated "In the summer of 2017 the water in the downstream pond became orange and this was associated with rapid temperature variation. This event was investigated by chemical analysis and was found to be caused by the precipitation of iron oxide from bacterial process. As predicted this event re-occurred in the summer of 2018."</p> <p>Monthly water quality monitoring data presented in Table 8.36 in Appendix 1 showed elevated sulfate and total iron concentrations in the Central Dike seepage. Since the seepage was believed to be originated from the TSF, these results would suggest iron sulfide mineral oxidation in the TSF. Both iron sulfide oxidation and ferric iron precipitation reactions produce acid and could result in the formation of acid rack drainage and metal leaching (ARD/ML) if the acid is not neutralized completely, which could happen if the neutralization potentials of the tailings and along the seepage pathways are low or become depleted.</p> <p>Table 5.3 presented the results of four tests conducted in 2018 on the acid base accounting (ABA) and metal leaching of the tailings. Strong acidic condition was produced in all the tests (i.e., pH values ranged from 1.54 to 1.79). One test conducted in October 2018 resulted in an arsenic leaching concentration of 0.67 mg/L, exceeding the MDMER guideline limit. No leaching data on lead was provided.</p> <p>Monthly tailings reclaim pond water quality monitoring results presented in Table 8.25 in Appendix 1 also showed elevated sulfate and total iron concentrations. All</p>	CIRNAC recommends that the quantity and quality of the Central Dike seepage be closely monitored and that proactive measures be taken to mitigate ARD/ML formation in the TSF and to reduce or stop the Central Dike seepage	<p>Water was tested in 2017 and 2018 and all parameters were confirming the hypothesis that the orange coloration was a bacterial process and not ARD/ML. No pH reduction was measured in the Central Dike seepage water. Testing of this water continues in 2019 with a similar program to continue to confirm the hypothesis of a bacterial process. The Central Dike seepage quantity and quality is monitored minimally on a monthly basis as per the requirement of the Water License 2AM-MEA1526 Part E Item 13. With the beginning of tailings deposition in Goose Pit, it is anticipated the South Cell will be emptied of standing water by the Fall 2020. Initial data suggests when this water level is kept as low as possible it results in a significant reduction in seepage through the dike. Update regarding the Central Dike Seepage will continue to be provided via the annual report along with the monitoring results required by the Water License.</p> <p>Agnico will continue to perform, when possible, the progressive capping of the TSF which is a mitigation measure the ARD-ML formation in the TSF.</p>		<p>2019 Annual Report Section 3.1.1.1.c</p> <p>Details in Meadowbank Water Management Plan Section 3.1.11.4 (Appendix 11)</p>



			monthly copper concentrations, with the exception of December 2018, exceeded the MDMER guideline limit. Given the above observations, CIRNAC considers that there exists a potential risk of deterioration in water quality of the Central Dike seepage in the future if no mitigation measure is taken.				
CIRNAC	MBK	Section 4.2.1, Meadowbank Gold Project 2018 Annual Report	In the review of the 2017 Annual Report of the Meadowbank Gold Project, CIRNAC noted that no monitoring results on the water level of Turn Lake were presented and requested that the Proponent do so in its 2018 Annual Report. Section 4.2.1 of the 2018 Annual Report indicated that Turn Lake water level monitoring would be initiated during the 2019 open water season and the results would be reported and compared to predictions in the next annual report.	CIRNAC recommends that AEM fulfil this commitment and present the results in the 2019 Annual Report.	Agnico will provide Turn Lake water level monitoring in the 2019 Annual Report		Section 4.2.1 of the 2019 Annual Report
CIRNAC	MBK	Section 4.4.3, Meadowbank Gold Project 2018 Annual Report; Appendix 15; Appendix C, Appendix 8	<p>Water License 2AM-MEA1526 Part E, Item 9 states: “The Licensee shall, on an annual basis during Operations, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the predicted 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.”</p> <p>Data presented in the 2018 Annual Report showed that for a number of parameters, the differences between the measured results and the predicted values, even those under the Probable Poor End scenario, were greater than 20%. Furthermore, the results of the current water quality model prediction indicated that the concentrations of some parameters (e.g., aluminium, arsenic, cadmium, chromium, copper, iron, nickel, selenium, fluoride, mercury, lead, etc.) of the pit water would exceed the CCME water quality guidelines or other site-specific criteria and may require treatments prior to dike breaching. Given the inconsistencies observed between the measured and the predicted values, it is possible that pit water quality at closure could be even lower than currently predicted.</p> <p>A brief discussion was provided in the 2018 Annual Report on the possible causes, the potential implications, and various mitigation measures and treatment options. However, given the significance of the differences and the potential implications (e.g., costly treatment of large quality of water in the pits in the closure and post-closure phases), CIRNAC considers it important that the model predictions be updated, and appropriate proactive mitigation measures be identified and implemented to prevent or reduce any adverse impact on water quality and/or avoid any prohibitive closure cost.</p>	CIRNAC recommends that the water quality predictions be updated, that appropriate proactive mitigation measures be identified, and implemented by the Licensee, and that the results be discussed in the 2019 Annual Report.	The comparison presented in Section 4.4.3 of the 2018 Annual Report compared the actual water volume and quality measurements against the prediction that was carried out at the start of the project back in 2008 (baseline), as per Water License 2AM-MEA1526 Part E, Item 9. Section 2.6 of the Meadowbank Water Quality Forecasting Update for the 2018 Water Management Plan (Appendix C of the 2018 Annual Report Appendix 8) presented key parameters that were measured over time and data were overlaid with the forecasted concentrations from the previous year’s model. The model presented in the Water Quality Forecasting will continue to be updated on an annual basis. The 2019 water quality forecast will be an update of the “prediction” of what could be observed in the pit water at the end of deposition. In 2019, monitoring data will continue to be compared to the baseline prediction and the water quality prediction model. Agnico acknowledges CIRNAC’s recommendation and will provide in the 2019 Annual Report a complete discussion on the comparison’s finding for both the baseline and 2019 forecast model.		Section 4.4.3 of the 2019 Annual Report
CIRNAC	MBK	Section 5.4, Meadowbank Gold Project 2018 Annual Report; Appendix 17; Appendix 7; Appendix 21	<p>Thermal monitoring results presented in the 2018 Annual Report showed that the freeze-back of waste rocks and tailings was a complex process and the thickness of the thermal active layer varied from 1.5 to 4.0 meters at different locations. Although additional laboratory and field based collaborative studies (i.e., with the Research Institute in Mine and Environment) have been conducted since 2014, no information or result was provided in the 2018 Annual Report.</p> <p>CIRNAC notes that promoting and maintaining permafrost condition has been the principle strategy for preventing or mitigating ARD/ML formation in the Waste Rock Storage Facilities (WRSF) and the TSF at Meadowbank. It involves thermal encapsulation of potentially acid generating (PAG) waste rocks or tailings with a cover of non-potential acid generating (Non-PAG) waste rocks. To be effective, the cover needs be thicker than the thermal active layer so that a permafrost condition will be maintained below the cover. It is important that the maximum thickness of the thermal active layer be reliably obtained or predicted for the WRSF and the RSF where the thermal encapsulation strategy will be applied.</p> <p>Given that the WRSF and a portion of the TSF at Meadowbank are in the closure phase, CIRNAC considers it important that AEM validate and update its thermal models with thermal monitoring data and when necessary, strengthen its thermal</p>	CIRNAC recommends that AEM validate and update its thermal models with thermal monitoring data and present the results in the 2019 Annual Report.	<p>As mentioned in Section 8.2 of the Waste Rock and Tailings Management Plan the capping of the both cells of the Tailings Storage Facility (TSF) are currently active with ongoing tailings deposition. The current thermistors installed in the TSF allows the gathering of data on the thermal regime of the tailings during operation. Progressive capping is ongoing, but its surface area is limited and there are few thermistors installed within the capping. As a result, limited data is available on the tailings thermal regime when capped. A capping study will be undertaken to implement the CIRNAC recommendation at closure once more instruments will have been installed in the TSF capping. In the 2019 annual report a meaningful discussion on the thermal data during operation will be included and compared to the conceptual thermal modelling results.</p> <p>As mentioned in Section 8.3 of the Waste Rock and Tailings Management Plan a study is ongoing with a consultant to calibrate the thermal model and develop an instrumentation plan to assess the cover performance of the Amaruq WRSF. This mandate is soon completed and Agnico will initiate in 2019 a similar approach at the Meadowbank Rock Storage Facility to review the available data, compare thermal results to FEIS prediction, identify data gap and propose new instruments location for closure. This mandate is expected to be recurrent over the years with the ultimate objective of updating the modelling supporting the conclusion that the cover design is effective to comply with the water quality objective of the project at closure. Initial data from this study should be available to be presented in the 2019 annual report.</p>		2019 Annual Report Section 5.4.1



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			monitoring networks and/or update its Waste Rock and Tailings Management Plans.				
CIRNAC	MBK/WT	Section 7, Meadowbank Gold Project 2018 Annual Report	<p>Table 7.1 of the 2018 Annual Report indicates that 243 cases of spills were observed, including 26 cases of reportable spills, at Meadowbank in 2019. An examination of Tables 7.2 and 7.3 of the 2018 Annual Report shows that hydraulic oil leak due to hose/pipe failure or “O” ring failure occurred almost daily or once every few days in 2018. The volume of each hydraulic oil spill ranged from 4 to 600 liters, with most falling between 40 and 100 liters.</p> <p>Although the cases of spills in 2018 were lower than in 2017 (i.e., 411 cases) and spills were contained and cleaned and contaminated material disposed to the appropriate area, CIRNAC believes that further improvement can and should be made.</p>	CIRNAC recommends that AEM make further efforts to prevent spill or reduce the number and volume of spills and report such efforts in the 2019 Annual Report.	Agnico acknowledge CIRNAC’s recommendation and will include the requested information in the 2019 annual report.		Section 7 of the 2019 Annual Report
CIRNAC	MBK	Section 9.1.1, Meadowbank Gold Project 2018 Annual Report; Meadowbank Interim Closure and Reclamation Plan (ICRP) – Update 2018, Appendix 51	<p>Progressive reclamation of various components or facilities (e.g., the open pits, the WRSFs, the TSF, and the water management infrastructures) was discussed in the 2018 Annual Report, and the Meadowbank Interim Closure and Reclamation Plan was updated in July 2018.</p> <p>Amendment No.3 to Water License 2AM-MEA1526 for Meadowbank Gold Project was approved in March 2019, authorizing the disposal of tailings into the mined-out open pits at Meadowbank. This amendment would result in significant changes in the planned project activities and consequently, the current progressive reclamation plans for the open pits, the TSF, and certain water management infrastructures will need to be updated to reflect such changes.</p>	CIRNAC recommends that AEM update the Meadowbank Interim Closure and Reclamation Plan in a timely manner so that appropriate progressive reclamation can be planned and implemented.	Agnico Eagle submitted the Meadowbank Interim Closure and Reclamation Plan dated May 29, 2019 to CIRNAC on June 7, 2019 and on July 24, 2019 to the NWB. During the ICRP review process, Agnico has provided responses to CIRNAC’s comments. On October 21, NWB provided to Agnico the approval for this management plan. Action item were identified by the NWB and an updated management plan will be submitted as part of the 2019 Annual Report.		Appendix 55 of the 2019 Annual Report
CIRNAC	WT	Nunavut Water Board Water Licence No. 2AM-WTP1826; Agnico Eagle Meadowbank Gold Project 2018 Annual Report. Section 4.2.2	Whale Tail Lake South Basin, Whale Tail Lake North Basin, and Mammoth Lake water levels were monitored on a weekly basis, during open water season and weather permitting. 2018 water level results were reported as a range and average for each lake.	CIRNAC requests in the 2018 annual report, individual water level measurements are presented for each lake in tabular and graphical form for the NWB to review.	Table and graphic below presented the water level for Whale Tail Lake North Basin, Whale Tail Lake South Basin and Mammoth Lake in 2018. Similar information will be provided in the 2019 Annual Report.		Section 4.2.2 of the 2019 Annual Report
CIRNAC	WT	Nunavut Water Board Water Licence No. 2AM-WTP1826; Agnico Eagle Meadowbank Gold Project 2018 Annual Report Section 8.7.2; Appendix 38 – Whale Tail 2018 Groundwater Management Monitoring report; Agnico Eagle Whale Tail Pit Project Groundwater Monitoring Plan Version 2.1, February 2019; CIRNAC comments on Groundwater Monitoring Plan	CIRNAC appreciates the addition of thermistors AMQ17-1337, AMQ17-1233, AMQ17-1277A and AMQ15-452, between Nemo Lake and Whale Tail Pit, to Groundwater Monitoring Plan Version 2.1.	CIRNAC recommends the Groundwater Monitoring Plan state the thermistors have, at minimum, a quarterly frequency of observations as per Part I Item 15 of the 2AM-WTP1826 water licence, and that the thermistor data is submitted in the Annual Report.	Agnico acknowledges CIRNAC’S recommendation and will add the requested information in the next review of the Groundwater Monitoring Plan.		Appendix 61 - Groundwater Monitoring Plan Section 3.1



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		Version 2.1, March 1, 2019					
CIRNAC	WT	Nunavut Water Board Water Licence No. 2AM-WTP1826; Agnico Eagle Meadowbank Gold Project 2018 Annual Report; Agnico Eagle Whale Tail Pit Project Groundwater Monitoring Plan Version 2.1, February 2019	Due to AEM's high reliance on seeps to validate the horizontal and vertical groundwater flow models and inform the adaptive management plan, CIRNAC is adamant that the seep minimum frequency of observations and monitoring parameters adheres to Part I Item 15 and Schedule I Table 2 of the 2AM-WTP1826 water licence. Specifically, that the minimum frequency of observation for seepage at the pit wall is quarterly, and that seeps shall be monitored monthly or as found during operations for Group 1 parameters.	Considering the uncertainties and risks around long-term water treatment, CIRNAC also requests seeps in the vicinity of lithologies with high acid rock draining and metal leaching (ARD/ML) potential are highlighted in reporting tables.	Agnico acknowledge CIRNAC's recommendation and will highlight the requested information in the next report.		Appendix 47 - Groundwater Monitoring Plan Section 3.2.2
CIRNAC	WT	Nunavut Water Board Water Licence No. 2AM-WTP1826; Agnico Eagle Meadowbank Gold Project 2018 Annual Report; Agnico Eagle Whale Tail Pit Project Groundwater Monitoring Plan Version 2.1, February 2019	CIRNAC acknowledges the 2016 Westbay Multiport Well System has been added to Groundwater Monitoring Plan Version 2.1, and that the well will be sampled and the hydraulic gradient monitored on an annual basis. CIRNAC would like to confirm that all 6 ports of the 2016 Westbay Multiport Well System will be sampled and the hydraulic gradient monitored annually.	CIRNAC would like to confirm that all 6 ports of the 2016 Westbay Multiport Well System will be sampled and the hydraulic gradient monitored annually.	It is Agnico's intent to operate as per the approved Groundwater Management Plan Version 2.1. Thus, Agnico intends to complete annually the Westbay Multiport Well system sampling and monitor the hydraulic gradient. In 2019, only Port 2, 3, 4 and 6 were sampled. Port 1 was not sampled because of its elevated residual fluorescein and based on the limited development completed to date but field measurements of fluorescein content and electrical conductivity were recorded. Port 5 was meant to measure hydraulic pressure only, it was not intended for collection of groundwater samples. Result of the 2019 campaign will be provided in the 2019 Annual Report.		Appendix 61 - Groundwater Monitoring Plan Section 3.2.2 Appendix 47 - Groundwater Monitoring Report Section 1.1
CIRNAC	MBK	Progressive Reclamation – Mine Site - 2017 Annual Report	<p>Section 9.1.1 of the 2017 Annual Report generally discusses the status of current reclamation plans and progressive reclamation carried out to date at a high level. The information is consistent with general plans and principles outlined in other portions of the document and the FEIS.</p> <p>No mention is made of potential implications of updates to Life of Mill plan if ore is milled from additional pits elsewhere, and what if any implications this may have on planned progressive reclamation.</p> <p>In terms of progressive reclamation progress, the only numeric value provided is that of 86% of the Portage PRSF had been covered to end of January 2017. We would have expected that AEM would have provided more details than this with respect to the status of progressive reclamation at the mine site (e.g., areas of TMF and WRSF facilities covered in 2017 and total areas to date, along with the volumes associate with these areas).</p> <p>It is noted by AEM that the Interim Closure and Reclamation Plan (ICRP) will be updated in 2018.</p>	CIRNAC expects that 2018 updates to ICRP will include more details on progressive reclamation such as: areas of TMF and WRSF facilities covered in 2017 and total areas to date, along with the volumes associate with these areas, amongst others.	The 2018 ICRP update was submitted to NWB on August 22, 2018. Following the authorities' review period of this plan, no comments were received regarding the current CIRNAC's recommendation. In this 2018 updated version, information regarding the progressive closure of TSF and WRSF can be found Section 6.2 of the report, however it does not included all the details requested by CIRNAC. Agnico may consider adding some of this information in the next ICRP revision. The annual report will continue to include detailed progressive closure completed during the year.		Appendix 55 of the 2019 Annual Report
CIRNAC	MBK	Results of Thermistor Measurements for Tailings and Waste Rock Storage	The results of thermistor measurements were presented in the annual report without any discussion of these results and how they are integrated in the update of the Waste Rock and Tailings Management Plans. There is also no discussion on how the results compare with early thermal modelling predictions.	CIRNAC recommends that AEM analyze the thermistor monitoring results against early thermal modelling predictions and update its Waste Rock and Tailings Management Plans if large discrepancies are	Agnico Eagle acknowledge CIRNAC comment and give the mandate in 2018 to a consultant. Result will be provided in the 2019 Annual Report		2019 Annual Report Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail



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		Facilities - 2017 Annual Report		observed between the monitoring results and model predictions in the 2018 Annual Report.			
CIRNAC	WT	Updated Groundwater Monitoring Plan; Type “A” Water Licence No. 2AM-WTP1826, Whale Tail Pit Project; Agnico Eagle Mines Limited - April 25, 2019	Section 3.2.1 of Groundwater Monitoring Plan Version 2.1 indicates that periodic seepage surveys will be conducted twice during the first year of operations and annually thereafter. Section 3.2.2 states “water samples will also be collected from seeps in the pit walls if there is sufficient water for analysis and if access to the seep is possible.” Due to AEM’s high reliance on seeps to validate the horizontal and vertical groundwater flow models and inform the adaptive management plan, CIRNAC is adamant that the seep minimum frequency of observations and monitoring parameters adheres to Part I Item 15 and Schedule I Table 2 of the 2AM-WTP1826 water licence.	The NWB acknowledges Agnico Eagle response to fully adhere to Licence requirements and notes that although this was not an item flagged by the NWB in its letter to Agnico of January 21, 2019, this section should still be updated in the next version of GWMP to be fully aligned with the Licence requirements. The NWB also notes that the Schedule I, Table 2 referenced within Agnico Eagle response varies from the actual table included within the Licence regarding the Frequency of Monitoring at ST-S-1 to TBD during Closure.	With respect to CIRNAC’s recommendation that the minimum seep frequency of observations and monitoring parameters adheres to Part I Item 15 and Schedule I Table 2 of the 2AM-WTP1826 water licence, Agnico notes that this is already a legal requirement and Agnico will be complying with 2AM-WTP1826...		Appendix 61 - Groundwater Monitoring Plan Section 3.2.1
ECCC	MBK	Agnico Eagle Mines Limited. Meadowbank Gold Project 2018 Annual Report Appendix 39: Meadowbank and Whale Tail 2018 Air Quality and Dustfall Monitoring Report. April 2019; ASTM International. Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter) D1739-98. Reapproved 2017; Environment and Climate Change Canada. Meadowbank Gold Project and Whale Tail Project – 2017-2018 Annual Monitoring Report. ECCC Responses to NIRB Recommendations. December 2018; Environment and Climate Change Canada. Technical Review Submission to the Nunavut Impact Review Board Respecting the Whale Tail Pit	<p>The Proponent indicted that dustfall sampling would be conducted in accordance with the ASTM method, and states that, “ASTM methods suggest collection of the dustfall sample at 2-3 m height on a utility pole to prevent reentrainment of particulates from the ground, and to reduce vandalism and potential for wildlife interaction. For locations DF-1 – DF4, samples were collected in this manner” (Page 6, Air Quality and Dustfall Monitoring Report). However, the Proponent also indicated that dustfall samplers would be placed on the ground along haul roads and at remote sites (instead of on poles at a height of two meters as prescribed by ASTM).</p> <p>The Proponent noted that the reason for the modification of the method was the difficulty in constructing and deploying a large number of sampling stands. The Proponent conducted a study in 2012 with a small number of samples and did not find a significant difference in dustfall rates between samples on the ground versus at a two-meter height. The Proponent also indicated that they plan to conduct a supplemental study in 2019 to confirm that dustfall canisters deployed on the ground align with those measured on stands.</p> <p>As previously indicated by ECCC (in both the ECCC 2018 Response to the NIRB Recommendations and in the ECCC Technical Review Submission for the Whale Tail Pit Expansion Project) the placement of dustfall canisters on the ground can have negative implications on data quality. According to ASTM (2017), at heights below two meters, there is a wider variability in the concentration of particles subject to settling. Sampling close to the ground also increases the chances that measured dustfall can be influenced by accumulated snowfall and interference by wildlife. Therefore, to remove the possible biases in data and to be able to compare measured dustfall to Alberta guidelines appropriately, the dustfall sampling method should be consistent with the ASTM method and consistent across all sites.</p>	ECCC continues to recommend that the Proponent conduct dustfall sampling for all sampling locations according to the ASTM method (2017), specifically at a sampling height of two meters	Agnico acknowledges ECCC’s comment. The result of the 2019 study will be provided in subsequent annual report along with sampling method and mitigation measure that will be adopted. Agnico will be available to discuss the 2019 study results with ECCC		Appendix 41 of the 2019 Annual Report



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		Expansion Project Proposed by Agnico Eagle Mines Limited. May 2019					
ECCC	MBK	Agnico Eagle Mines Limited. Meadowbank Gold Project 2018 Annual Report, Section 4.4.2. April 2019; Agnico Eagle Mines Limited. Meadowbank Gold Project 2018 Annual Report, Appendix 8: Meadowbank 2018 Water Management Report and Plan. April 2019	<p>Flooding of the mined-out pits will occur until 2030, using both passive and active methods. ECCC advises that prior to reconnecting flooded pits to surrounding waterbodies, the water quality of the pits must be demonstrated to have stabilized and be consistently acceptable for discharge to the receiving environment. Thus, an extended period of water quality monitoring will be required following flooding.</p> <p>ECCC notes that the interval (approximately 3 to 4 years) between active flooding of the pits and the proposed timing of dike breaching (i.e., approximately 2030) may not allow sufficient time to demonstrate stable and acceptable pit water quality. Further, the 2018 Annual Report and 2018 Water Management Report and Plan indicate that dike breaching is contingent on pit water quality meeting aquatic guidelines and/or site-specific criteria. However, these documents do not address the need to demonstrate stability and long-term acceptability of pit water quality. Monitoring results must demonstrate that water quality is stable and consistently meets guidelines/criteria prior to reconnecting flooded pits to fish bearing waterbodies.</p>	ECCC recommends that the Proponent, in conjunction with the 2019 Annual Report, revise management and monitoring plans that are relevant to reconnecting flooded pits with surrounding fish bearing waterbodies to clarify that dike breaching is dependent on demonstrating that pit water quality has stabilized and is consistently acceptable for discharge to the receiving environment	Agnico acknowledge ECCC's comments and will add a precision in the 2019 Water Management Report and Plan.		Appendix 11- Meadowbank Water Management Plan, Section 3.2.1, Section 3.2.1.1, Section 3.2.3, Section 6
ECCC	MBK	Agnico Eagle Mines Limited. Meadowbank Gold Project 2018 Annual Report, Section 3.1 Dikes and Dams. April 2019	<p>In the Annual Report, the Proponent states the following: "The Central Dike seepage is normally pumped back into the South Cell. From September to October 2017 the seepage was transferred to Goose Pit as a mitigation measure. This measure combined with an adapted tailings deposition plan was effective in reducing the seepage flow rate. As a result, the average seepage rate at Central Dike decreased from 540 m3/h in 2017 to 263 m3/hr at the end of 2018 and is following the trend from the 2017 seepage modelling done by Golder.</p> <p>In the summer of 2017 the water in the downstream pond became orange and this was associated with rapid temperature variation. This event was investigated by chemical analysis and was found to be caused by the precipitation of iron oxide from bacterial process. As predicted this event re-occurred in the summer of 2018. The current mitigation strategy to reduce the risk related to seepage includes the following:</p> <ul style="list-style-type: none">• increased surveillance frequency (instrumentation review, site observation)• presence of a backup pumping unit in the downstream area to maintain enough pumping capacity in case of a sudden seepage increase• revised tailings & water management strategy to minimise the amount of water stored into the South Cell while maximising tailings coverage against Central Dike and Saddle Dam 4" (Page 16) <p>ECCC notes that it is possible that the orange or rusty colour observed in the water downstream could be an evidence of the oxidation of iron sulphide thereby creating acid rock drainage/metal leaching (ARD/ML). Iron-oxidizing bacteria helps to accelerate the oxidation of iron in cases where they are present in the water. If this is the case, and has resulted in ARD/ML, it is not clear how the proposed mitigation strategy provided by the Proponent will reduce/prevent the amount of iron oxide or the iron-oxidizing bacterial process (thereby preventing the incidence of ARD/ML).</p> <p>Additionally, the Proponent did not indicate whether the orange coloured water was tested for ARD or indicate the pH value of the water in order to confirm or eliminate ARD/ML activity.</p>	ECCC recommends that the Proponent test the orange coloured water for ARD/ML and demonstrate how the proposed mitigation will reduce/prevent the incidence of the ARD/ML downstream if it is found to be occurring.	Water was tested in 2017 and in 2018 and all parameter were confirming the hypothesis that the orange coloration was a bacterial process and not ARD/ML. No pH reduction was measured in the Central Dike seepage water. Testing of this water will resume at freshet in 2019 with a similar program to continue to confirm the hypothesis of a bacterial process.		2019 Annual Report Section 3.1.1.1.c Details in Meadowbank Water Management Plan Section 3.1.11.4 (Appendix 11)



ECCC	MBK	Agnico Eagle Mines Limited. 2019. Meadowbank Gold Project – 2018 Annual Report, Section 8.5.3.1.7	<p>The Proponent has been monitoring ST-16 and Lakes NP-2, NP-1 and Dogleg since migration of water from the North Cell was detected in 2013. Results are showing reductions in the concentrations of the parameters of concern, and it appears mitigation measures are effective.</p> <p>As noted in the Annual Report, “The KIA [Kivalliq Inuit Association] requested that Agnico [the Proponent] continue monitoring until there is a 5-year period of non-detect cyanide results. To date (5 previous year), the monitoring indicated that yearly average for CN levels does not exceed the CCME [Canadian Council of Ministers of the Environment] guideline, the MDMER [Metal and Diamond Mining Effluent Regulations] or Water License limit for effluent discharge into the environment for NP2, NP1 and downstream lakes, Dogleg and Second Portage. Thus, based on the analysis of the previous result, Agnico Eagle will suspend the current program in 2019” (Page 160). ECCC notes that there have not been 5 years of non-detect Cyanide (CN) results; the annual average for total CN at ST-16 in 2017 was 0.0743 mg/L, which increased from 2015 and 2016. Winter concentrations in Lake NP-2 in 2017 were 0.008 mg/L total CN. While these levels are below guidelines and discharge criteria, they indicate that there is still measurable cyanide in Lake NP-2. Suspending the current program of monitoring is reasonable for the downstream lakes; however, periodic checks of water quality in Lake NP-2 would provide assurance that mitigation is effective.</p>	ECCC recommends that the Proponent continue to monitor Lake NP-2 on a yearly basis for the same suite of parameters as have been measured since 2014.	Agnico acknowledges ECCC’s recommendation and will provided Lake NP-2 monitoring results in the 2019 annual report.		Section 8.5.3.1.7 of the 2019 Annual Report
ECCC	MBK	Agnico Eagle Mines Limited. 2019. Meadowbank Gold Project – 2018 Annual Report, Appendix 8: Meadowbank 2018 Water Management Report and Plan, Appendix C: Technical Note - Meadowbank Water Quality Forecasting Update for the 2018 Water Management Plan Section 3.0; Agnico Eagle Mines Limited. 2019. Meadowbank Gold Project - 2018 Annual Report, Appendix 17: Meadowbank Gold Mine Waste Rock and Tailings Management Report & Plan, Section 6.3.	<p>Section 3.1 of the Water Quality Forecasting Update states that, “deposition of Whale Tail pit tailings is forecast to start in July 2019 until December 2021. The tailings will be deposited in the North and South Cells TSF” (pdf Page 133).</p> <p>Section 6.3 of the Mine Waste Rock and Tailings Management Report & Plan states:</p> <p>“An updated version of the tailings deposition from 2019 until the end of mine life is presented in Appendix B. This updated tailings deposition plan considers modification to the LOM and tailings deposition parameters. The water management strategy related to this deposition plan is presented in the water management plan. This plan does not consider the in-pit amendment process, which would require an update to the tailings deposition strategy and plan” (Page 31).</p> <p>At the time that the 2018 Annual Report was prepared, approval to deposit tailings into the mined-out Goose and Portage pits had not been received. The addition of tailings to the pits will represent a significant change to the water balance quality modeling predictions and may have a bearing on the treatment strategy that will be required to reduce the identified parameters of concern (aluminium, arsenic, cadmium, chromium, copper, iron, mercury, nickel, lead, selenium, fluoride, and total ammonia may require treatment to reach CCME criteria). The Proponent has identified the need for treatment, and has outlined potential candidate treatment approaches, noting in the Annual Report (Page 59) that treatment could be undertaken at the South Cell Reclaim Pond prior to its transfer to Portage Pit.</p> <p>Once the tailings management strategy changes to in-pit disposal, it will be necessary to re-visit the modeling and water balance/water quality predictions. It is not clear if there would be the opportunity to treat contaminants in waste streams prior to discharge into the pits, which would achieve the most efficient reductions, or if a post-flooding approach would be taken.</p> <p>ECCC acknowledges that the 2018 Annual Report information is based on conditions at the time of preparation and submission of the report; however, the anticipated change in tailings disposal and associated effects on water management raises questions on the plans for treatment.</p>	ECCC recommends that the Proponent clarify the approach to updating plans and identifying treatment options	Agnico has provided a Pore Water Quality Program, an updated Waste Rock and Tailings Management, a Groundwater Management Plan and an Interim Closure and Reclamation Plan (ICRP) in light of in-pit tailings disposal. These plans were approved by the NWB on October 21. In the approval letter, action items were identified and updated management plans will be submitted as part of the 2019 Annual Report. As per the NWB Reasons for Decision document related to the in-pit disposal approval, an updated Water Management Plan will be submitted as part of the 2019 Annual Report. This updated plan will include water quality forecast, water balance, and water treatment requirements at closure associated with the in-pit tailings deposition with a particular focus on total dissolved solids and high-sulphate wastewater. The Pore Water Quality Monitoring Program is also to be incorporated into the Water Management Plan, Water Quality and Flow Monitoring Plan, and Aquatic Effects Management Plan, whose updated versions are to be submitted with the subsequent annual report.		Appendix 23 - Pore Water Quality Monitoring Program Appendix 50 - AEMP Section 2.10.3 Appendix 11 - Water Management Plan Water Quality and Flow Monitoring Program will be updated following the approval of the Whale Tail Project Expansion



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ECCC	MBK	<p>Agnico Eagle Mines Limited. 2019. Meadowbank Gold Project - 2018 Annual Report, Appendix 17: Meadowbank Gold Mine Waste Rock and Tailings Management Report & Plan, Section 7</p>	<p>The Proponent stated that the ARD control strategies retained at the Meadowbank Gold Mine are freeze control and climate control strategies. These strategies involve placing a sufficiently thick cover of non-potential acid generating (NAG) waste rock over the PAG material to provide an insulation protection so that the PAG material stays frozen while the active layer is maintained within the NAG material.</p> <p>ECCC agrees that the placing of NAG rock cover over PAG rock will provide an insulating protection. However, the Proponent did not indicate the thickness of cover or the depth of the active layer and states that:</p> <p>“In areas where the active layer extends into the tailings material, the thawed layer should be limited to the upper 30 cm of the tailings mass and saturation of the tailings should remain above 85% to limit oxidation of the tailings” (Page 39). ECCC is of the view that if the NAG cover is thicker than the depth of active layer, then this would reduce or eliminate the chance of the thawed layer intruding into the tailings mass. With the uncertainty of climate change, saturation of the top layers of the tailings mass should not be relied on as a mitigation option.</p>	<p>ECCC recommends that the Proponent design the cover thickness such that it is thicker than the depth of active layer.</p>	<p>The Waste Rock and Tailings Management Report & Plan (July 2019) was provided for review to the NWB on July 26, 2019. The current recommendation from ECCC was addressed by Agnico during the current review process and thus we will refer ECCC to Agnico responses submitted to NWB on September 20 and October 8, 2019. The plan was approved by the NWB on October 21. In the approval letter, action items were identified and updated management plan will be submitted as part of the 2019 Annual Report.</p>		<p>Appendix 24 - Meadowbank Waste Rock and Tailings Management Plan, Section 7</p> <p>2019 Annual Report Section 5.4.1</p>
ECCC	MBK	<p>Appendix G8 – Groundwater; Section 3 Adapted GW Monitoring Program for IPD Appendix A - Meadowbank site visit and groundwater sampling – Factual Report; Section 3.2 and 4.0</p>	<p>ECCC acknowledges that Agnico Eagle Mines Ltd. (AEM or the Proponent) is taking steps to overcome past issues with obtaining groundwater quality samples, and supports the ongoing efforts to resolve issues with groundwater well performance and sample quality. AEM proposes to install three new groundwater wells adjacent to the pits, in order to monitor movement of water from the pits once in-pit tailings disposal commences.</p> <p>In the Groundwater Report, on page 11, the statement is made that: Groundwater samples will be collected from the new wells at least once prior the pit deposition. The groundwater data will represent background geochemistry data prior to in-pit tailings deposition.</p> <p>Section 3.2 of Appendix A states: Alkalinity and TSS are higher in groundwater than in TPL surface water for most samples. Most of the exceeding parameters (copper, total mercury, total ammonia nitrogen and total cyanide) are related to the reclaim water signature (emphasis added). ..Moreover, Stormwater Lake was not sampled and could represent a source of contaminants on site and therefore should be investigated.</p> <p>Section 4 of Appendix A states: Reclaim water is a source of sulfate and can be traced along the groundwater flow paths (from ST-21 to ST-S-5, MW-16-01);</p> <p>ECCC supports the characterization of groundwater prior to the deposition of tailings in the pits; however, ECCC notes that the pre-deposition groundwater chemistry will not be representative of background conditions (as stated) but will provide information on changes to groundwater associated with the in-pit tailings disposal. Any adaptive management strategies for groundwater contamination will be based on thresholds and/or changes to groundwater quality. For example, AEM plans to use pumping to mitigate migration of groundwater of unacceptable quality into the lake, in the event that is observed. Any thresholds should be based on the quality of the groundwater, rather than a degree of change, given that the pre-deposition quality has already been altered.</p>	<p>ECCC recommends that the Proponent ensure thresholds are based on the quality of the groundwater rather than on the degree of change.</p>	<p>This will be evaluated in 2019</p>		<p>Appendix 46 - Groundwater Monitoring Report Section 3.4.3</p>
ECCC	WT	<p>Commitment made to ECCC by phone in May 2019</p>			<p>Incorporate 2019 results into 2020 management plan update</p>		<p>Appendix 64 of the 2019 Annual Report</p>



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GN	WT	<p>Raptor Monitoring Around Whale Tail Site and Haul Road - Nos. 28, 36 (Project Certificate 008)</p> <p>Appendix 45 (Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report) section 12.4 – Methodology; 2018 Annual Report section 8.18.1.6 - Raptor Nest Survey, section 8.18.1 - Wildlife Monitoring Meadowbank and Whale Tail Site, section 12.7 Accuracy of Impact predictions; Nunavut Impact Review Board (NIRB). (2017). Final Hearing Report, Agnico Eagle Mines Ltd Whale Tail Pit Project, NIRB file No. 16MN056, appendix B; Terrestrial Ecosystem Management Plan, version 6, section 3.7.2.1 – Nest Monitoring and section 3.7.3.1 – Nest Monitoring</p>	<p>Raptor monitoring, as reported in the 2018 Annual Report (2018 Report), is inconsistent with the objectives specified in the Terrestrial Ecosystem Management Plan (TEMP). The GN is concerned that certain raptor-related aspects of the TEMP are not being implemented as required under Terms and Conditions Nos. 28 and 36 (NIRB Project Certificate 008), and that the current monitoring does not have the power to detect and mitigate Project-related effects on raptor nesting success.</p> <p>Nest Surveys The 2018 Report indicates that surveys to locate active raptor nests in the vicinity of the Whale Tail Pit and Haul Road were not conducted in 2018. The report also notes that: “Raptor nests in the Whale Tail Pit and Haul Road study area were previously identified by researchers from the University of Alberta during the environmental assessment process (i.e., 2015 to 2017)... Nest monitoring was not conducted in the Whale Tail area in 2018 because none of the identified active nests are in close proximity to project activities and facilities.” (AEM 2019, appendix 45, section 12.4) The decision not to conduct raptor nest surveys and subsequent nest monitoring at the Whale Tail Pit and Haul Road is inconsistent with the Project’s TEMP which indicates that:</p> <p>"For new development sites, suitable habitat within 1.5 km of the sites will surveyed on foot for active Raptor nests." (TEMP version 6, section 3.7.2.1).</p> <p>The TEMP also indicates that there will be nest monitoring for nests located within the active footprint and within 1.5 km of Project facilities (TEMP v6 - fig 14). Nest management plans, including the application of no-work distance buffers will be applied to nests in “areas of concern” (TEMP version 6, section 3.7.3.1).</p> <p>2018 was a construction year for the Whale Tail Pit and Haul Road involving road construction, development and use of quarries and the construction of mine site infrastructure. Raptor nest surveys should have been conducted at these sites to identify nests requiring subsequent nest monitoring and nest management plans. The report seems to rely on the assumption that nest surveys conducted in 2015 to 2017 were sufficient to predict the location of active nests in 2018. The GN is concerned that evidence to validate this assumption is not presented in the 2018 Report. Furthermore, it is noted that raptor monitoring in 2018 in the vicinity of other components of the Project led to the discovery of 5 previously undocumented nests (AEM 2019, section 8.18.1.6). The possibility thus exists that there were active nests in the vicinity of the Haul Road and Whale Tail pit that should have been monitored and managed in 2018.</p> <p>Impact Predictions and Thresholds The impact prediction for raptor nests was that nest failures would not be caused by mine-related activities (AEM 2019, appendix 45, section 12.7). The monitoring threshold for this prediction is one Project-related nest failure per year and the 2018 Report concludes that this threshold was not exceeded in 2018 (AEM 2019, appendix 45, table 12.3). The GN is concerned that this conclusion is not supported by evidence. The results of raptor monitoring programs, as presented in the 2018 Report, do not appear to be designed to detect Project-related nest failures. The 2018 Report indicates that:</p> <p>“Seven active Peregrine Falcon (Falco peregrinus) nests were observed and monitored at quarry sites along the AWAR in 2018, with successful nesting confirmed at three nests.” (AEM 2019, section 8.18.1)</p> <p>However, there is no evidence to determine whether the failure of 4 of the 7 nests were Project related or not. The study design does not appear to support analysis that would allow detection of Project-related nest failures; for example, by examining nest success as a function of intensity of Project-related disturbance.</p>	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <p>- That the Proponent provide evidence to support the assumption that raptor nest surveys in 2015 to 2017 were an accurate predictor of the locations of active nests in 2018 in the vicinity of the Haul Road and Whale Tail Pit.</p> <p>- That the Proponent explain why raptor nest surveys were not conducted in 2018 in the vicinity of the Whale Tail Pit and Haul Road construction activities, as required by the TEMP.</p> <p>- That the Proponent clarify whether raptor nest surveys will be conducted in the vicinity of all new sites of development prior to any activity occurring.</p> <p>- That the Proponent clarify how the raptor nest monitoring program, as currently designed, is able to distinguish between WT Project-related and other effects on nest success in-order to reach the conclusion that in 2018 there were no WT Project-related nest failures.</p> <p>- That the Proponent design and implement a raptor monitoring program that has the statistical power to monitor nest success relative to the established threshold of “one Project-related nest failure per year” or revise the threshold and study design in consultation with the Terrestrial Advisory Group.</p> <p>- The GN requests that the Proponent fully implement raptor mitigation as specified in the TEMP. This includes the development of management plans for nests in areas of concern, regardless of whether effects on the success of those nests have been observed.</p> <p>- The Proponent should ensure that the next revised version of the TEMP will reflect the following commitment made during NIRB’s review of the WT Project:</p> <p>“The proponent shall establish automatic minimum no-disturbance</p>	<ul style="list-style-type: none">• That the Proponent provide evidence to support the assumption that raptor nest surveys in 2015 to 2017 were an accurate predictor of the locations of active nests in 2018 in the vicinity of the Haul Road and Whale Tail Pit. <p>Agnico Eagle’s Response: The raptor nest surveys from 2015 to 2017 were an accurate predictor of the locations of active nests in 2018. Important considerations were: 1) none of the previously identified active nests were within 1 km of the construction area of the Whale Tail Pit area or Whale Tail Haul Road;</p> <p>2) the suitability of nesting habitat in the vicinity of the Whale Tail Pit and Haul Road had not changed substantially by 2018 because quarries, borrow pits, and mine pits were in the development phase; and</p> <p>3) extensive disturbance and construction activity in 2018 reduced the possibility that new nests would be established.</p> <ul style="list-style-type: none">• That the Proponent explain why raptor nest surveys were not conducted in 2018 in the vicinity of the Whale Tail Pit and Haul Road construction activities, as required by the TEMP. <p>Agnico Eagle’s Response: Newly established raptor nests would have been identified through several monitoring approaches, including: 1) wildlife surveys along the Whale Tail Haul Road and Quarries; 2) Height of Land (HOL) surveys; 3) Whale Tail on-site and Haul Road freshet monitoring; and 4) on-site environmental monitoring. Environmental staff conducting these surveys are also tasked with identifying raptor nests. Any documented raptor activity would have been followed up with dedicated raptor nest surveys, and if applicable, a comprehensive site-specific raptor nest management plan.</p> <ul style="list-style-type: none">• That the Proponent clarify whether raptor nest surveys will be conducted in the vicinity of all new sites of development prior to any activity occurring. <p>Agnico Eagle’s Response: As indicated above, raptor activity is identified through a number of monitoring approaches that are also focused on new development areas. In spring 2020, a dedicated raptor nest survey will be conducted to determine whether raptor nesting has been initiated in the vicinity of the Whale Tail Pit and Haul Road. It’s also part of Agnico’s practices to conducted nest monitoring in quarries prior to allow activities in quarries.</p> <ul style="list-style-type: none">• That the Proponent clarify how the raptor nest monitoring program, as currently designed, is able to distinguish between WT Project-related and other effects on nest success in-order to reach the conclusion that in 2018 there were no WT Project-related nest failures. <p>Agnico Eagle’s Response: The current raptor nest monitoring program involves weekly monitoring of identified raptor nests, but ensures that monitoring does not disturb nesting birds. Agnico’s approach, and one recommended by raptor specialist Alistair Franke, is to restrict all activity such as vehicle movements, blasting, and raptor nest monitoring in the vicinity of active nests. Although raptor nest monitoring does provide information on the success of most nests, the causes of nest-failures (e.g., predation, weather, food supply, or human disturbance) are difficult to determine.</p> <ul style="list-style-type: none">• That the Proponent design and implement a raptor monitoring program that has the statistical power to monitor nest success relative to the established threshold of “one Project-related nest failure per year” or revise the threshold and study design in consultation with the Terrestrial Advisory Group. <p>Agnico Eagle’s Response: A raptor nest monitoring program that has the statistical power to monitor nest success but does not contribute to nest disturbance requires further discussions within the TAG and with raptor experts such as Alistair Franke. The current approach of restricting human disturbance and minimizing impacts from nest monitoring may be the preferred choice.</p> <ul style="list-style-type: none">• The GN requests that the Proponent fully implement raptor mitigation as specified in the TEMP. This	Appendix 52 Section 13 - Raptor Nest Monitoring; Section 13.6.2 - Whale Tail Pit and Haul Road; Appendix L - 2019 Whale Tail Raptor Report
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		<p>The GN maintains that the 2018 Report’s conclusions rapture regarding nesting success are unsubstantiated.</p> <p>Nest Management Plans The 2018 Report indicates that: “Raptor nest management plans were not warranted at any of the active nest sites as no project-related effects on raptor nesting success were observed.” (AEM 2019, section 8.18.1)</p> <p>The approach to nest management presented in the 2018 Report is contrary to the approach outlined in the TEMP. The purpose of a nest management plan is to prevent effects on nest success. To be effective, a plan should thus be in place prior to, and regardless of, effects being observed. The TEMP specifies that nest management plans, including the potential application of no-work distance buffers will be applied to nests in “areas of concern” (TEMP version 6, section 3.7.3.1). It does not specify that an effect on nesting success must be observed before a plan is developed.</p> <p>The GN finds the reported approach to raptor nest management troubling and is concerned that in addition to going undetected (see section above entitled Impact Predictions and Thresholds), Project-related effects on raptor nesting may be going unmitigated.</p>	<p>buffers around all raptor nests located in proximity to the Project. Project activities, including the operation of vehicles, heavy equipment, aircraft and blasting, shall be prohibited within these buffers unless an exception is specified within a nest-specific management plan that has been reviewed and approved by the GN, subject matter experts and other relevant parties. The size of minimum, no-disturbance buffers shall be based on the BC Guidelines for Raptor Conservation or similar guidelines as recommended by the Project’s TAG.” (commitment #32, NIRB 2017, appendix B)</p> <p>· In the 2019 Annual Report, the Proponent should provide details of the automatic no disturbance buffers established around each active nest and any modifications to these buffers that were applied as part of an approved nest management plan.</p>	<p>includes the development of management plans for nests in areas of concern, regardless of whether effects on the success of those nests have been observed.</p> <p>Agnico Eagle’s Response: Agnico brings in subject-based experts, such as Alistair Franke, to provide advice on nest-specific management approaches. Where mining activity is unavoidable in close proximity to active nests, site-specific nest management plans will be developed to outline mitigation strategies such as timing windows and setbacks. For nests in quarries along the AWAR and WTHR, mining activity (e.g., blasting, movement of materials) is restricted; therefore, site-specific nest management plans are not necessary.</p> <ul style="list-style-type: none">• The Proponent should ensure that the next revised version of the TEMP will reflect the following commitment made during NIRB’s review of the WT Project: <p>“The proponent shall establish automatic minimum no-disturbance buffers around all raptor nests located in proximity to the Project. Project activities, including the operation of vehicles, heavy equipment, aircraft and blasting, shall be prohibited within these buffers unless an exception is specified within a nest-specific management plan that has been reviewed and approved by the GN, subject matter experts and other relevant parties. The size of minimum, no-disturbance buffers shall be based on the BC Guidelines for Raptor Conservation or similar guidelines as recommended by the Project’s TAG.” (commitment #32, NIRB 2017, appendix B).</p> <p>Agnico Eagle’s Response: Agnico acknowledge GN’s comment and will ensure that the next revised version of the TEMP reflects this commitment.</p> <ul style="list-style-type: none">• In the 2019 Annual Report, the Proponent should provide details of the automatic no disturbance buffers established around each active nest and any modifications to these buffers that were applied as part of an approved nest management plan. <p>Agnico Eagle’s Response: Agnico agrees to provide details on the automatic no-disturbance buffers and other mitigation approaches for each active raptor nest in the 2019 annual report.</p>	
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GN	WT	No. 28 (Project Certificate 008)Appendix 45 (Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report), section 3.2 – Objectives; section 4.2 – Objectives; section 6.0 – Caribou Satellite Collaring Program; section 3.6.5 – Road Related Mitigation; and Terrestrial Ecosystem Management Plan (TEMP), version 6	<p>Some caribou monitoring and mitigation activities reported in the 2018 Annual Report (2018 Report) do not align with thresholds and seasons used in the Terrestrial Ecosystem Management Plan (TEMP). This makes it challenging for reviewers to understand how the Project’s caribou protection measures are being implemented and whether the measures are likely to be, or are being, effective in minimizing Project effects on caribou.The 2018 Report and the TEMP do not align in several areas with respect to reported versus planned caribou monitoring and mitigation. This makes it hard for reviewers to understand how monitoring results compare to impact predictions and how caribou protection measures are being implemented relative to the TEMP.Seasonal WindowsThe proposed intensity of caribou monitoring and mitigation, as specified in the TEMP, varies according to defined seasonal windows (e.g. Figures 6 – 9, TEMP version 6). These windows correspond to seasons used for effects assessments in previous environmental impact statements for the Project. In several parts of the 2018 Report, results relating to caribou are reported using seasons that differ from those used in the TEMP. For example:• Road surveys are a key component of the TEMP used for monitoring caribou and supporting mitigation, including implementation of the caribou decision trees (Figures 6 – 9, TEMP version 6). Tables 3.1, 3.2 and 3.5 of the 2018 Report (AEM 2019, appendix 45), which tables summarize the frequency and details of road surveys conducted in 2018, use seasons which differ from the seasons used in the TEMP for caribou monitoring and mitigation.• The 2018 Report summarizes the results of the caribou satellite collaring program, including information on the seasonal movements of caribou in relation to the Project (AEM 2019, appendix 45, section 6). The seasons used to present these results differ from the seasons used in the TEMP.Other sections of the Annual Report provide details of the individual surveys or mitigation measures for caribou but do not provide a summary according to the seasonal windows used in the TEMP for caribou monitoring and mitigation. For example:• The 2018 Report summarizes road restrictions implemented in 2018 for mitigating Project effects on caribou (AEM 2019, appendix 45, section 3.6.5, tables 3.7 – 3.9). A useful addition to this section would be summaries according to season.• Similar seasonal summaries would be useful for activities such as height-of-land surveys, mine site surveys, pre-blasting surveys. Monitoring ThresholdsThe 2018 Report specifies the following Project-effect thresholds for caribou monitoring:“Evaluate whether road-related operations preclude Caribou from using suitable habitats beyond 1,000 m. The threshold level along the roads is unnatural Caribou use patterns beyond 1,000 m”. (AEM 2019, appendix 45, section 3.2)And“Evaluate whether mine-related construction and operation activities preclude Caribou from using suitable habitats beyond 500 m (considered to be an average across various disturbance types) of mine buildings, facilities, and roads. Threshold level within mine facilities is unnatural Caribou use patterns beyond 500 m. The threshold level along roads is unnatural Caribou use patterns beyond 1,000 m (also see Section 3)”. (AEM 2019, appendix 45, section 4.2)And“Disturbance Mine-related construction and operation activities will not preclude Caribou and Muskoxen from using suitable habitats beyond 1,000 m of the AWAR.” (AEM 2019, appendix 45, table 3.12)The 2018 Report states that both of these thresholds were exceeded. The GN notes that none of these thresholds are included in the TEMP (version 6) and quantitative analyses to assess monitoring results relative to these thresholds are not presented in the 2018 Report.</p>	<p>The GN offers the following recommendations to the Board with respect to this issue:1) For future Annual Reports, the Proponent should develop a format for caribou-related components that is aligned with the TEMP with respect to planned monitoring and mitigation. This should include summaries, according to seasons, defined for caribou in the TEMP, for: (1) road, mine site, height-of-land and pre-blasting survey effort. Tables containing dates of individual surveys should be included as appendices; (2) mitigation measures such as road closures, mine site work stoppages, blasting delays, as specified in caribou decision trees in the TEMP (Figure 6 to 9, TEMP, version 6) and (3) monitoring of zone-of-influence, movements and caribou group size observations.2) Currently, caribou-related are elements scattered throughout the 2018 Report, in some instances presented with results for other species. For future Annual Reports, all caribou elements should be presented in a single comprehensive section covering the implementation and effectiveness of the Project’s caribou protection measures.3) Monitoring thresholds used in the Annual Report for caribou should be the same as those established in the TEMP.</p>	<p>1) For future Annual Reports, the Proponent should develop a format for caribou-related components that is aligned with the TEMP with respect to planned monitoring and mitigation. This should include summaries, according to seasons, defined for caribou in the TEMP, for: (1) road, mine site, height-of-land and pre-blasting survey effort. Tables containing dates of individual surveys should be included as appendices; (2) mitigation measures such as road closures, mine site work stoppages, blasting delays, as specified in caribou decision trees in the TEMP (Figure 6 to 9, TEMP, version 6) and (3) monitoring of zone-of-influence, movements and caribou group size observations.Agnico Eagle’s Response:For the 2019 report, data summaries for various surveys, mitigation measures, and monitoring will be organized by Caribou seasons as defined in the TEMP. For clarity, a discussion on the differences between the Caribou seasons defined in the TEMP and those recognized by the GN will be included in the 2019 annual report.2) Currently, caribou-related are elements scattered throughout the 2018 Report, in some instances presented with results for other species. For future Annual Reports, all caribou elements should be presented in a single comprehensive section covering the implementation and effectiveness of the Project’s caribou protection measures.Agnico Eagle’s Response:Although the general structure of the 2018 annual report will be retained for the 2019 report, an additional section will be included that integrates the Caribou elements found in various sections of the report.3) Monitoring thresholds used in the Annual Report for caribou should be the same as those established in the TEMP.Agnico Eagle’s Response:The Caribou monitoring thresholds described in the 2018 report are an artefact of earlier versions of the TEMP and will be removed for the 2019 report.</p>	Appendix 52 Section 11 - Integrated Caribou Monitoring Results
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GN	WT	<p>Nos 28 and 29 (Project Certificate 008)</p> <p>Appendix 45 (Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report) Table 3.12 - Accuracy of Impact Predictions – Sensory Disturbance and Mortality along the AWAR, Vault Haul Road, and Whale Tail Haul Road, Table 6.1 - Accuracy of Impact Predictions – Satellite-collaring Data, Section 3.8 – Management Recommendations, Section 6.6 Results, Section 6.7 Caribou Migration Patterns</p>	<p>The 2018 Annual Report (2018 Report) claims success in managing Project roads to minimize effects on the movements of migrating caribou by application of Caribou Protection Measures (CMPs) within the Terrestrial Ecosystem Management Plan (TEMP). The GN maintains that this claim is not substantiated by the information presented in the report. Contrary to this claim, the 2018 Report concludes that Project effects on caribou movements exceeded the threshold level. The GN is concerned that this exceedance has occurred and could occur in future years to a greater spatial extent and/or intensity without adaptive management being implemented. The GN notes that the 2018 Report does not include discussion of an adaptive management response to this finding. Additionally, the 2018 Report does not present quantitative analyses of this effect, which could inform adaptive management, despite data for such analyses are being available.</p> <p>The 2018 Reports states that: “The AWAR, Vault Haul Road, and Whale Tail Haul Road survey data are important for documenting time periods when the area near the road is utilized by various wildlife species and for evaluating the need, if any, for implementing adaptive management (e.g., temporary road closures and radio announcements). Moreover, Caribou density can be compared graphically across years, which can be used to track changes in density and preferential migration corridors. The road sections with higher use are prioritized for temporary road closures, speed reductions or additional adaptive management strategies. The road survey data are used in conjunction with satellite-collaring and mortality data to successfully manage road operations during heavy wildlife use periods.” (AEM 2019, appendix 45, section 3.8)</p> <p>The GN notes that this claim of success in managing Project roads to avoid or minimize effects on caribou is not substantiated by monitoring results or other evidence presented in the 2018 Report. Contrary to this claim, the 2018 Report concludes that the Environmental Impact Statement predictions and the monitoring threshold for sensory disturbance of caribou were exceeded in 2018 (AEM 2019, appendix 45, tables 3.12 and 6.1). Migrating caribou appeared to exhibit significant deflection and delayed crossing in response to Project roads (AEM 2019, appendix 45, figures 6.7 and 6.8, sections 6.6 and 6.7).</p> <p>It is also noted in the 2018 Report that the response to this exceedance was the implementation of adaptive management in the form of:</p> <p>“Multiple road closures and notices. Use of Decision Tree for Management and Monitoring. Ongoing analysis by GN (in partnership with Agnico Eagle)” (AEM 2019, appendix 45, table 6.1)</p> <p>However, the GN disagrees that this constitutes an adaptive response to exceedance of the monitoring threshold. The road closures and use of decision trees were existing measures in place at the time the effects (and exceedances) occurred in 2018. The effects on caribou movement occurred despite these measures being in place. Thus, they do not represent an adaptive response to what appears to be a failure of the Project’s CPMs. The 2018 Report does not discuss why the existing CPMs failed to prevent exceedance of the threshold. The 2018 Report does not assess whether the CPMs were properly implemented or whether certain aspects require improvement. Overall, the 2018 Report does not identify any new CPMs or other adaptive management measures beyond those presently specified in the TEMP. This leaves the GN concerned that similar effects on caribou movement will occur repeatedly in future years and may increase in spatial extent and intensity once the more heavily used of the Project’s roads (the Whale Tail Haul Road) begins its full operation in 2019. The GN finds this lack of adaptive response unacceptable.</p> <p>The 2018 Report presents a qualitative description of Project effects on caribou movements (AEM 2019, appendix 45, section 6) including maps of the movements</p>	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <ul style="list-style-type: none">• That the Proponent should explain in detail what adaptive management measures (over and above existing caribou protection measures in the TEMP (version 6)) will be taken in 2019 and in future years in response to the 2018 Report’s finding that disturbance of caribou exceeded threshold levels. In particular, please explain how this finding will influence management of the Whale Tail Haul Road and any revisions to the TEMP that are proposed by the Proponent.• That future Annual Reports include quantitative analyses of road effects on the movement and distribution of caribou that incorporate concurrent data on recorded traffic levels, caribou monitoring activities and road management measures that are implemented.	<p>• That the Proponent should explain in detail what adaptive management measures (over and above existing caribou protection measures in the TEMP (version 6)) will be taken in 2019 and in future years in response to the 2018 Report’s finding that disturbance of caribou exceeded threshold levels. In particular, please explain how this finding will influence management of the Whale Tail Haul Road and any revisions to the TEMP that are proposed by the Proponent.</p> <p>Agnico Eagle’s Response: A number of adaptive mitigation strategies were implemented in spring 2019 in response to Caribou movements across the AWAR and Whale Tail Haul Road. Road survey frequency was increased to an almost daily basis, and road closures and/or road restrictions (e.g., light vehicles only) were implemented on numerous occasions. In addition, when applicable, lower speed limits were set and daily rides (e.g., crew changes, food deliveries etc.) were escorted by Environment Department and in collaboration with HTO and KIA. When necessary, Environment Department stopped convoys, sometimes for hours, to let Caribou pass undisturbed. These adaptive management strategies will be more clearly outlined, and linked to Caribou monitoring results, in the 2019 report.</p> <p>• That future Annual Reports include quantitative analyses of road effects on the movement and distribution of caribou that incorporate concurrent data on recorded traffic levels, caribou monitoring activities and road management measures that are implemented.</p> <p>Agnico Eagle’s Response: In the 2019 report, a clearer link will be made between monitoring results (i.e., movement and distribution of Caribou) and mitigation measures that are implemented (e.g., road management measures). Further, a comprehensive GN report (i.e., Kite et al.) on the effect of the AWAR and Whale Tail Haul Road on movements of collared Caribou should be finalized end of June 2019.</p>	<p>Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table 3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation</p>
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			<p>of collared individuals. The GN is concerned that the 2018 Report does not present quantitative analyses, pursuant to Term and Condition No. 28, when data on both caribou movements in the vicinity of roads and the monitoring and mitigation measures that were in operation over the same periods are available. This type of analysis could inform all parties regarding the magnitude of observed effects on caribou and facilitate a greater understanding of how existing CPMs are, or are not, working. This would ultimately allow for effective adaptive management.</p> <p>The GN feels that it is prudent to undertake a detailed investigation on the possible reason for the observed exceedance of the caribou disturbance threshold A possible reason could be the incomplete/inconsistent application of the Project’s Caribou Protection Measures along roads. Levels of caribou monitoring (i.e. road surveys and height-of-land surveys) implemented in 2018 were below the minimums specified in the TEMP. In addition, there were potentially some instances where the observation of large groups of caribou in 2018 should have triggered road closures that did not occur. The combination of insufficient levels of monitoring and a failure to trigger road closures may account, to some extent, for the observed effects on caribou.</p>				
GN	WT	<p>No28 (Project Certificate 008</p> <p>Appendix 45 (Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report) section 4.5.5 - Predatory Mammal Deterrence and Protection, Table 4.1 - Wildlife Presence Requiring Action (from Appendix E), Table 4.3 - Summary of Deterrence Activities at the Meadowbank Mine and Whale Tail Sites from 2015 to 2018, Table 4.5 - Summary of Mine Site Wildlife Fatality Records for Caribou and Predatory Mammals (2007 to 2018), Table 4.6 - Accuracy of Impact Predictions – Mine Site Wildlife Disturbances; Terrestrial Ecosystem Management Plan (TEMP), version 6</p>	<p>The Project has had persistent problems with predatory mammals, such as wolves and wolverines. Based on the information provided in the 2018 Annual Report (2018 Report), it is evident that the Environmental Impact Statement (EIS) predictions regarding Project-related mortality of predatory mammals has been exceeded in 9 of the last 12 years. The GN is concerned that adaptive management is not being effectively applied to bring this mortality below predicted levels. The 2018 Report summarizes Project interactions with predatory mammals such as wolves, bears and wolverine, including mortalities. The 2018 Report indicates that: “Wolverines were regularly observed around the Meadowbank and Whale Tail sites primarily during the winter months in 2018 (see Table 4.2, Figure 4.1, and Appendix E). Deterrence actions, which followed the Wildlife Protection and Response Plan (Appendix C in 2018 TEMP), were required on 17 occasions primarily in January and February (Table 4.1). One Wolverine, which was not successfully deterred from the site was dispatched on 13 January (see Section 4.5.6.2 and Table 4.3). Well-defined food-handling practices and employee awareness programs have minimized Wolverine fatalities or Wolverine-human interactions; however, an increase in deterrence efforts in 2018 (see Table 4.3) will be tracked to determine whether the trend continues in 2019.</p> <p>Wolves were also regularly observed around the Meadowbank and Whale Tail sites during the winter months in 2018 (see Table 4.2, Figure 1, and Appendix E). Deterrence actions were required on 14 occasions in January, February, April, and December (Table 4.1). One Wolf, which was not successfully deterred from the site, was dispatched on 25 January (see Section 4.5.6.2 and Table 4.3). Notices were sent on a weekly basis to Meadowbank employees regarding the presence of wildlife, waste management procedures, and requesting all sea cans and doorways be closed. An increase in deterrence efforts in 2018 (see Table 4.3) will be tracked to determine whether the trend continues in 2019.” (AEM 2019, appendix 45, section 4.5.5)</p> <p>With respect to this section of the 2018 Report, the GN notes the following concerns:</p> <ul style="list-style-type: none">• In 2018, most of the interactions between the Project and wolves or wolverines that required actions such as use of deterrents or euthanasia occurred in winter (Dec-March) and spring (April) (AEM 2019, appendix 45, Table 4.1). The report does not explain why interactions peaked during this period, what specific attractants, if any, were present at the Project, and what adaptive management is planned to address the problem.	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <p>1) That the Proponent should clarify apparent discrepancies between table 4.1 and section 4.5.5 of the Annual Report (AEM 2019, appendix 45) in the reporting of predatory mammal interactions with the Project, as noted above.</p> <p>2) That the Proponent should explain: (i) why interactions in 2018 with wolf and wolverine peaked from Dec to April; (ii) what attractants, if any; were present at the Project during this period; (iii) what adaptive management is planned to address the problem.</p> <p>3) That the Proponent should clarify whether the trend of increasing deterrent actions against wolf and wolverine (2015-2018) reflects increasing problems with these species or increasing deterrent efforts. Please present available evidence.</p> <p>4) That the Proponent should indicate what additional adaptive management will be taken in 2019 to address what appears to be a persistent, if not increasing, problem with predatory mammals.</p> <p>5) That the Proponent should retain an independent specialist to conduct a site inspection and audit of the Project to recommend additional</p>	<p>1) That the Proponent should clarify apparent discrepancies between table 4.1 and section 4.5.5 of the Annual Report (AEM 2019, appendix 45) in the reporting of predatory mammal interactions with the Project, as noted above.</p> <p>Agnico Eagle’s Response: Unsuccessful deterrence indicates that deterrence activities did not result in predatory mammals immediately leaving the mine site; however, these individuals eventually left the mine site on their own accord and did not need to be dispatched. For the 2019 report, further details will be provided on the circumstances around and management actions taken for individuals that were not successfully deterred.</p> <p>2) That the Proponent should explain: (i) why interactions in 2018 with wolf and wolverine peaked from Dec to April; (ii) what attractants, if any; were present at the Project during this period; (iii) what adaptive management is planned to address the problem.</p> <p>Agnico Eagle’s Response: Several factors may explain increased Wolf and Wolverine presence in 2018: 1) Since Wolf and Wolverine population size is cyclical, increased numbers may have been present in the region in 2018; 2) potential limited prey availability may have led to an increase in attraction to the mine site; and 3) attractants may have been more readily available at the mine site in 2018. Waste management at site is in constant monitoring and is addressed by increasing the level of staff training. Employees on site are reminded regularly on proper waste segregation through departmental toolbox meetings and site wide communications. This is to stress the importance of maintaining a proper waste management. In 2018, Agnico continued to conduct weekly visits of the different infrastructures for waste management as the incinerator, landfill, waste container and all areas around site to assess the performance of the waste management. These practices will be continued in 2019.</p> <p>3) That the Proponent should clarify whether the trend of increasing deterrent actions against wolf and wolverine (2015-2018) reflects increasing problems with these species or increasing deterrent efforts. Please present available evidence.</p> <p>Agnico Eagle’s Response: Please refer to answer above.</p> <p>4) That the Proponent should indicate what additional adaptive management will be taken in 2019 to address what appears to be a persistent, if not increasing, problem with predatory mammals.</p> <p>Agnico Eagle’s Response: Please refer to answer above.</p> <p>5) That the Proponent should retain an independent specialist to conduct a site inspection and audit of</p>		<p>Appendix 52 Section 4.5.5 - Predator Mammal Deterrence and Protection; Table 4.1 - Wildlife Presence Requiring Action at the Meadowbank and Whale Tail Sites in 2019 (from Appendix E).</p>



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			<ul style="list-style-type: none">• The reference to Appendix E as a source of details regarding Project interactions with predatory mammals is incorrect. Appendix D appears to be the correct source.• There are apparent inconsistencies between information provided in tables 4.1 and 4.3 versus the text in section 4.5.5 regarding the frequency of successful and unsuccessful deterrent actions and the dispatching of predatory mammals in 2018 (AEM 2019, appendix 45). For example, the unsuccessful deterrent actions for a wolverine and wolf on Jan 13 and 25, respectively, that are referred to in section 4.5.5 do not appear in table 4.1. Additionally, table 4.1 suggests that 2 wolves were not successfully deterred on February 23 and April 19. Section 4.5.5 does not mention whether these individuals were dispatched. The 2018 Report does not specify whether or not these animals were euthanized.• Table 4.3 suggests that deterrent activities for wolf and wolverine have increased between 2015 and 2018. The report does not clarify whether this trend reflects increasing problems with these species or increasing deterrent efforts. <p>Table 4.6 of the 2018 Report (AEM 2019, appendix 45) indicates that Project-related mortality of predatory mammals in 2018 did not exceed the monitoring threshold. The GN notes the following with respect to this conclusion:</p> <ul style="list-style-type: none">• The threshold presented in this table is “Destruction of two (2) problem Grizzly Bear or Wolverine per year.” This is different from the threshold specified in the Terrestrial Ecosystem Management Plan which is “Two individuals of the same species in a year” including wolverine, wolf and grizzly bear (TEMP version 6, table 18). Two wolves were dispatched in 2018 suggesting that the threshold was reached. Data presented in table 4.5 (AEM 2019, appendix 45) suggest that the Project has been at or above this threshold for wolves in 5 of last 12 years.• The EIS predicted that “Predatory Mammals will not be killed as a result of Project activities” (TEMP version 6, table 18). Data presented in table 4.5 of the 2018 Report suggests that the Project has exceeded this prediction for 9 of the last 12 years including 2018 (AEM 2019, appendix 45). <p>Overall, the 2018 Report highlights that the Project has a persistent, if not increasing problem, with predatory mammals. The 2018 Report does not indicate what additional adaptive management will be taken in 2019 to address this problem.</p>	<p>adaptive management for predatory mammals, where appropriate. That the results of this audit be submitted to NIRB.</p> <p>The Proponent’s response to GN recommendation 1-4 should take the form of an open letter to both the GN and NIRB.</p>	<p>the Project to recommend additional adaptive management for predatory mammals, where appropriate. That the results of this audit be submitted to NIRB.</p> <p>Agnico Eagle’s Response: Agnico acknowledges GN’s recommendation and will evaluate it further.</p>		
GN	WT	<p>No 28 (Project Certificate 008)</p> <p>Nunavut Impact Review Board (NIRB). (2017). Final Hearing Report. Agnico Eagle Mines Ltd. Whale Tail Pit Project. NIRB File No. 16MN056; Terrestrial Ecosystem Management Plan (TEMP), version 6</p>	<p>The Project’s Terrestrial Ecosystem Management Plan (TEMP) specifies that blasting for mining and construction activities will be postponed when caribou are in the vicinity of the Project. This mitigation is supported by monitoring. The 2018 Annual Report (2018 Report) does not present information on implementation of monitoring and mitigation measures for wildlife that occurred in 2018 in relation to blasting activities. It is unclear whether these measures were implemented.</p> <p>The TEMP specifies that blasting will be postponed when caribou are within a certain distance of a blast site (TEMP, version 6, figure 9 and table 6). This mitigation is supported by monitoring to detect the presence of caribou.</p> <p>Additionally, in accordance with commitments made by the Proponent during NIRB’s review of the Whale Tail Pit Project (WT Project) (NIRB 2017, appendix B), the WT Project’s TEMP was to be revised to include:</p> <ul style="list-style-type: none">• A provision for suspension of blasting activities at the Whale Tail site when caribou above the specified seasonal group size threshold are present within 4 km of the blast site. This provision shall apply year-round except during calving season when the buffer shall be increased to 5 km when cows with calves are present (Commitment 15);	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <p>1) The Proponent should provide information on blasting activities that occurred along the Haul Road and at Project mine sites in 2018. This should include details (in table format, included with the Proponent’s other responses to the GN and NIRB) of wildlife surveys that were conducted and mitigation measures for caribou and muskox that were applied with reference to the no-blasting buffers.</p>	<p>The 2019 Annual report will provide more details on the surveys and mitigations measures adopted in relation to blasting activities.</p>		<p>Appendix 52 Table 3.11 - Summary of Road Restrictions Related to Ungulate Activity Along the Whale Tail Haul Road in 2019; Section 4.4.1 - Mine Site Inspections</p>



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			<ul style="list-style-type: none">• A provision for mandatory suspension of blasting when groups of muskox above the specified group size threshold are observed within 1km of blasting activities (Commitment 29); and• The conduct of surveys prior to each blast to detect caribou and other wildlife within the no-blasting buffers specified in TEMP (Commitment 17). <p>The 2018 Report does not provide information on monitoring or mitigation that occurred in relation to wildlife and blasting activity. It is therefore unclear whether this part of the TEMP is being applied, as required under Term and Condition No. 28 (NIRB Project Certificate 008)</p>				
GN	WT	No 28 (Project Certificate 008) Meadowbank Gold Project 2018 Annual Report, section 8.18 – Terrestrial Ecosystem Management Plan; Government of Nunavut (2017). Final written submission for the NIRB’s review of the Whale Tail Pit Project; Terrestrial Ecosystem Management Plan (TEMP), version 6; Nunavut Impact Review Board (NIRB). (2017). Final Hearing Report. Agnico Eagle Mines Ltd. Whale Tail Pit Project. NIRB File No. 16MN056	<p>Since issuance of the certificate for the Approved Project (NIRB Project Certificate 008), the Terrestrial Ecosystem Management Plan (TEMP) has not been updated to reflect some of the commitments made regarding caribou mitigation measures during the final hearing for the Whale Tail Pit project. Many of these commitments were intended to enhance the protection measures employed to mitigate Project effects on caribou. The GN is concerned that the Proponent is accordingly not compliant with Term and Condition No. 28 (NIRB Project Certificate 008).</p> <p>Term and Condition No. 28 (NIRB Project Certificate 008) states that:</p> <p>“The Proponent shall maintain a Terrestrial Ecosystem Management Plan (TEMP) throughout all phases of the Project. The Plan shall include detailed monitoring, mitigation, and adaptive management measures for wildlife, with consideration for each Project activity predicted to affect wildlife, and with inclusion of specific triggers for mitigation and adaptive management intervention. The TEMP shall demonstrate consideration for all relevant commitments made by the Proponent throughout the Nunavut Impact Review Board’s review of the Project.”</p> <p>The 2018 Annual Report (2018 Report) states that:</p> <p>“Agnico submitted the TEMP Version 5 in June 2018. This new version includes final revisions following hearings and receipt of NIRB Whale Tail Project Certificate no. 008. Agnico is submitting via the 2018 Annual Report an updated TEMP Version 6, December 2018 (Appendix 51) to fully comply with the Project Certificate and also to reflect discussions held at the TAG meeting.” (AEM 2019, section 8.18)</p> <p>The GN does not share the Proponent’s view that the latest version of the TEMP is fully compliant with Term and Condition No. 28 of the NIRB Whale Tail Project Certificate no. 008. Since issuance of this certificate, in March 2018, the TEMP has been revised twice (versions 5 and 6). Despite this, the latest version (version 6) does not reflect numerous commitments for revisions during review of the Whale Tail Project; some of which were scheduled to occur within 1 year of project certification. These commitments are summarized in Table 1 attached to this submission.</p> <p>Since issuance of the certificate, the GN has worked with the Proponent via the Terrestrial Advisory Group and has requested that the Proponent incorporate relevant revisions to the TEMP to reflect commitments made during the final Whale Tail Pit Project final hearing. It is the GN’s view that there has been ample time to incorporate these commitments in a revised TEMP. At the present time, the GN is uncertain whether, how and/or when these commitments will be fulfilled.</p>	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <p>1) The Proponent should provide a revised version of the TEMP that reflects all commitments (#1 through 37) made during the NIRB review of the Whale Tail Pit Project, as presented in Appendix B of the final hearing report (NIRB 2017).</p> <p>2) To accompany this revised TEMP, the Proponent should provide a conformity table referencing the sections of the TEMP that address each commitment.</p> <p>3) The 2019 Annual Report should provide information to demonstrate how commitments made during the NIRB review of the Whale Tail Project have been implemented.</p>	<p>An update TEMP Version 7 was submitted to NIRB on July 2, 2019 and included all of the commitments made during the NIRB review of the Whale Tail Project.</p> <p>The 2019 Annual Report will report on the commitment implementation.</p>	Appendix 52 - Wildlife Monitoring Summary Report	



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GN	WT	<p>No 28 (Project Certificate 008)</p> <p>Appendix 45 (Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report), section 7.2 – Objectives, section 7.3 – Duration, table 7.1 – Height-of-Land Survey Data Along the Whale Tail Haul Road in 2018, table 3.12 - Accuracy of Impact Predictions – Sensory Disturbance and Mortality along the AWAR, Vault Haul Road, and Whale Tail Haul Road; Nunavut Impact Review Board (NIRB). (2017). Final Hearing Report. Agnico Eagle Mines Ltd. Whale Tail Pit Project. NIRB File No. 16MN056; Terrestrial Ecosystem Management Plan (TEMP), version 6</p>	<p>With respect to the Whale Tail Pit project, the objective of Height-of-land (HOL) surveys is to provide an early warning system for detecting the presence of caribou in proximity to the Whale Tail Pit and Haul Road. This surveillance system provides a trigger for implementing mitigation measures including road closures during caribou migratory seasons.</p> <p>In 2018, HOL survey effort, as reported in the 2018 Annual Report (2018 Report), was below minimums specified in the Project’s Terrestrial Ecosystem Management Plan (TEMP). The GN has previously expressed concerns that even these minimums are too low and the Proponent had committed to increase HOL survey effort. To date, the Proponent has not fulfilled this commitment. The finding that HOL survey effort in 2018 was below these already low minimums is a significant concern.</p> <p>The GN is of the view that HOL surveys as implemented in 2018 and specified in the TEMP do not provide an effective early warning system for implementing caribou protection measures. The 2018 Report’s conclusion that disturbance of migrating caribou exceeded the monitoring threshold may be explained in part by the low level of HOL survey effort combined with low levels of road survey effort in 2018 (the other key mechanism for detecting caribou near the Project).</p> <p>The GN is concerned that the Proponent is non-compliant with term and condition 28 (NIRB Project Certificate 008) because HOL survey effort in 2018 was below minimums specified in the TEMP and the TEMP has not been revised to increase HOL effort, in accordance with commitments made during NIRBs review of the Whale Tail Project.</p> <p>As part of the Caribou Protection Measures in the Project’s TEMP, HOL surveys are conducted along the Haul Road to:</p> <p>“[P]rovide an ‘early warning’ system of the presence of Caribou in proximity to the Whale Tail Pit and Haul Road.” (AEM 2019, appendix 45, section 7.2)</p> <p>These surveys are scheduled to:</p> <p>“[B]e conducted once per week from January to April and from July to August. From May to June and September to December, the prime migratory period for Caribou, the frequency of surveys will increase to twice per week unless triggers (see Section 9) require surveys every two days.” (AEM 2019, appendix 45, section 7.3)</p> <p>In 2018, 15 HOL surveys totaling only 300 minutes of observation were conducted from September to December (AEM 2019, appendix 45, table 7.1). The GN is concerned about this reported survey effort for the following reasons:</p> <ul style="list-style-type: none">• As an ‘early warning’ system to trigger measures designed to reduce disturbance of migrating caribou (e.g. road closures), 300 minutes of HOL surveys over a period of 12 months is inadequate by any reasonable standard. This represents 0.05% of the time that caribou could have interacted with the Haul Road in 2018; meaning that for 99.95% of the year there was no ‘early warning’ system in place.• The level of HOL survey effort in 2018 was well below the minimums specified in the TEMP. Based on the minimum frequency of survey effort specified in the TEMP, at least 80 HOL surveys should have been conducted in 2018 (TEMP version 6, section 3.5.2.6 and table 14). For the period September to December, when 14 of the 15 HOL surveys were conducted, at least 32 surveys should have been conducted. Overall, HOL survey effort in 2018 was less than 20% of the minimum that should have been conducted if the TEMP was being fully implemented. This does not account for a further increase in survey efforts that should have been triggered when caribou were observed near the Haul Road.• No HOL surveys were conducted during the spring migration (April-May) which is	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <ol style="list-style-type: none">1. That the Proponent should explain why the number of HOL Surveys conducted in 2018 was less than 20% of the minimum number specified in the Project’s TEMP.2. That the Proponent should explain why HOL surveys were not conducted during the spring caribou migration.3. That the Proponent should explain why the frequency of HOL surveys was not increased to every 2 days in 2018 in response to observations of caribou and subsequent Haul Road closures.4. The Proponent should provide a revised version of the TEMP that reflects the commitment made during the NIRB’s review of the Whale Tail Pit project to increase the frequency of HOL surveys (NIRB 2017, Appendix B).5. The 2019 Annual Report should provide information to demonstrate how the commitment to increase HOL survey frequency has been implemented and how this method of survey is providing an effective ‘early warning’ system to detect caribou approaching the Haul Road. <p>The Proponent’s response to recommendations 1-3 should come in the form of an open letter submitted to both the GN and NIRB.</p>	<ol style="list-style-type: none">1. That the Proponent should explain why the number of HOL Surveys conducted in 2018 was less than 20% of the minimum number specified in the Project’s TEMP. <p>Agnico Eagle’s Response: Please refer to Agnico’s response to GN’s recommendation 3 above regarding the low number of road surveys, especially in April and May 2018. Since HOL surveys are generally conducted during road surveys, the overall number of HOL surveys was also affected by the reduced number of road surveys. Other factors that contributed to the low frequency of HOL surveys included, personnel issues, safety (i.e., two field staff were not always available to walk to the HOL stations), and weather.</p> <ol style="list-style-type: none">2. That the Proponent should explain why HOL surveys were not conducted during the spring caribou migration. <p>Agnico Eagle’s Response: Please refer to Agnico’s response to GN’s recommendation 3 above regarding the frequency of road surveys during the spring Caribou migration. HOL surveys were conducted more frequently in spring 2019.</p> <ol style="list-style-type: none">3. That the Proponent should explain why the frequency of HOL surveys was not increased to every 2 days in 2018 in response to observations of caribou and subsequent Haul Road closures. <p>Agnico Eagle’s Response: Please refer to Agnico’s response to GN’s recommendation 9-1 above.</p> <ol style="list-style-type: none">4. The Proponent should provide a revised version of the TEMP that reflects the commitment made during the NIRB’s review of the Whale Tail Pit project to increase the frequency of HOL surveys (NIRB 2017, Appendix B). <p>Agnico Eagle’s Response: An update TEMP Version 7 was submitted to NIRB on July 2, 2019 and included all of the commitments made during the NIRB review of the Whale Tail Project.</p> <ol style="list-style-type: none">5. The 2019 Annual Report should provide information to demonstrate how the commitment to increase HOL survey frequency has been implemented and how this method of survey is providing an effective ‘early warning’ system to detect caribou approaching the Haul Road. <p>Agnico Eagle’s Response: Agnico acknowledges GN’s recommendation and will include the requested information in the 2019 Annual Report.</p>	Appendix 52 Section 7 - Height-of-Land Monitoring; Table 7.2 - Height-of-Land Survey Data along the Whale Tail Haul Road in 2019; Section 7.6 - Management Recommendations; Appendix G - Whale Tail Viewshed Analysis - Roadside Survey Points; Appendix H - 2019 Height of Land Survey Forms
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		<p>identified in the TEMP as a sensitive season for caribou when monitoring levels are supposed to increase along the Haul Road. This means that no ‘early warning’ system was in place during this sensitive season. As only a single road survey occurred in the spring the detection of caribou during the spring migration of 2018 relied on incidental observations by Haul Road users. The GN finds this the lack of dedicated surveillance for caribou unacceptable.</p> <ul style="list-style-type: none">• Caribou observations and subsequent closures of the Haul Road occurred in 2018 (AEM 2019, appendix 45, table 3.9) but it appears from the 2018 Report that the frequency of HOL survey effort did not increase concurrently to every 2 days, as specified in the TEMP (TEMP version 6, section 3.5.2.6 and table 14).• HOL surveys are supposed to occur during all phases of the Project that have potential to interact with caribou including construction and operations phases. 2018 was a construction year for the Whale Tail Project.• The GN has repeatedly expressed concern that the minimum frequency of HOL surveys, as specified in the TEMP (versions 5 and 6), is too low and will not provide the ‘early warning’ system needed to protect caribou from adverse impacts of the Haul Road. The fact that survey effort in 2018 was below the levels specified in the TEMP, levels the GN already considers too low, is of great concern. Neither the TEMP in its current form nor the survey effort implemented in 2018 reflects the commitment to increase survey effort made by the Proponent during the NIRB’s review of the Whale Tail Pit project.• Given the low levels of HOL surveying and road surveying in 2018, including a near total lack of reported surveying during the spring migration, it appears that implementation of the Project’s caribou protection measures was highly dependent on incidental observations of caribou made by people using the Haul Road. These observations are short range in nature resulting in a decrease in their effectiveness in use as a preventative measure for disturbance. This lack of surveillance may have contributed to the observed deflection of caribou from the road in 2018, as reported in the 2018 Report (AEM 2019, appendix 45, table 3.12). <p>Overall, the GN finds that survey effort to support caribou protection measures was unacceptably low in 2018; below the minimums specified in the TEMP for each type of survey. Further the minimums specified in the TEMP are themselves too low and have not been increased in accordance with commitments made the Proponent during the NIRB’s review of the Whale Tail Pit project. The GN is of the view that the Proponent is accordingly non-compliant with term and condition 28 (NIRB Project Certificate 008).</p>			
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It appears that the caribou protection measures specified in the Project’s Terrestrial Ecosystem Management Plan (TEMP), in the form of decision trees, are not being fully or consistently implemented. If this is the case, this would accordingly mean the Proponent is non-compliant with Terms and Conditions Nos. 28 and 30 (Project Certificate 008).</p> <p>The 2018 Report provides information on the management of Project roads in response to the presence of caribou, including road closures to allow caribou to cross. The GN notes several areas where clarifications and/or additional information regarding road management are needed in-order for reviewers to determine whether the Project’s caribou protection measures are being implemented properly. The GN is also concerned that the closure of roads in 2018 may not, in several instances, have been managed in accordance with the caribou protection measures specified in the Project’s TEMP.</p> <p>Road Closures for Caribou in 2018</p> <p>The 2018 Report provides a summary of road-related mitigation in response to observations of caribou in 2018. This includes tables summarizing road closures and traffic restrictions along the All-Weather Access Road (AWAR), Vault Haul Road, and Haul Road (AEM 2019, appendix 45, table 3.7, 3.8, 3.9 respectively). The GN notes several inconsistencies between these tables and other parts of the 2018 Report, as follows:</p> <ul style="list-style-type: none">• Information in table 3.7 does not match that appearing in table 4.1 which lists wildlife observations made in 2018 that required action. For example, table 4.1 indicates that the AWAR was closed August 12, 13 and 21. These closures are not listed in table 3.7. The 2018 Report does not explain this inconsistency.• Review of the 2018 Report’s appendices shows that there were numerous days during the spring and fall caribou migrations when caribou, in groups greater than the Group Size Thresholds (GST) specified in the TEMP and under Term and Condition No. 30 (NIRB Project Certificate 008), were observed within 1.5 km of the AWAR or Haul Road; typically within a range of 500m. Examples of days when these observations were recorded are listed in table 1 below. In accordance with the caribou protection measures specified in the TEMP, these observations should have triggered a road closure to non-essential vehicles (TEMP version 6, Figures 7 and 8). However, these closures are not reported in tables 3.7 to 3.9, table 4.1 or in other parts of the 2018 Report. It is unclear why road closures were not implemented on these days. The GN is concerned that the Project’s caribou protection measures are not being properly implemented. <p>Table 1. Days in 2018 when caribou, in groups exceeding GSTs, were observed near Project roads but road closures were not implemented.</p> <p>Source Days Observation Made Road Appendix A (AEM 2019) April 4, 24. May 8, 11, 18, 25. Sept 25, 28. Oct 1. Nov 15 AWAR Appendix B (AEM 2019) April 19. Oct 17, 24, 25. Haul Road Appendix E (AEM 2019) April 2, 7, 8, 9, 10, 24, 25. May 24. Oct 22, 28, 31. Nov 8, 9, 15, 16 AWAR Appendix E (AEM 2019) Sept 22, 26, 27 Haul Road</p> <p>For the Whale Tail Pit Haul Road, road restrictions related to ungulate activity caribou are summarized in table 3.9 (AEM 2019, appendix 45). The table provides</p>	<p>The GN offers the following recommendations to the Board with respect to this issue:</p> <ol style="list-style-type: none">1. That the Proponent should clarify the inconsistencies between tables 3.7 and 4.1 in the Annual Report with respect to road closures for caribou.2. That the Proponent should explain why road closures were not implemented in response to observations of caribou made on the days listed in table 1 (above).3. With respect to the reported closure of the AWAR on September 27, 2018, the Proponent should explain what information from caribou monitoring, on or around September 27, prompted the road closure. The Proponent should clarify where this information can be found in the 2018Report. The Proponent should advise what monitoring information formed the basis for reopening the road after September 27.4. That the Proponent should explain why the AWAR was not closed earlier during fall migration in response to collar maps provided to road managers.5. That the Proponent should outline what specific efforts and investment it made in 2018 to collect data on the movements of collared animals in proximity to the Haul Road in-order to support day-to-day road management and monitor Project effects.6. That the Proponent should retain the services of a consultant to conduct an independent audit of the implementation of caribou protection measures for the Project. This audit should assess how the caribou decision trees within the TEMP are being implemented in each case when caribou are observed near the Project in 2019. Results of this audit should be appended to the 2019 Annual Report.7. The Proponent should ensure that the caribou decision trees specified in the TEMP (TEMP version 6, figures 7 and 8) will be implemented in a	<ol style="list-style-type: none">1. That the Proponent should clarify the inconsistencies between tables 3.7 and 4.1 in the Annual Report with respect to road closures for caribou. <p>Agnico Eagle’s Response: The data represented in Table 3.7 (and Tables 3.8 and 3.9) and Table 4.1 originate from two different sources. Table 3.7 summarizes information contained in ‘Wildlife Mitigation Documentation’ (i.e., Road Status Updates) provided in Appendix C, while Table 4.1 summarizes information from the more general ‘Wildlife Observation Records’ (see Appendix E), which focus on observations within the mine sites. Inconsistencies between these two data sources will be corrected in the 2019 report.</p> <ol style="list-style-type: none">2. That the Proponent should explain why road closures were not implemented in response to observations of caribou made on the days listed in table 1 (above). <p>Agnico Eagle’s Response: Collection of data linking monitoring results with mitigation actions (e.g., road closures) was not adequate in 2018 but has been approved in 2019. For the 2019 report, a clearer link will be described.</p> <ol style="list-style-type: none">3. With respect to the reported closure of the AWAR on September 27, 2018, the Proponent should explain what information from caribou monitoring, on or around September 27, prompted the road closure. The Proponent should clarify where this information can be found in the 2018 Report. The Proponent should advise what monitoring information formed the basis for reopening the road after September 27. <p>Agnico Eagle’s Response: Closure of the road on September 27 likely resulted from information provided by road maintenance, operations, or Environment staff rather than from a dedicated survey. In the future, more information behind decisions to close roads or restrict traffic will be provided.</p> <ol style="list-style-type: none">4. That the Proponent should explain why the AWAR was not closed earlier during fall migration in response to collar maps provided to road managers. <p>Agnico Eagle’s Response: It’s part of Agnico’s management to increase the field road surveillance when the collars maps received indicated that the caribou are approaching. The collars maps are not the only tool use to trigger the closure or not of the road.</p> <ol style="list-style-type: none">5. That the Proponent should outline what specific efforts and investment it made in 2018 to collect data on the movements of collared animals in proximity to the Haul Road in-order to support day-to-day road management and monitor Project effects. <p>Agnico Eagle’s Response: As collared animals entered the study area and approached mine facilities, requests are made to the GN/Caslys Consulting to increase the frequency at which collar location maps were provided. Examples include: a) April 16, 2018 – request for collar maps to 2x/week; b) September 4, 2018 – request for collar maps to 2x/week; and c) April 01, 2019 – request for daily collar maps.</p> <ol style="list-style-type: none">6. That the Proponent should retain the services of a consultant to conduct an independent audit of the implementation of caribou protection measures for the Project. This audit should assess how the caribou decision trees within the TEMP are being implemented in each case when caribou are observed near the Project in 2019. Results of this audit should be appended to the 2019 Annual Report. <p>Agnico Eagle’s Response: Agnico acknowledges GN’s recommendation and will evaluate it further.</p> <ol style="list-style-type: none">7. The Proponent should ensure that the caribou decision trees specified in the TEMP (TEMP version 6, figures 7 and 8) will be implemented in a consistent manner on every occasion caribou are observed. <p>Agnico Eagle’s Response:</p> <p>Agnico will ensure that the decision trees in version 6 of the TEMP will be implemented in a consistent</p>	<p>Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table 3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation</p>
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		<p>that traffic was “restricted” on difference occasions but does not define what the term “restricted” means. Additionally, there is no additional information regarding decisions to allow partial travel or partial activity when the Haul Road was otherwise closed. This lack of information hinders reviewers’ ability to meaningfully analyze the effectiveness of all road mitigation measure.</p> <p>The 2018 Report indicates that during the period September 16 to October 14:</p> <p>“Some of the Lorillard and Wager Bay animals that did not cross the Meadowbank Road during late summer crossed successfully during the fall season, particularly those animals north of Whitehills Lake (see Figures 6.2, 6.5 and 6.8). Others, primarily along the Whale Tail Haul Road north of the Vault and south of Whitehills Lake appeared to move away from the road in a northeastern direction, remaining east of the road during the fall rut (see Figures 6.2 and 6.8). Mine records indicate that small to moderate groups of Caribou were seen within the mine LSAs during the fall period (see Table 4.2 and Appendix E). Only one road closure on 27 September along the Meadowbank AWAR was required during this period (see Table 3.4 and Table 4.1).” (AEM 2019, appendix 45, section 6.6)</p> <p>With respect to this statement the GN notes the following:</p> <ul style="list-style-type: none">• Contrary to suggestions in the 2018 Report, the Meadowbank AWAR road closure on September 27 does not appear to be a response to the observation of caribou near the road; a response specified in the Project’s TEMP. Neither Appendix E nor table 4.2 of the 2018 Report lists any caribou observations along the AWAR from September 22 to 30. It appears the timing and duration of this road closure was not based on caribou monitoring information.• As noted above, in table 1 of this GN comment, observations of caribou above the GSTs were made on several days in September and October. These should have triggered closure of the AWAR but according to the 2018 Report did not.• The GN provided maps of the locations of collared caribou to the Proponent on a daily basis during spring and fall migration periods. As is discussed in the 2018 Report and also evident from these maps, the September 27 road closure occurred after the bulk of collared animals had been deflected several times in their attempts to cross the road. The GN is concerned that this one-day road closure occurred too late, after adverse effects on migrating caribou, spanning a period of several weeks, had already occurred. It is unclear why the AWAR was not closed earlier and for longer during the fall migration in response to the collar information provided to road managers and the ground-based observations of Project personnel. The Project’s caribou protection measures are meant to be applied proactively to prevent adverse effects rather than being applied after these effects have occurred. <p>Deflection of Caribou and Available Collar Data</p> <p>The 2018 Report acknowledges that a significant deflection of caribou from Project roads occurred in 2018, stating that:</p> <p>“Collared animals are observed throughout the RSA (typically around spring and fall migratory periods). A pattern of animals being deflected from the AWAR is evident based on an analysis of data from 2011 to 2018 (Figures 6.7 and 6.8).” (AEM 2019, appendix 45, section 6.7)</p> <p>With respect to the report’s findings the GN notes that inspection of figures 6.7 and 6.8 suggests that caribou were also deflected by the Haul Road during their spring migration in 2018. The GN is concerned that once more collared animals are observed interacting with the Haul Road and once haul truck traffic begins to use the Haul Road, this observed pattern of deflection will worsen.</p>	<p>consistent manner on every occasion caribou are observed.</p> <p>The GN seeks the following clarifications with respect to Table 3.9 of the 2018 Report:</p> <ul style="list-style-type: none">• For April 22, please explain what is meant by “restricted”. Does this mean the amount of traffic using this portion of the road was decreased? If so, how. If not, what restrictions were implemented. How does escorting of traffic reduce disturbance of caribou?• For April 27, 28 and May 14, 15, 27, please explain what is meant by “restricted” in each of these cases.• For May 4 the table indicates that the Haul Road was “Closed to all traffic; construction work allowed to continue between Vault Laydown and km 20”. Please explain what caribou monitoring (i.e. height-of-land surveys, road surveys etc.) was being conducted on May 4 that supported the decision to continue construction. What information was obtained from this monitoring that led to the decision to continue construction? Where in the Annual Report is this monitoring information reported?• For May 8 and 11, please explain whether the closures on these days are reported as caribou-related, or were the result of weather closures.• For May 22 why was the road only closed for northbound traffic? What is different about southbound traffic that made it acceptable to continue while caribou were crossing the road? <p>The Proponent’s written deliverables to the GN’s requests and recommendations should be presented in the form of an open letter to the both the GN and NIRB.</p>	<p>manner.</p> <p>The GN seeks the following clarifications with respect to Table 3.9 of the 2018 Report:</p> <ul style="list-style-type: none">• For April 22, please explain what is meant by “restricted”. Does this mean the amount of traffic using this portion of the road was decreased? If so, how. If not, what restrictions were implemented. How does escorting of traffic reduce disturbance of caribou? <p>Agnico Eagle’s Response: Under ‘restricted’ access, only obligatory small vehicles or light trucks are permitted to use the road. Tankers or other heavy equipment for hauling, construction or maintenance are not allowed. This means that the amount of traffic using this portion of the road was significantly decreased.</p> <p>When delivery of goods or to allow crew change are necessary, escorts are led by a member of the Environment Department, in collaboration with the Baker Lake HTO and/or KIA, who is adequately trained (i.e., able to assess Caribou behaviour, movements, etc.) and has the authority to stop the convoy, if necessary. For example, a convoy travelling from Baker Lake to Meadowbank in spring 2019 stopped for several hours to allow a group of Caribou to cross the road. In addition, convoys limit disturbance to a single event rather than multiple events over a longer period of time.</p> <ul style="list-style-type: none">• For April 27, 28 and May 14, 15, 27, please explain what is meant by “restricted” in each of these cases. <p>Agnico Eagle’s Response: Please refer to Agnico’s response above.</p> <ul style="list-style-type: none">• For May 4 the table indicates that the Haul Road was “Closed to all traffic; construction work allowed to continue between Vault Laydown and km 20”. Please explain what caribou monitoring (i.e. height-of-land surveys, road surveys etc.) was being conducted on May 4 that supported the decision to continue construction. What information was obtained from this monitoring that led to the decision to continue construction? Where in the Annual Report is this monitoring information reported? <p>Agnico Eagle’s Response: The Environment Department, even if no official wildlife survey sheets were recorded, monitored the caribou migration along the WTHR on a daily basis during caribou migration. Recording all road monitoring was improved in 2019. On the notification sent to HTO, KIA and GN on May 4, Agnico mentioned: ‘Vault transit to KM20 is restricted to light vehicle only for the construction crew as no caribou were observed on that section of the road this morning’. It was determined that there is no risk to allow the construction between Vault laydown and Km 20. KIA was also on site on May 4 to provided assistance to the Environment Department with the monitoring of the road and no concerns were raised.</p> <ul style="list-style-type: none">• For May 8 and 11, please explain whether the closures on these days are reported as caribou-related, or were the result of weather closures. <p>Agnico Eagle’s Response: Road closures during the May 8th to 11th period were due to a number of factors, including snow accumulation, Caribou close to the road, and Muskox close to the road at Km 95 (see Appendix C of the 2018 Wildlife Report).</p> <ul style="list-style-type: none">• For May 22 why was the road only closed for northbound traffic? What is different about southbound traffic that made it acceptable to continue while caribou were crossing the road? <p>Agnico Eagle’s Response: The road was initially closed to northbound traffic leaving the Vault because Caribou were observed at the beginning of the Amaruq Road (note: southbound traffic would require some time to reach the Vault end of the road). Further evaluation determined that Caribou had moved away from the road later in the day allowing the road to be reopened to all traffic.</p>	
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			<p>As required under Term and Condition No. 57 (NIRB Project Certificate 004) and Term and Condition No. 29 (NIRB Project Certificate 008), the Proponent participates in a caribou collaring program in collaboration with the GN. The 2018 Report states that:</p> <p>“The satellite-collaring program was developed to provide information on the distribution of Caribou occurring within the Meadowbank RSA and contribute data to ongoing satellite-collaring programs for the Ahiak, Qamanirjuaq, and other herds. The satellite-collaring program, along with GN DoE regional data, is an important monitoring and management tool that provides a regional perspective on Caribou activity near mine operations. Another key objective of the program is to provide timely information for the Caribou management and monitoring strategy at the Meadowbank and Whale Tail sites (i.e., Decision Tree approach; see 2018 TEMP).” (AEM 2019, section 8.18.1.4)</p> <p>The 2018 Report does not indicate what investment was made by the Proponent in 2018 to deploy collars on caribou that are likely to interact with the Haul Road. It is thus unclear how the Proponent has attempted to fulfill the collaring program’s objective of obtaining timely information to support implementation of the ‘Decision Tree Approach’; an approach that requires near real-time information on the locations of caribou in-order to manage Project roads on a daily basis.</p>				
KIA	MBK	Annual Report 4.4.3 Predicted vs Measured Water Quality, 4.4.3.1 Meadowbank Site	<p>Vault Pit experienced 64% higher runoff volume in 2018 compared with the predicted amount. AEM suggests that this may have been due, in part, to “a large ice wall...formed in the Vault pit over the winter months” causing “a higher seepage flow rate entering the pit that was not accounted for in the original water balance” (p. 45). AEM does not indicate the cause of the ice wall, or whether it is likely to be a common occurrence. If it is, the water balance should be updated accordingly.</p>	<p>The KivIA would like an explanation from AEM on why the ice wall formed in the Vault pit in 2018 and whether it is likely to occur in future winters. Also, it is recommended that the water balance be updated if the ice wall is predicted to be a common occurrence and provide a discussion as to what changes to the water management plan may be required as a result of this ice wall.</p>	<p>The first occurrence of the ice wall at Vault was observed in 2017. The source of the ice wall is a water inflow observed on the catchbench at El. 109m. There is a high probability that the source of the ice wall is the water in the nearby attenuation pond. From 2017 to 2019 it has been observed that the ice wall formation was getting bigger year after year as the pit became deeper.</p> <p>As mining activity are over in Vault Pit it is considered that the ice wall water inflow will contribute to the natural reflooding of the pit. This information will be updated in the water balance.</p>		Meadowbank Water Balance in Appendix A of the Meadowbank Water Management Plan (Appendix 11)
KIA	MBK	Annual Report 8.5 Mine Site Water Quality and Flow Monitoring, 8.5.3.1. Meadowbank Site	<p>Table 8.21 shows monitoring data for 2014-2018 for ST-16, NP2, NP1, Dogleg and Second Portage Lake. Values that correspond to half detection limits are bolded. It would be helpful to also highlight values that represent exceedances to the listed regulatory limits.</p>	<p>The KivIA recommends that AEM highlight exceedances to listed regulatory limits, in particular water license, MDMER and CCME, in tables reporting water quality data within the receiving environment</p>	<p>Agnico acknowledges KIA’s recommendation and will highlighted exceedance in the table presented as part of the Annual Report.</p>		Section 8 of the 2019 Annual Report
KIA	MBK/WT	Appendix 31 Meadowbank and Whale Tail 2018 Core Receiving Environment Monitoring Program, Section 2.3.1, page 28	<p>AEM states, “The sequential extraction test results failed the QA/QC assessment in two rounds of analysis. In the original set of analyses, the samples were incorrectly processed (i.e., pulverized) by the laboratory prior to analysis using the sequential extraction procedure. The effect on the data was anomalously high concentrations of most metals in sequential extraction steps... Maxxam was conducting additional analyses on the sediment to determine the source of the error while the 2018 CREMP report was finalized. The sequential extraction test results were not included in the discussion of sediment metals bioavailability at TPE, WAL, or the Whale Tail study areas.” Since the study results were deemed inaccurate and the bioavailability of metals in the sediment of TPE, WAL and Whale Tail was not quantifiable, the KivIA recommends that AEM complete another sequential extraction study once the source of the error is determined.</p>	<p>The KivIA would also like AEM to indicate if another sequential extraction study will be completed in 2019 to determine sediment metals bioavailability at TPE, WAL and Whale Tail since the 2018 results did not meet the data quality objectives</p>	<p>Maxxam was unable to resolve the QA/QC issues identified with the 2018 testing, resulting in Azimuth’s lack of confidence in the sequential extraction procedure (SEP). While the SEP had been used successfully in the past without any QA/QC issues, our experience last year led us to explore alternative tools given the unreliability of the SEP. For 2019, Agnico plan on repeating the sediment toxicity testing (chironomid and amphipod tests) and coupling that with sediment porewater analyses to directly measure metals concentrations to address bioavailability (i.e., porewater analyses will replace the SEP).</p>		Appendix 35 - 2019 CREMP Report Section 4.6.3



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KIA	MBK/WT	Appendix 31 Meadowbank and Whale Tail 2018 Core Receiving Environment Monitoring Program, Section 3.3 Water Chemistry, page 39; Appendix 37 Meadowbank 2018 Groundwater Monitoring Program Report, Section 2.5.2 Duplicates, field and trip blank; Appendix 38 Whale Tail 2018 Groundwater Management Monitoring Report, Attachment A 2018 Westbay Sampling Technical Memorandum, Section 5.0 Quality Assurance/Quality Control, page 10	<p>AEM states, “The few exceedances of the established data quality objectives (DQOs) represent much less than 1% of the total QA samples and parameters measured – there were only nine out of over 1,200 field duplicate RPD values that exceeded 50%.” In the KivIA’s experience, 50% is not a standard value for RPD analysis.</p> <p>In Appendix 37 AEM states, “USEPA (1994) indicates that an RPD of 20% or less is acceptable.” This reference is also included in Appendix 38 where AEM states, “Per USEPA recommended methods (USEPA, 1994), an RPD of 20% or less was considered acceptable.”</p>	The KivIA recommends that AEM compare RPD values to a standard value (e.g.: 20% as recommended by the USEPA) or provide a reference supporting the use of a 50% RPD for comparison	<p>CCME’s Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment: Volume 1 Guidance Methods and Volume 4 Analytical Methods (2016) both recognize that field duplicates are inherently more variable than laboratory duplicates. Consequently, they state that acceptance limits for field-based QC are broader than laboratory QC and are typically 1.5 to 2 times the laboratory QC limits. The Guidance Methods (CCME 2016) state that “quantifying acceptable precision is a matter of judgement, but assuming that field and laboratory error are similar in magnitude, acceptance criteria twice those given above [sic for laboratory QC limits] would result. Consequently, an RPD of 40% for surface water field duplicate samples would be consistent with CCME guidance.</p> <p>The Guidance Methods (CCME 2016) also states that “near to the detection limit, acceptance criteria are relaxed...within 5X of the LRL [sic laboratory reporting limit]...duplicate concentrations should be less than 2X the LRL.” Further, they note that “the importance of reduced precision becomes more important when concentrations straddle or are near regulatory guidelines.”</p> <p>Thus, the acceptance criteria for field duplicate QC samples recommended by CCME (2016) will be adopted for the 2019 CREMP.</p>		Appendix 35 - 2019 CREMP Report Appendix A QAQC (Section 1.1)
KIA	MBK/WT	Appendix 31 Meadowbank and Whale Tail 2018 Core Receiving Environment Monitoring Program, Section 4.3.2 Temporal and Spatial Trends, pages 49 - 53 and Figure 2-2	<p>AEM states, “The Meadowbank project lakes (NF locations only) were screened against site-specific trigger and threshold values developed for the Meadowbank project lakes and Walley Lake.” AEM then indicates that conductivity/hardness exceeded trigger values in TPN, TPE, SP and WAL; calcium, magnesium, potassium and sodium exceeded trigger values in TPN, TPE, SP and WAL; TDS exceeded trigger values in TPN, TPE, SP and WAL; and alkalinity exceeded trigger values in SP and TPE. Furthermore, AEM states, “the trends described above are clearly mine-related.” And indicates, “The same list of parameters that exceeded the Meadowbank trigger values typically exceeded the concentrations predicted in the FEIS, namely ionic compounds (calcium and magnesium), hardness, and total alkalinity.”</p> <p>According to AEM’s Management response plan for the Meadowbank Mine Aquatic Environment Monitoring Program Figure 2-2 an exceedance of an early warning trigger(s) requires an assessment of the magnitude of the change, the spatial scale of the change and the reversibility of the change. AEM has assessed the magnitude of the change and completed a literature review describing some of the possible effects of the increased concentrations.</p> <p>The KivIA is concerned however, that AEM has not discussed the implications of these increasing concentrations on the community composition of phytoplankton, zooplankton nor benthic invertebrate. Changes in community composition at these lower trophic levels of the aquatic ecosystem may have implications for higher trophic levels.</p> <p>The KivIA is further concerned that AEM has neglected to assess whether these trends in water chemistry are reversible nor have they determined their spatial extent.</p>	<p>The KivIA recommends that AEM complete the following:</p> <p>i) Investigate the source of these parameter increases, their spatial extent and the reversibility of these trends.</p> <p>ii) Discuss the implications of increased conductivity, calcium, magnesium, potassium, sodium, TDS and alkalinity at the near-field sites on lower trophic levels, specifically in terms of the community composition of phytoplankton, zooplankton and benthic invertebrates.</p> <p>iii) In accordance with AEM Management Response Plan for the Meadowbank Mine Aquatic Environment Monitoring Program, that AEM increase monitoring frequency at the mid-field sites to determine the spatial extent of exceedances observed in the near-field during the open water season.</p> <p>iv) Conduct an investigation of cause study for the observed changes in water chemistry and determine possible management strategies.</p>	<p>The Management Response Plan (MRP) is shown in Figure 2.2 of the 2018 CREMP report. However, details of the MRP are laid out in the 2015 AEMP document, which describes the AEMP-related monitoring programs, how they are cross-linked, and the MRP. The 2015 report states that “management actions will be taken in cases where integrated evaluation of results across AEMP programs identifies a potential impact to the receiving environment; the scope of management actions will depend on the nature of the problem, the spatial scale, evidence for causality, permanence and uncertainty.” This recognizes that the management actions are tailored to the situation and are not prescriptive. In the present case, none of the parameters shown to have increased due to mining have effects-based threshold values (i.e., the early warning triggers are based solely on statistical comparisons rather being set relative to an effects-based threshold). This situation is also considered in the results-based sampling strategy that dictates monitoring requirements at mid-field and far-field areas (see Section 2.2.3 of the 2018 CREMP report). Further, information from the literature suggests that none of the observed changes are close to concentrations of concern for aquatic life (i.e., assessment of negligible risk). Consequently, no further management actions were recommended other than tracking the temporal and spatial trends.</p> <p>While Agnico has been managing the mine-related changes in water quality according to the MRP, we acknowledge that the supporting information could be better packaged to document the rationale for the recommended management action. To that end, Agnico will commission a technical memorandum that addresses elements i) and ii) of the stated concerns above and includes an assessment of uncertainty; this memorandum will be included as an appendix in the 2019 CREMP. Should that assessment indicate that elements iii) and iv) are needed to support management decisions, then they will be considered at that time.</p>		Appendix 35 - 2019 CREMP Report Appendix J Quality Effect Assessment



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KIA	WT	Appendix 38 Whale Tail 2018 Groundwater Management Monitoring Report, Attachment A 2018 Westbay Sampling Technical Memorandum, Section 2.1 Westbay Well Installation, page 2; Appendix 37 Meadowbank 2018 Groundwater Monitoring Program Report, Appendix A 2018 Groundwater Factual Report, Section 1.1 Background, page 1	<p>AEM states, “The total dissolved solids (TDS) content in the Formation groundwater was determined to range between 2,198 mg/L and 4,042 mg/L (Golder 2016a).” These values are for the Whale Tail Pit area collected at a lower depth than those obtained for the Meadowbank Mine site. Results obtained at the Meadowbank site are from shallower sites and measured TDS concentrations between 52 and 1727.7 mg/L.</p> <p>SNC Lavalin was commissioned to review historical groundwater throughout the Meadowbank and Whale Tail project area; they provided the following recommendations:</p> <p>“›De-icing salt and calcium chloride brine used to prevent the boreholes from freezing after drilling operation remains in groundwater for years despite intensive purging of wells after installation. When those products are used in boreholes without a dye tracer, it becomes impossible to establish background conditions of groundwater chemistry, despite extensive purging of the wells. Salinity, concentration of calcium and chloride dissolved in groundwater fluctuate from multiple order of magnitude throughout the years and show no logical trend; The sampling methodology used to retrieve groundwater samples induce the sample to be either diluted (sample not collected in front of the well screen) or charged with parameters that come from fine particulates found in dirty water (sediment in suspension in a sample from sumps and horizontal well can induce false results because groundwater samples are collected in bottle with preservatives but are not filtered in the field before adding the water to the bottles with preservatives); and</p> <p>› Important chemical parameters to establish background chemistry were missing from the data set (major ions dissolve in groundwater).”</p> <p>The SNC Lavalin recommendations raise the question as to whether differences between measurements collected at Meadowbank and Whale Tail may indicate differences in site specific groundwater chemistry, sample collection depth or methodological differences between SNC Lavalin and Golder that have confounded the results.</p>	The KiviA recommends for the 2019 annual report that AEM provide a discussion of the implications of adopting SNC Lavalin’s recommendations and whether observed differences between data gathered at Meadowbank and Whale Tail are due to site specific differences in groundwater chemistry, sample depth collection or methodological factors.	Agnico acknowledges KIA’s comment and will provide requested information in the 2019 Annual Report.		Appendix 47 - Groundwater Monitoring Report Section 4.0
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, Section 2.8, Overview – Mitigation Audit, page 10	The proposed Mitigation Audit to begin in 2019 “to evaluate the use and effectiveness of the mitigation, following principals of adaptive management, and to identify additional mitigation measures as required” is a useful idea but as presented lacks detail.	The KiviA would like AEM to explain why only a summary of the audit will be provided in the annual report, and whether the Terrestrial Advisory Group (TAG) will review and advise on drafts of the audit.	Agnico will appended an audit report to the annual report if available on time. The conclusion of the Mitigation Audit can be discussed with the TAG.		Appendix 52 Section 2.8 - Mitigation Audit
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Roads Surveys, page 23	The results from the different monitoring methods are not integrated or correlated, nor are the sequences documenting the management actions recorded. There was no integration of the collar data with the road surveys, incidental sightings and HOL surveys. Although Tables 3.7–3.9 summarize road restrictions, the triggers (e.g., collar locations, road survey observations, HOL survey data, and/or incidental sightings) that led to road closures were not presented.	<p>The KiviA recommends that the report more clearly show:</p> <p>i) when and how the decision trees were followed,</p> <p>ii) the sequence of monitoring which led to triggers and mitigation actions,</p> <p>iii) follow-up monitoring to examine the efficacy of the mitigation.</p>	<p>i) when and how the decision trees were followed,</p> <p>Agnico Eagle’s Response: For the 2019 report, a clearer link between monitoring outcomes and management responses will be provided (as per the decision tree approach).</p> <p>ii) the sequence of monitoring which led to triggers and mitigation actions,</p> <p>Agnico Eagle’s Response: Clearer links between monitoring and management will be provided in the 2019 report.</p> <p>iii) follow-up monitoring to examine the efficacy of the mitigation.</p> <p>Agnico Eagle’s Response: Agnico is investigating the possibility of conducting a more comprehensive analysis of the effectiveness of mitigation measures in reducing road-related effects on Caribou movements.</p>		Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table



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							3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Roads Surveys, page 23	The results from the different monitoring methods are not integrated or correlated, nor are the sequences documenting the management actions recorded. There was no integration of the collar data with the road surveys, incidental sightings and HOL surveys. Although Tables 3.7–3.9 summarize road restrictions, the triggers (e.g., collar locations, road survey observations, HOL survey data, and/or incidental sightings) that led to road closures were not presented.	The KivIA recommends that more information is needed other than the herd was ‘close’. For example, the tables provided in S 3.6.5 Road-related Mitigation are useful giving the frequency and duration of closures but should include the thresholds or sightings that triggered the closures.	The linkages between monitoring results and mitigation action will be more clearly outlined in the 2019 annual report.		Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table 3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys	Traffic data are an integral component of caribou (and muskox) management, and it is critical that daily mine traffic be presented from all roads. However, in the report traffic frequency data are lacking.	<p>The KivIA recommends that AEM complete the following:</p> <p>i) Annual graphs showing haul trucks, medium vehicles (e.g., watering or fuel trucks), and light vehicles (e.g., pickup trucks) compared against predicted traffic levels.</p> <p>ii) Have the ATV traffic levels as recorded by security on AWAR presented in graphs as well.</p>	<p>i) Annual graphs showing haul trucks, medium vehicles (e.g., watering or fuel trucks), and light vehicles (e.g., pickup trucks) compared against predicted traffic levels.</p> <p>Agnico Eagle’s Response: Agnico acknowledge KIA’s recommendation and will evaluate the feasibility to include the requested information in the 2019 annual report. This will also be reviewed during the TAG meeting.</p> <p>ii) Have the ATV traffic levels as recorded by security on AWAR presented in graphs as well.</p> <p>Agnico Eagle’s Response: The monthly AWAR ATVs and snowmobile usage are already provided in Table 11.2 of the 2018 Annual Report.</p>		Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys–	<p>Under the stated objective “Document wildlife utilization along the AWAR, Vault Haul Road, and Whale Tail Haul Road corridors”. The KivIA recommends that it would be more accurate (and measurable) to document wildlife distribution and abundance than wildlife utilization (meaning is unclear).</p> <p>Under the stated objective “Evaluate wildlife trends along the road corridors, including identifying areas where higher densities of wildlife are observed. Evaluate whether road-related operations preclude Caribou from using suitable habitats</p>	The KivIA requires clarification on how are ‘unnatural’ and ‘suitable’ defined, and how will it be determined that caribou are not able to use suitable habitats and demonstrate unnatural use patterns beyond 1 km distance from roads (and beyond 500 m for pits and mine site; s 4.2, pg 30).	These threshold levels are an artefact of an earlier version of the TEMP (2006) and will be removed for the 2019 report as they are not in the revised TEMP (Table 14, TEMP v6).		Appendix 52 - Wildlife Monitoring Summary Report



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		Objectives, page 11	beyond 1,000 m. The threshold level along the roads is unnatural Caribou use patterns beyond 1,000 m".				
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys– 2018 Results, AWAR, page 13.	<p>The tables on the AWAR surveys (section 3.6.2) demonstrate annual trends and the seasonal numbers but the KivIA recommends that it should be cross-referenced to 3.6.5 Road-related Mitigation.</p> <p>The figures in this report are very informative. For example, Fig. 3.1 suggests that over half of AWAR had high densities crossing in 2018, and Fig. 3.4 indicates that the highest caribou densities along the Whale Tail haul road in 2018 were observed between Km 5 and 19, and Km 50 and 55, which suggests much of the road needs to be designed as caribou friendly.</p> <p>Figure 3.2 (cumulative caribou observations) is a good figure, but the KivIA recommends that it could show finer resolution than 5 km sections, perhaps 2 km for better resolution to focus mitigation efforts.</p>	The tables on the AWAR surveys (section 3.6.2) demonstrate annual trends and the seasonal numbers but the KivIA recommends that it should be cross-referenced to 3.6.5 Road-related Mitigation.	The feasibility of implementing this suggestion will be investigated for the 2019 annual report.		Appendix 52 Section 3.6 - 2019 Results; Figures 3.1, 3.2 and 3.3; Section 3.6.4 - Traffic Data and Caribou Movements; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table 3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys– 2018 Results, AWAR, page 13.	<p>The tables on the AWAR surveys (section 3.6.2) demonstrate annual trends and the seasonal numbers but the KivIA recommends that it should be cross-referenced to 3.6.5 Road-related Mitigation.</p> <p>The figures in this report are very informative. For example, Fig. 3.1 suggests that over half of AWAR had high densities crossing in 2018, and Fig. 3.4 indicates that the highest caribou densities along the Whale Tail haul road in 2018 were observed between Km 5 and 19, and Km 50 and 55, which suggests much of the road needs to be designed as caribou friendly.</p> <p>Figure 3.2 (cumulative caribou observations) is a good figure, but the KivIA recommends that it could show finer resolution than 5 km sections, perhaps 2 km for better resolution to focus mitigation efforts.</p>	Figure 3.2 (cumulative caribou observations) is a good figure, but the KivIA recommends that it could show finer resolution than 5 km sections, perhaps 2 km for better resolution to focus mitigation efforts.	Agnico acknowledge KIA's comment and a 2 km resolution will be used for figures included in the 2019 report.		Appendix 52 Section 3.6 - 2019 Results; Figures 3.1, 3.2 and 3.3
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys– Road Related Wildlife Mortality, page 26.	Table 3.10 shows four Arctic hare road-related mortalities in 2018, but Table 3:11 (Cumulative road kill data) does not acknowledge any mortalities of small mammals or any wildlife in 2018	The KivIA requests that AEM clarify this discrepancy.	Four Arctic Hare mortalities should have been included in Table 3.11. Careful attention will be paid to ensure consistency in the 2019 report.		Appendix 52 Table 3.13 - Wildlife Mortalities Related to the Meadowbank AWAR, Vault Haul Road, and Whale Tail Haul Road and Non-Mine Related Mortalities in 2019; Table 3.14 - Summary of Road-related Wildlife Fatality Records (2007 to 2019)



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KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 3.0, Road Surveys– Management Recommendations, page 27.	NA	<p>The KivIA recommends that:</p> <p>i) these suggestions should already be part of the report</p> <p>ii) they should be written in such a way as to be measurable based on how and when they will be implemented.</p>	<p>i) these suggestions should already be part of the report</p> <p>Agnico Eagle’s Response: The recommendation in this Section 3.0 Road Surveys – Management Recommendations are already part of the report and will continue to be implemented in 2019. This section will be revised in the 2019 report for clarity.</p> <p>ii) they should be written in such a way as to be measurable based on how and when they will be implemented.</p> <p>Agnico Eagle’s Response: Management recommendations will be revised to include information on the factors affecting implementation.</p>		Appendix 52 Section 3.8 - Management Recommendations
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 4. Pits and Mine Site Ground Surveys– Incidental Wildlife Observations, page 32	Table 4.1 (Wildlife Presence Requiring Action) shows nine instances of when a road was closed for caribou but with no details. Most of these observations and resultant closures are not captured in Tables 3.7-3.9: Summary of Road Restrictions.	<p>The KivIA recommends that this separation of observations by techniques needs some rethinking and re-presentation – perhaps a section on mitigation by topic (road closures) with the different monitoring techniques. This would help evaluate which monitoring methodology is more efficient in coverage and utility, and where there may be gaps and duplications.</p>	<p>The 2019 report will include an integrated section related to Caribou monitoring and mitigation that will ensure that the links between monitoring results and mitigation or management actions are clearly described.</p>		Appendix 52 Section 11 - Integrated Caribou Monitoring Results; Section 11.2 - Integrated Results; Table 11.1 - Summary of Caribou Monitoring Activities and Management Responses at theMeadowbank and Whale Tail Projects in 2019; Figures 11.1 to 11.4
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 4. Pits and Mine Site Ground Surveys– Incidental Wildlife Observations, page 36	Table 4.1 (Wildlife Presence Requiring Action) provides a summary of what appears to be a lot of deterrence of wolverine and wolf required at Meadowbank, especially in Jan-Feb 2018. Deterrence activities in 2018 for wolf and wolverine were the highest recorded over 4 years (Table 4.3). The Summary Report states that AEM employees are using “Well-defined food-handling practices and employee awareness programs”.	<p>The KivIA requires AEM to provide clarity on why there is a large requirement for deterrence. This unusual attraction may still be related to garbage or the kitchen facility</p>	<p>Several factors may explain increased Wolf and Wolverine presence in 2018: 1) Since Wolf and Wolverine population size is cyclical, increased numbers may have been present in the region in 2018; 2) potential limited prey availability may have led to an increase in attraction to the mine site; and 3) attractants may have been more readily available at the mine site in 2018. Waste management at site is in constant monitoring and is addressed by increasing the level of staff training. Employee on site are reminded regularly on proper waste segregation through departmental toolbox meetings and site wide communications. This is to stress the importance of maintaining a proper waste management. In 2018, Agnico continued to conduct weekly visits of the different infrastructures for the waste management as the incinerator, landfill, waste container and all areas around site to assess the performance of the waste management. These practices will be continued in 2019.</p>		Appendix 52 Section 4.5.5 - Predator Mammal Deterrence and Protection; Table 4.1 - Wildlife Presence Requiring Action at the Meadowbank and Whale Tail Sites in 2019 (from Appendix E).



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KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 6. Caribou Satellite-Collaring Program - Objectives, page 50	Figures 6.7 and 6.8 strongly suggest an influence of AWAR and the Whale Tail haul road for deflecting and delaying caribou road crossing, as acknowledged in the text (s 6.6, pg 61)	<p>The KivIA recommends that the next steps should be:</p> <p>i) quantification of these observations,</p> <p>ii) better/finer scale reporting of monitoring, and</p> <p>iii) mitigation to adaptively reduce the degree of deflection/delaying crossing.</p>	<p>Agnico will revise and update these sections in the 2019 Annual Report. Among other, clearer links between monitoring results and management decisions (i.e., how the decision tree is being implemented) and caribou monitoring and road management (i.e., mitigation effort) will be outlined in the 2019 report. As well, an integrated section on Caribou monitoring and management will improve clarity.</p>		Appendix 52 Section 3.6.4 - Traffic Data and Caribou Movements; Figure 3.6 - Monthly Traffic Data along the AWAR and Whale Tail Haul Roads in 2019; Section 3.6.6 - Road-related Mitigation; Section 3.6.7 - Caribou Responses to Mitigation; Table 3.12 - Observations of Caribou Crossing Mine Roads in 2019; Appendix C - 2019 Wildlife Mitigation Documentation; Section 11 - Integrated Caribou Monitoring Results; Section 11.2 - Integrated Results; Table 11.1 - Summary of Caribou Monitoring Activities and Management Responses at the Meadowbank and Whale Tail Projects in 2019; Figures 11.1 to 11.4
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 7.0, Height of Land Monitoring	The data as presented leads one to question whether HOL surveys are “an effective ‘early warning’ system” (pg 65).	<p>The KivIA recommends the following:</p> <p>i) Fig. 7.1 shows “Maximum observable areas” which are totally unrealistic – some appear to be >10-12 km. These should be capped at 4 km maximum as it is not possible to detect caribou beyond 3-4 km distance.</p> <p>ii) Table 7.1 (Height-of-Land Survey Data) needs to be compared with road surveys and other triggers for intensified mitigation to see whether the HOL actually contribute to monitoring at distances beyond what the road surveys provide. Did the fall 2018 HOL surveys contribute to Whale Tail haul road monitoring and mitigation? This is not stated in the report.</p>	<p>i) Fig. 7.1 shows “Maximum observable areas” which are totally unrealistic – some appear to be >10-12 km. These should be capped at 4 km maximum as it is not possible to detect caribou beyond 3-4 km distance.</p> <p>Agnico Eagle’s Response: HOL maps will be revised in the 2019 report to reflect this suggestion.</p> <p>ii) Table 7.1 (Height-of-Land Survey Data) needs to be compared with road surveys and other triggers for intensified mitigation to see whether the HOL actually contribute to monitoring at distances beyond what the road surveys provide. Did the fall 2018 HOL surveys contribute to Whale Tail haul road monitoring and mitigation? This is not stated in the report.</p> <p>Agnico Eagle’s Response: The effectiveness of the HOL survey approach will be discussed at future TAG meetings. A discussion on the effectiveness of the approach will be included in the 2019 report.</p>		Appendix 52 Section 7 - Height of Land Monitoring; Figure 7.1 - Location of Height of Land Surveys along the Whale Tail Haul Road (and View Corridors); Table 7.2 - Height of Land Survey Data along the Whale Tail Haul Road in 2019; Section 7.6 - Management Recommendations; Appendix G - Whale Tail Viewshed Analysis - Roadside Survey Points; Appendix H - 2019



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							Height of Land Survey Forms
KIA	MBK/WT	Appendix 45, Meadowbank and Whale Tail 2018 Wildlife Monitoring Summary Report, section 8.0, Remote Camera Monitoring	No results were provided from the remote camera monitoring and it is unclear how the remote cameras will contribute to monitoring	The KivIA recommends that the Methodology section should state how the camera data will be used for monitoring and mitigation	The primary purpose of remote cameras is to document behavioral interactions rather than monitoring Caribou presence or abundance. The 2019 report will provide a more comprehensive discussion on results of the program.		Appendix 52 Section 8 - Remote Cameras; Appendix I - Remote Camera Protocol – Whale Tail Haul Road; Appendix J - Whale Tail Haul Road – Remote Camera 2018/2019 Summary
NIRB	MBK	Board Recommendation 2018-2019 MBK	Condition 25 requires the Proponent to manage and control waste in a manner that reduces or eliminates the attraction of carnivores and/or raptors to the site. In addition, the Proponent is required to employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. During the 2019 site visit, NIRB staff did not observe wildlife deterrents for the Meadowbank project (landfill, waste storage areas, or fuel tank farm at Baker Lake). Since 2017, raptors (Peregrine Falcon) have nested at various Meadowbank sites including quarry sites along the all-weather access road including quarry 22 which was used as temporary storage for contaminated hydrocarbon soil from 2009 to 2012 until the first contaminated soil storage/pilot remediation site (later converted to a landfarm) landfarm was developed in 2013. Plans are in place to remediate this quarry site and the NIRB has discussed annually regarding reclamation of quarry 22 but delays have occurred due to an active Peregrine Falcon nest at this quarry site since 2017. Further, deterrents were not observed at the Baker Lake Marshalling Area which has attracted other types of nesting birds in the past (ravens and songbirds). Lack of wildlife deterrence at this site and other areas at the Meadowbank site does not fully meet the requirements of Term and Condition 25 of the amended Project Certificate No. 004.	<p>The Board requests that Agnico Eagle Mines Ltd. provide an explanation why deterrents were not put in place around the fuel tank farm at Baker Lake or quarry 22 in 2018 where birds have nested and has necessitated the removal of a nest or delay of work. In addition, a proposed timeline of activities for the remediation of quarry 22 and any other quarry sites along the all-weather access road that has been used by raptors should be included.</p> <p>The requested information should be provided to the Board within 30 days following the issuance of this recommendation.</p>	<p>Agnico Eagle acknowledge NIRB’s recommendation and will put effort to eliminate wildlife attraction at the Meadowbank landfill by employing approved deterrents for carnivores. Other waste storage area on Meadowbank Site are well contained and didn’t show any problems with wildlife.</p> <p>Agnico used to add deterrents on top of the Baker Lake fuel tank farm. However, high wind in this area have destroyed the deterrents and make them inefficient. In Agnico’s view, Condition 25 of the Meadowbank Project Certificate does not specifically require the use of approved deterrent at the Baker Lake Fuel farm as it’s not a waste storage area or landfill, as stipulated in the condition. Nevertheless, Agnico will reinstall a deterrent at the top of the fuel tank at Baker Lake to avoid bird nesting.</p> <p>Deterrents will be installed before the next 2020 nesting season in Quarry 22 at Meadowbank in order to continue the soil decontamination. If the use of deterrents is successful in Quarry 22, Agnico will continue the work previously initiated in this area.</p> <p>No remediation works were performed in quarries along the AWAR in 2018, and thus, the presence of falcon in quarries does not represent for Agnico a concern at this moment. Timeline for remediation of quarries along the AWAR are provided in the Interim Closure and Reclamation Plan; reclamation is planned to be completed in the post-closure timing.</p>	The current timeline for the quarries’ reclamation is scheduled for 2031-2032. Progressive closure opportunities will be added in the upcoming update to the Interim Closure and Reclamation Plan and provided in the annual report.	Appendix 55 - ICRP-Update 2019 Rev 1 Section 6.2.2



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NIRB	MBK	Board Recommendation 2018-2019 MBK	<p>Term and Condition 36 for Project Certificate No. 004, Amendment 003 requires that Agnico Eagle place/hire local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet. Even though approximately 56 ships with fuel and goods ingress/egress at Baker Lake from Chesterfield Inlet in 2018, only one (1) marine mammal monitor was hired for a period between August 6 to August 23, 2018. Agnico Eagle did not provide a reason on why marine mammal monitors were not hired for the other ships that were travelling through Chesterfield Inlet. This concern was brought up last year by the Board and in response Agnico Eagle indicated that it is committing to hiring monitors for the entire shipping season to fulfill the term and condition. The Board stresses the importance of meeting this condition.</p>	<p>The Board requests that Agnico Eagle Mines Ltd. provide an explanation of why local marine mammal monitors were not used for all vessels transporting fuel or materials for the Meadowbank Project during the 2018 season. This explanation should also include a description of any alternative monitoring and mitigation employed by the Proponent and its effectiveness and/or confirmation of planned efforts. A proposed timeline to achieve full compliance with Term and Condition 36 of Project Certificate No. 004 amendment 003 must also be provided.</p> <p>The requested information should be provided to the Board within 30 days following the issuance of this recommendation.</p>	<p>Agnico remains committed to meet compliance with Condition 36 and is intending to seek out monitors from the Chesterfield Inlet when possible. For multiple reasons (sickness, family related matters, personal issues, alternative work), availability of possible monitors being challenging in that area, Agnico would hire monitors from other local communities to ensure the condition is met.</p> <p>Recruitment is also done within the community agents to find reliable and available monitors that are willing to board the vessels for a significant time period, as the vessels are travelling back and forth from the Inlet to the Baker community. Recruitment from the community has always proved to be challenging as multiple candidates first accepted the proposed work but declined or changed their minds at the last minute. Some monitors that accepted to board the vessels did not appreciate the very different marine life and requested to unboard the vessel on short notice and did not want to pursue this type of work any further. Some monitors had health issues while onboard and could not continue their work. A plethora of personal reasons was also given to stop monitoring work. As an improvement further on, in March 2019, prior to the beginning of the barge season, Agnico Eagle toured the related communities, including Chesterfield Inlet, to advertise the need of having monitors available for the upcoming shipping season. Meetings included sessions with the hamlet counselors and mayor and local HTO representatives.</p> <p>Being a concern from Chesterfield, Agnico Eagle is still committed to include local monitors but alternatively, local helpers from the Kivalliq region have been hired full-time by the Environmental Department in the fall of 2019 and in cases where monitors from Chesterfield prove to be impossible or very challenging, theses helpers would be used to supplement coverage when needed.</p> <p>Agnico have, as part of Condition 40 of the Whale Tail Project Certificate, to develop and implement a Marine Mammal Management and Monitoring Plan (MMMMP). Desgagnés Group, the contractor responsible of fuel and goods delivery at Baker Lake, has been collaborating on the voluntary whale watching data collection project of the Marine Mammal Observation Network (MMON) since 2015. Each year, training is given by MMON to ship officers to train them in marine mammal identification and observation. Desgagnés, in collaboration with MMON, also developed a Poster and a manual with supporting documents for marine mammal identification. Those tools are available on each ship to increase the effectiveness of the marine mammal survey. Currently, Desgagnés Group apply the Marine Mammal and Seabird observer (MMSO) as described in the MMMMP. As an alternative to ensure data collection as per Condition 36, Agnico will evaluate with Desgagnés Group the possibility to pursuit, in the following years, the marine mammal monitoring from Helicopter Island to Baker Lake infrastructures.</p>	<p>Agnico noted the NIRB additional request made during the call on December 16, 2019, which is to provide the 2020 monitoring plan related to Term and Condition 36 as part of the 2019 Annual Report. This information will be included in the upcoming report along with the monitoring activities archived in 2019.</p>	<p>Section 11.8.2 of the 2019 Annual Report</p>
NIRB	MBK	Board Recommendation 2018-2019 MBK	<p>Term and Condition 74 of Project Certificate No. 004, Amendment 003 directs the Proponent to employ environmentally protective techniques to suppress surface road dust. As noted in previous NIRB annual reports and during site visits, Agnico Eagle has limited dust suppression to specific areas at Meadowbank: the haul roads at the mine site; a road between the Meadowbank gatehouse and Exploration Camp site; between the Baker Lake marshalling facility and the Baker Lake gatehouse; and the airstrip. Agnico Eagle uses calcium chloride on all the aforementioned roads except water is used on mine site haul roads and the airstrip. Along the all-weather access road (AWAR) between Baker Lake and Meadowbank dust suppression is only applied at five (5) areas identified by the community of Baker Lake, and monitoring results in 2018 indicated that rates of dustfall were effectively reduced in those specific locations and dust levels continued to be well within the range of historical values for those locations. In its response to the Board’s 2018 recommendations, Agnico Eagle maintained that it is meeting Term and Condition 74 of Project Certificate No. 004, Amendment 002 and that the approach where chemical suppressants are used in an intermittent fashion along a long-distance roadway in priority areas only is similar to other project sites in Nunavut.</p> <p>The NIRB acknowledges the efforts made by Agnico Eagle to suppress dust around the Meadowbank and Exploration Camp sites, and further recognizes the dustfall monitoring program Agnico Eagle has conducted along the AWAR since 2012 and the additional studies that are ongoing since 2016. As noted in the previous Annual Reports by Agnico Eagle and in the 2018 Annual Report, monitoring results at areas along the AWAR with dust suppressants were still at times above the predictions and above the Alberta Dustfall and Government of Nunavut – Total Suspended</p>	<p>The Board requests that Agnico Eagle Mines Ltd. provide a written submission on whether the predictions in the Final Environmental Impact Statement has potentially underestimated the amount of dust produced on the mine site including along the all-weather access road (AWAR) as the AWAR is considered a surface/project road by the NIRB. The submission must identify where original impact predictions can no longer be supported based on project experience to date and include an analysis of the effectiveness of management and mitigation strategies employed. The update must also provide a summary of lessons learned from the Project which can be used to improve future performance at this and other mining developments in Nunavut. Further, a justification for the validity of using these predictions as a comparison to the data currently being collected along the AWAR is to be provided.</p>	<p>The modelled predictions of fugitive dust emissions from the mine site, or any unpaved haul road generally should not be considered definitive. Rather, these predictions should be considered as a tool to be used to evaluate the potential for dust deposition to occur in the vicinity of the haul roads and fugitive dust generating activity locations. The methodology used to evaluate the dustfall deposition rate and ambient concentrations in the FEIS remains consistent with methods being used today in air quality assessments. The emissions from traffic were quantified using the industry-standard emission factors presented in the US EPA AP-42 Chapter 13.2.2: Un-paved Roads, which considers vehicle traffic parameters (number and size of vehicles) and road surface parameters (silt content and natural mitigation) and follow-on predictions were made using standard models and methodology. The fleet was estimated using the best available information.</p> <p>If the input parameters to the model were to change, it could reasonably be assumed that a commensurate change in the predicted deposition rates next to the roads and other fugitive dust sources could be expected. With this context considered, there is no reason to suggest that the FEIS predictions underestimated fugitive dust deposition rates.</p> <p>The above notwithstanding, of the compounds that are routinely evaluated by air quality assessors, the one with arguably the highest level of uncertainty is likely fugitive dust deposition. One of the considerations to be mindful of is that the standard emission factors used consider particles in the size range of approximately 30 microns (µm) in aerodynamic diameter and smaller. Dustfall, measured in the collection jars, often contains particles considerably larger than 30 µm. What this means in practice is that when dustfall deposition rates are measured and found to be lower than the modelled predictions, the modelled predictions can be considered exceptionally conservative as they have not included the largest particles and still over-predict the measured values. If there was a standard method to calculate the largest particle size emission rates and include them in the modelling, neither of which is possible using methods available then or now, the predicted values would be higher.</p>	<p>Agnico Eagle had included in the PEAMP update, provided to NIRB on December 25, 2019, the information regarding the FEIS predictions discussed in our initial response above. Furthermore, comparison to FEIS predictions, even if already included in the original PEAMP section, was reviewed for more clarity. Agnico has also committed to update the Air Quality and Dustfall Monitoring Plan as part of the 2019 Annual Report. The plan will be updated to clarify dust management and dust suppression on all surface roads. Agnico is also of the view that lesson learned is currently not a requirement of the Project Certificate requirement, and thus didn’t included this recommendation from the NIRB in the PEAMP update. Agnico will nevertheless take advantage of the lessons learned by Meadowbank, Whale Tail and Meliadine Projects.</p>	<p>Section 12 of the 2019 Annual Report</p>



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			<p>Particulate guidelines (three [3] out of 75 samples exceeding the GN 24-hour standard of 120 microgram/cubic metre [µg/m3]). The mine site dust predictions in the original Final Environmental Impact Statement (FEIS) for the Meadowbank project did not assume mitigations such as road watering or dust suppressants would be used. As such, it appears that the FEIS predictions have potentially underestimated the amount of dust that would be produced on the mine site.</p> <p>Agnico Eagle’s dust methodology with the installation of canisters at ground level and not on 1.5-2 metre poles, as is the common practice, has raised concerns from both the NIRB and regulatory authorities as the placement of canisters on the ground can have negative implications on data quality (e.g., downwash, ground dust or interference by wildlife). These limitations make it difficult to compare the dustfall data to other sites as well as any dustfall objective due to possible biases in the data collected. Further, the other four (4) other projects in Nunavut follow the ASTM standard test method1 for measurement of dustfall by deploying canisters on stands at heights of two (2) metres.</p> <p>With the exception of continuing the dustfall monitoring along the AWAR and applying dust suppressants along the high priority areas, Agnico Eagle has not made any further commitment to applying dust suppressant to the whole AWAR in the near future. Term and Condition 74 requires the application of dust suppression measures along all project roads including the AWAR [emphasis added]. The Proponent has not fully met the requirements of Condition 74, as dust suppression was not conducted along the AWAR from Baker Lake to the mine site again in 2018. The NIRB stresses that Term and Condition 74 applies to all mine roads including the AWAR. The NIRB notes that Agnico Eagle has been in non-compliance with this condition since the Project entered operations, as no dust suppression measures have been employed along the AWAR from Baker Lake to the mine site with the exception of the five (5) areas since 2017 as identified by the community to be of importance.</p>	<p>The requested information should be provided to the Board within 30 days following the issuance of this recommendation.</p> <p>Recommendations related to concerns with respect to applying dust suppressants along the mine roads for Meadowbank and with respect to the dust methodology are addressed under the Whale Tail Pit section of this Board memo.</p>	<p>The Board is asked to consider the dust (airborne and deposited) monitoring results in their full context, which shows the vast majority of the data being widely compliant with the applicable guidance with only a few outliers and no trend toward increasing concentrations or deposition rates. The Board is also asked to consider the extensive monitoring results as a whole when evaluating the ongoing applicability of the modelling results and to give priority to the monitoring results above the modelling predictions. For dust evaluation in particular, there is more certainty in the monitoring than in the modelling.</p> <p>Considering all of the above and based on a careful re-evaluation of the modelling and assumptions used to make predictions for dust deposition and ambient particulate concentrations, Agnico assert that the modelling methods and results can continue to be relied on to provide guidance on dust management for the Project including the associated roads.</p>		
NIRB	WT	Board Recommendation 2018-2019 WT	<p>Term and Condition 2 of Project Certificate No. 008 for Whale Tail Pit requires Agnico Eagle to verify commitments to the utilization of dust suppressants along not only the all-weather access road (AWAR), but the Whale Tail haul road (also referred to as the Amaruq Haul Road) and any other roads and trails associated with the Whale Tail Pit Project as well. This is similar to Term and condition 74 for Meadowbank and why the NIRB is considering them together. Agnico Eagle noted in the 2018 Annual Report that daily road watering and, if necessary, the application of chemical dust suppressants would be employed at the Whale Tail Pit Project to mitigate emissions of fugitive road dust during the frost-free summer season as per the Air Quality and Dustfall Monitoring Plan. The Plan also states that the use of chemical dust suppressants may only be used as a last resort for the Whale Tail haul road in accordance with the Environmental Guidance for Dust Suppression (published by the Government of Nunavut, Department of Environment, 2014). No information on the thresholds is provided within the Plan on when the dust mitigation measures would be triggered except to note that dust mitigation measures for the road would be employed when road visibility is impaired, or in areas where dust deposition is potentially impacting traditional land use, fish habitat and/or water quality. However, as observed during the 2019 site visit and as stated in the 2018 Annual Report, Agnico Eagle did not employ dust suppressants along the whole AWAR, nor along the Whale Tail haul road, and the Whale Tail Pit site roads. Therefore, carrying forward the discussion for Meadowbank, the Proponent does not appear to have fully met the requirements of Condition 2 or Condition 74 of the Whale Tail Pit or Meadowbank Project certificates, as dust suppression techniques were not applied along the Project roads. The NIRB stresses that both of these conditions apply to all surface/project roads including the AWAR, the Haul Road, and roads at the mine sites.</p>	<p>The Board reminds Agnico Eagle Mines Ltd. (Agnico Eagle) that Term and Condition 2 of Project Certificate 008 and Term and Condition 74 of Project Certificate No. 004, Amendment 3 concerns the suppression of dust on all surface/project roads that are used by Agnico Eagle for the Meadowbank and Whale Tail Pit Projects. The surface roads for the two Projects include the all-weather access road, the Whale Tail haul road, and both the Meadowbank and the Whale Tail Pit sites roads. As such, Agnico Eagle must update its Air Quality and Dustfall Monitoring Plan to include the objectives of both these terms and conditions along with a clear indication of timelines and triggers for adaptive management. Should Agnico Eagle be unable to meet these conditions of the Project Certificates, Agnico Eagle must submit a proposed alternative management measures with discussions and/or justifications for the variance from the terms and conditions.</p> <p>The updated Air Quality and Dustfall</p>	<p>Agnico had provided an updated version of the Air Quality and Dustfall Monitoring Plan (Version 4, March 2019) via the 2018 Annual Report. This updated version was to fulfill ECCC’s concern detailed in the letter submitted on December 16, 2018 related to NIRB 2018 Recommendations.</p> <p>With the Whale Tail Pit Expansion Project permitting on going, a version 4.1 was submitted in July 2019 to regulators.</p> <p>In order to avoid confusion between the operation plan version 4 currently used by Meadowbank and version 4.1 submitted in regards of the expansion project, Agnico is respectfully requesting to update the Air quality and Monitoring Plan as part of the 2019 Annual Report to be submitted in March 2020. This updated version will include the stakeholder’s recommendations and Agnico’s commitment is regards to dust management.</p>	<p>Agnico asked to provide an updated version of the Air Quality and Dustfall Monitoring Plan as part of the 2019 Annual Report to avoid confusion and avoid having many versions of this plan circulating to regulators between our current version 4 approved for operation and version 4.1 submitted for the permitting process of the Whale Tail Expansion Project. Stakeholder’s recommendation in our initial response refer to recommendations/commitments received on this plan during the permitting process of Whale Tail Expansion Project. Agnico wants to provide an updated version in the annual report that will clearly include all of the recommendations/commitments received from both operation and permitting process. NIRB agreed to Agnico’s request during the call. Agnico also agreed to NIRB recommendation, mentioned during the call, which is to include more details regarding the dust management and dust suppression on all surface roads in the updated version.</p>	Appendix 62 of the 2019 Annual Report



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				Monitoring Plan should be provided to the Board within 60 days following the issuance of this recommendation.			
NIRB	WT	Board Recommendation 2018-2019 WT	Condition 32 requires Agnico Eagle to work with the Baker Lake Hunters and Trapper Organization (HTO) and other parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the Whale Tail haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife. The Proponent has reported in the 2018 Annual Report that expansion of the haul road to 9.5 metres wide was completed in November 2018, and its mine work plan for the haul road indicates future work includes only road maintenance and operation. During the 2019 site visit it was noted that there were no specific caribou/wildlife crossings incorporated into the current Whale Tail haul road design or for other project infrastructure such as access roads and NIRB staff observed caribou hesitating to cross the road and the caribou searched for less steeply sloped areas to eventually cross. While the 2018 Annual Report notes engagement with the Baker Lake HTO regarding selection of traditional land use crossings to be used by members of the public for crossing the road, this does not meet the intent of the term and condition as it relates to wildlife specifically nor does it include any discussion of consultation with other parties regarding wildlife crossings. In addition, details of the selected crossings (if any) were not provided in the 2018 Annual Report. Therefore, the Board concludes the Proponent has not met the requirements of term and condition 32.	<p>The Board requires that Agnico Eagle Mines Ltd. (Agnico Eagle) clarify whether engagement with the Baker Lake Hunters and Trappers Organization and any other parties in 2018 regarding construction of project infrastructure to allow for safe passage of terrestrial wildlife was completed. If so, include details regarding the selection of areas for proposed wildlife crossings. If this information is not available, justification as to why this has not been completed, and information on the timeline and proposed activities that Agnico Eagle is planning to conduct to meet this term and condition for all project infrastructure should be provided.</p> <p>The action plan should be provided to the Board within 30 days following the issuance of this recommendation.</p>	<p>Following consultation of the Baker Lake HTO, Agnico re-slopped the Whale Tail Haul Road (WTHR) at KM 127 to facilitate the wildlife passage in this area. BLHTO came back once the re-slopping was finalized and didn't not express any other concern.</p> <p>Within the TAG, permeability and road design discussions are ongoing and will meet satisfaction of all parties. Different projects are also ongoing and are being discussed at the TAG, including monitoring movement of caribou with cameras, a pilot drone study and satellite imagery. All of the above project will be highly useful into the determination of the preferred wildlife passage and behavior on the field.</p> <p>As part of the Whale Tail expansion project, Agnico has committed to conduct an analysis of available scientific and IQ caribou data (including collar, road sightings, trails, oral testimony and mapping) to determine sections of the Haul Road that are most likely to be used by migrating caribou. In July 2019, Agnico submitted to NIRB and TAG member a memo to fulfill this commitment. Following this submission, only the KIA provided comments. Agnico Eagle submitted a revised version in August 2019 and only received comments from KIA since submission. Agnico Eagle will make a presentation of its final report to the TAG on November 26, 2019 for final approval. The following step will be to organize a site visit with TAG member to refine further required changes along the Whale Tail Haul Road (and based on sections identified in the report provided). The site visit is tentatively planned for Q2 2020. Following this, a Construction Plan, will be provided to TAG members and the NIRB</p>	Agnico noted the NIRB additional request made during the call on December 16, 2019, which is to have a better reporting of Condition 32 in the 2019 Annual Report. This will include, among other items, the reporting of the commitments Agnico did in 2019 and detailed any engagements with HTO.	Section 8.18.3 of the 2019 Annual Report
NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	Undertake additional site-specific permafrost monitoring, mapping and thermal analysis in consultation with INAC and NRCan. Results of these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter.	<p>Permafrost conditions on the Project site were estimated based on thermistor data up to October 2017 and previous works; No results from studies following the release of the Project Certificate has been provided; Thermal Monitoring program memo provided to CIRNAC and NRCan, November, 2018; Thermal Monitoring Plan, version 2 submitted in 2018 Annual Report.</p> <p>COMPLIANCE UNCLEAR: CIRNAC noted that Proponent has not met the requirements and an updated Groundwater Monitoring Plan was requested</p>	<p>Agnico will like to point out to the thermistor results up to January 2019 provided in Appendix A of the Thermal Monitoring Plan, Version 2 March 2019.</p> <p>Regarding the updated Groundwater Monitoring Plan, before Agnico received CIRNAC's response to NIRB 2018 recommendation on December 14, 2018, Agnico was already in a discussion process with CIRNAC to address their concerns related to TC 15. Following several discussions with them, a Groundwater Management Plan (GWMP) Version 2 was submitted to CIRNAC on November 2018 and an updated Version 2.1 February 2019 was submitted to NWB to addressed CIRNAC's concern. At the beginning of March 2019, CIRNAC replied to Agnico to let us know that the overall objective of Term and Condition No. 15 has been met currently. On April 25, the NWB accept the Whale Tail GWMP Version 2.1. Based on the information received, Agnico considers that we are actually in compliance with TC 15 and CIRNAC's concerns are resolved. Agnico acknowledges that the information provided to CIRNAC and NWB may not have reach NIRB. Agnico will ensure in the future to include NIRB in discussion with CIRNAC and NWB related to the groundwater monitoring.</p>	During the call on December 16, 2019, NIRB mentioned that they find that the current Thermal Monitoring Plan didn't addresses all the requirements of the term and condition regarding thermal monitoring and requested to better define the monitoring strategy. Agnico is of the opinion that the term and condition related to thermal monitoring are actually meet in the Thermal Monitoring Plan Version 2. Agnico will nevertheless assess a possible review of the plan and see how and if it can be updated to add clarity. A potential updated version would be submitted as part of the 2019 Annual Report. NIRB also requested that the updated plan include previous CIRNAC's comments. Agnico is still in the view that CIRNAC's concern detailed in their response to NIRB 2018 Recommendation received on December 14, 2018 were adequately addressed in the Thermal Monitoring Plan Version 2 submitted.	Appendix A of the Thermal Monitoring Report in Appendix 27 of the 2019 Annual Report



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NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	Develop and implement an Erosion Management Plan. The Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with updates submitted annually thereafter or as may otherwise be required by the NIRB.	COMPLIANCE UNCLEAR: updates not provided in the annual report.	<p>Erosion Management Plan, version 1 was submitted on June 4, 2018, and thus no updated version of the plan was requested to be submitted in the Annual Report.</p> <p>The Plan presents the monitoring and mitigating actions related to three (3) specific periods of activity for the Whale Tail Pit: the period of construction and dewatering (during construction and operation), the period of freshet (during construction, operation and closure) and the period of rise in water level in the South Basin of Whale Tail Lake (during operation).</p> <p>This Plan should be consulted in association with the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering (2016) and the Whale Tail Freshet Action Plan (2019).</p> <p>Result of the monitoring related to the Whale Tail Dike Construction can be found in Appendix 63 of the 2018 Annual Report (2018 Water Quality Monitoring for Dike Construction and Dewatering Report). Neither construction of the Mammoth Dike nor dewatering activities occurred in 2018, and thus monitoring result will be provided in the 2019 Annual Report.</p> <p>Monitoring related to Freshet and Water Level rise will be provided in the 2019 Annual Report.</p>		Section 8.3.5.2.11 of the 2019 Annual Report
NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	The Closure and Reclamation Plan to include a program to progressively reclaim disturbed areas in a manner that demonstrates the Proponent has considered aesthetic values of local communities. The Proponent shall provide a summary of its progressive reclamation efforts and associated feedback received from communities with respect to aesthetic values solicited by the Proponent as part of its public engagement processes in its annual reporting to the NIRB.	COMPLIANCE UNCLEAR: Meadowbank Interim Closure and Reclamation Plan, submitted August 2018; does not include Whale Tail Pit and no separate plan submitted. Whale Tail Pit Interim Closure and Reclamation Plan submitted June 2016 as part of FEIS.	<p>Meadowbank and Whale Tail both have a separate Interim Closure and Reclamation Plan. Agnico Eagle submitted the Meadowbank Interim Closure and Reclamation Plan – update 2018 via the 2018 Annual Report. The Meadowbank Interim Closure and Reclamation Plan – update 2019 (May 2019) was submitted to CIRNAC to CIRNAC on June 7, 2019 and on July 24, 2019 to the NWB. This update is in relation with the In-Pit Disposal and will be included in the 2019 Annual Report.</p> <p>Regarding the Whale Tail Interim Closure and Reclamation Plan, the last version approved version is the one from June 2016. As required by NWB Water License 2AM-WTP1826 Part J, Item 2: ‘The Licensee shall submit to the Board for approval within twelve (12) months of Operations, an updated Interim Whale Tail Pit Closure and Reclamation Plan... The Plan shall include all mine related facilities and Whale Tail Pit Haul Road.’ This update version will be submitted in 2020.</p>	Agnico agreed with NIRB’s request during the call on December 16, 2019 and will continue to report, in the annual report, on progressive closure achieved in the previous year. Agnico will also include in the annual report a discussion on progressive closure opportunities. The next revision of the ICRP will also have more details on progressive closure status and opportunities.	Section 9 of the 2019 Annual Report
NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	Develop and implement a Thermal Monitoring Plan to identify potential changes in talik distribution and flow path. The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter or as may otherwise be required by the NIRB.	COMPLIANCE UNCLEAR: CIRNAC requested Thermal Monitoring Plan include more details	Thermal Monitoring Plan, Version 2 (March 2019) was submitted via the 2018 Annual Report. Thermal Monitoring Plan Version 2 was updated to address CIRNAC’s concern detailed in their response to NIRB 2018 Recommendation received on December 14, 2018. Agnico didn’t received any comments from CIRNAC or NWB to advise that the monitoring plan was not compliant, among other via the review of the 2018 Annual Report, and thus, Agnico consider the Thermal Monitoring Plan accepted and to be in compliance with the Project Certificate.	During the call on December 16, 2019, NIRB mentioned that they find that the current Thermal Monitoring Plan didn’t addresses all the requirements of the term and condition regarding thermal monitoring and requested to better define the monitoring strategy. Agnico is of the opinion that the term and condition related to thermal monitoring are actually meet in the Thermal Monitoring Plan Version 2. Agnico will nevertheless assess a possible review of the plan and see how and if it can be updated to add clarity. A potential updated version would be submitted as part of the 2019 Annual Report. NIRB also requested that the updated plan include previous CIRNAC’s comments. Agnico is still in the view that CIRNAC’s concern detailed in their response to NIRB 2018 Recommendation received on December 14, 2018 were adequately addressed in the Thermal Monitoring Plan Version 2 submitted.	Thermal Monitoring Plan in Appendix 27 of the 2019 Annual Report
NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	Groundwater Monitoring Plan to collect additional site-specific hydraulic data in key areas from new monitoring wells. The required Groundwater Monitoring Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter.	COMPLIANCE UNCLEAR: additional monitoring wells not installed.	Agnico will refer to response provided in Section 3.2 below.	During the call on December 16, 2019, NIRB mentioned that they find that the current Groundwater Monitoring Plan didn’t addresses all the requirements of the term and condition. Agnico is of the opinion that the term and condition related to groundwater monitoring are actually meet as detailed in our original response Section 3.2. As per our initial	Appendix 47 of the 2019 Annual Report



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						response, at the beginning of March 2019, CIRNAC replied to Agnico to let us know that the overall objective of Term and Condition No. 15 has been met currently with Version 2.1 (February 2019). On April 25, the NWB accepted the Whale Tail GWMP Version 2.1. Agnico will nerveless assess a possible update to the Groundwater Management Plan and to resubmit an updated version as part of the 2019 Annual Report.	
NIRB	WT	NIRB Annual Monitoring Report Whale Tail Site	Similar to Environment and Climate Change Canada’s concern (see Table 7), the NIRB notes that the 2018 Air Quality and Dustfall Monitoring Plan did not provide for the management of any air quality or dust issues indicated by the data collected by following the monitoring plan.	The NIRB is requesting that Agnico Eagle compile all of the air quality and dust monitoring, mitigation, management information, and studies into one document to be submitted within 30 days of receipt of the request. This document should then be updated based on the data that is collected and presented in the annual report.	Agnico had provided an updated version of the Air Quality and Dustfall Monitoring Plan (Version 4, March 2019) via the 2018 Annual Report. This updated version was to fulfill ECCC’s concern detailed in the letter submitted on December 16, 2018 related to NIRB 2018 Recommendations. Agnico is of the opinion that all the requested information was already provided in annual report, the annual Air Quality and Dustfall Monitoring Report and the PEAMP section, which present the results compare to the FEIS. Agnico could potentially consider improving to the information provided in subsequent annual report.		Appendix 41 of the 2019 Annual Report
NIRB	MBK	Annual Monitoring Report Meadowbank Site	Throughout the 2018/2019 operating year, Agnico Eagle has been completing mining in a number of the deposits in the Meadowbank Area as noted at the beginning of this report. Further, the NIRB notes that Agnico Eagle is at the end of the predicted mining life of the Project. No information has been provided to the NIRB on the Interim Closure and Reclamation Plan on the closure of these deposits.	The NIRB is requesting Agnico Eagle update the Interim Closure and Reclamation Plan to the Final Closure and Reclamation Plan and include more details on progressive reclamation for these areas as well as for the areas identified by Crown-Indigenous Relations and Northern Affairs Canada, Comment 1.4 (see CIRNAC Comments on 2018 Annual Report); tailings storage facility and waste rock storage facility. The NIRB requires the updated plan in the 2019 Annual Report.	At this time, Agnico will not be submitting the Final Closure and Reclamation Plan as there is no cessation of operations at the Meadowbank facility with the ore processing, in-pit tailings deposition, airstrip, camp facilities and recovery of gold remains at full production. See further below on the Water Licence definitions for clarification. Agnico Eagle submitted the Meadowbank Interim Closure and Reclamation Plan dated May 29, 2019 to CIRNAC on June 7, 2019 and on July 24, 2019 to the NWB. During the ICRP review process, Agnico has provided responses to CIRNAC’s comments. On October 21, NWB provided to Agnico the approval for this management plan. Action items were identified by the NWB and an updated Meadowbank Interim Closure and Reclamation Plan will be submitted as part of the 2019 Annual Report. “Operations” means the set of activities associated with mining, ore processing and recovery of gold; excluding construction and decommissioning activities. “Interim Closure and Reclamation Plan” means a conceptual detailed plan on the reclamation of mine components which will not be closed until the end of the mining operations, and operational detail for components which are to be progressively reclaimed throughout the mine life. “Closure” means when an Operator ceases operations at a facility without the intent to resume mining activities in the future.	As detailed in our original response detailed above, Agnico is currently not in closure phase at Meadowbank site as most of the infrastructures associated with this site are still in operations to ensure the viability of the Whale Tail Project. As per the definition of ‘operations’ detailed in our original response above, ore processing and recovery of gold are still happening at Meadowbank via the Whale Tail Project, and thus, Agnico is still reaching the criteria to be considered in operation. Agnico consider that it would be premature at this stage to provide a Final Closure and Reclamation Plan given the milling activities and use of current Meadowbank infrastructures that continue via the current Whale Tail Project approved and the current permitting process of the Whale Tail Project Expansion. The current ICRP also state that the operations (mining and ore processing) will continue approximately 3 years with the Whale Tail Pit, from 2019 to 2022. Thus, a final closure plan is not required at this moment. Agnico also want to add that the NWB, CIRNAC or KIA have mentioned that the Meadowbank site should be considered in closure phase. Agnico is currently committed to provide an updated Interim Closure and Reclamation Plan as part of the 2019 Annual Report as per the approval letter to ICRP Version May 2019 received from the NWB on October 21, 2019. To satisfy NIRB’s concern exposed during the call	Appendix 55 - ICRP-Update 2019 Rev 1 Section 6.2



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						on December 16, 2019, Agnico will included in the updated version a discussion about progressive reclamation opportunities. Agnico will also provide to NIRB the approved ICRP Version May 2019 and will ensure that any updated version is officially submitted to NIRB at the same time as NWB.	
NWB	MBK	2018 Annual Report		Follow the recommendations outlined in section 8.12.3.1.1 Meadowbank CREMP of the 2018 Annual Report.	Agnico has followed all the recommendations outlined in Section 8.12.3.1.1 of the 2018 Annual Report. Results will be provided in 2019 Annual Report.		Appendix 35 - 2019 CREMP Report
NWB	MBK	2018 Annual Report		It is noted that the recommendations of the geotechnical inspections mainly include further monitoring of the structures. However, Table 5: Summary of Recommendations and Priority Levels from the 2018 Geotechnical Inspection assigns priority levels as high as P-2, which means “(i)f not corrected could likely result in structure safety issues leading to injury, environmental impact, or significant regulatory enforcement; or, a repetitive deficiency that demonstrates a systematic breakdown of procedures”. Please clarify the discrepancy between the recommendations to monitor and assigned P-2 priority level to some structures.	The geotechnical inspector’s intent was to emphasise the importance of continuing the ongoing monitoring and inspection program. It is not implying that the current monitoring and inspection program need correction. This discrepancy between priority rating and intent of the recommendation will be fixed in the 2019 annual inspection report submitted with the annual report.		Appendix 9 - 2019 Annual Geotechnical Inspection Reports
NWB	MBK	2018 Annual Report		Provide the list and timeline for the follow-up actions addressing the deficiencies identified by the geotechnical inspection. The follow-up actions are to include relevant measures to correct deficiencies in facilities assigned the P-2 priority level.	Please find attached a list of follow-up action for P2 priority level as well as the action plan and the timeline regarding the 2018 recommendations identified by the geotechnical inspection. Similar table will be implemented in the 2019 annual report submission.		Implementation Plans in Appendix 15 and 16 of the 2019 Annual Report
NWB	WT	Agnico Eagle Mines – Meadowbank Division Responses to Whale Tail WRSF, NPAG and Overburden Stockpile Design Report Comments Comment 3	CIRNAC COMMENT: AEM’s design report states “an adaptive monitoring strategy will be implemented in which the decision to install additional thermistor in operation will be based on the analysis of the results of the thermal monitoring program.	CIRNAC requests further details on what temperature, depths and timing would trigger the decision to install additional thermistors and/or signal the WRSF design is not performing as intended.	Agnico intends to evaluate WRSF freeze-back performance by monitoring thermistor strings, and collecting water quality data which will be compared against sensitivity and ‘base case’ freeze-back modelling, and site-wide load balance modelling. The results of the performance and monitoring will be presented within the Annual Report. It is expected that a range of freeze-back performance will occur due to inherent variability in construction technique, physical material properties and chemical material properties. Significant divergence of in situ measurements outside of the range of expected and acceptable variability from the numerical model will be evaluated to determine potential impact on closure and additional monitoring and/or mitigations required. Specifically, should daily temperature readings of thermistors located at the interface of the waste rock		2019 Annual Report Section 5.4.1 for Meadowbank and Section 5.4.2 for Whale Tail



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		Reference: Section 4.6.1 & 4.6.2			and thermal cover system indicate that the waste rock is not frozen, resulting in water quality exceedances beyond permitted values in the WRSF collection ponds or groundwater monitoring prior to post-closure, these will trigger the installation of additional monitoring and/or mitigation to reduce uncertainty in variability and reducing the overall risk to water quality. This overall performance will be based on the integration of the various monitoring data used as model inputs.		
NWB	MBK	Modification: Expansion of Baker Lake Fuel Tank Farm; Licence No. 2AM-MEA1526 Meadowbank Gold Mine Project, Agnico Eagle Mines Limited Approval letter to Water License Modification received January 28, 2019	On January 21, 2019, the Kivalliq Inuit Association (KivIA) requested that Agnico Eagle confirm which location of the “proposed piping for filling tanks and fuel distribution” is correct because of a discrepancy on the location of the “proposed piping for filling tanks and fuel distribution” between Figure 2.2 and engineering drawing 61-740-210-201. The KivIA also requested that Agnico Eagle confirm when the Baker Lake Tank Farm Environmental Performance Monitoring Plan will be updated with the Metal and Diamond Mines Effluent Regulations (MDMER) that come into force between June 1, 2018 and June 1, 2021.		On January 25, 2019, Agnico Eagle responded to KivIA comments, clarifying the location of the “proposed piping for filling tanks and fuel distribution”, and indicating that Agnico Eagle will submit to the Board for review, within 90 days of completion of the facility, a revised version of the “Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan” with as-built details. The Licensee also stated that revised MDMER maximum allowed concentrations will come into force on June 1, 2021. A revised version of the “Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan” and including updated section 4 (page 8) will be provided at that time.		Section 18 of the 2019 Annual Report
NWB	WT	2AM-WTP WT Landfill Design Report AEM response to CIRNAC comments	On Drawing – Whale Tail Landfill and Cross Sections [190419 2AM-WTP1826 Whale Tail Landfill Design Report-ILAE (page 8 of 9 pdf)], CIRNAC noticed that one (1) x 600 mm layer of NPAG waste rock will be used to cover the landfill. In the Landfill and Waste Management Plan [170125 2AM-WTP---- Landfill Design & MGMT Plan-IMLE (page 27 of 170 pdf] two (2) other layers (transition rockfill and liner bedding till layers) have been indicated in addition to the (1) x 600 mm layer of NPAG waste rock cover for a total of three layers.	CIRNAC requests AEM to clarify the number and type of layers in the landfill cover design, and if applicable, the reason for the change in landfill cover design from three layers to one layer.	Subsequent detailed engineering analysis determined that the two other transition layers would not be required to prevent seepage from the landfill and were therefore removed from the design. Unexpected seepage, if any, will be captured within the WRSF, which itself will be frozen and protected by the NPAG thermal cover. The Landfill and Waste Management Plan shall be updated at the next annual review to reflect this design change.		Appendix 63 of the 2019 Annual Report
NWB	MBK	AMENDMENT APPLICATION WATER LICENCE NO: 2AM-MEA1526 REASONS FOR DECISION Section VI Part B	The Board acknowledges the receipt of the Water Management Report and Plan Update dated November 2017. Agnico Eagle is reminded to adhere to Part E, Item 7 of the existing terms and condition of the Licence, which requires the submission of the Plan and updates to the Plan on an annual basis. Specifically, Agnico Eagle is advised that the NWB will expect the next annual report will include an updated Water Management Plan that addresses in-pit tailings deposition with a particular focus on total dissolved solids and high-sulphate wastewater.				Appendix 11 - Meadowbank Water Management Plan Section 4 and Meadowbank Water Quality Forecasting Update
NWB	MBK	AMENDMENT APPLICATION WATER LICENCE NO: 2AM-MEA1526 REASONS FOR DECISION Section VI Part B	Agnico Eagle is reminded of the requirements of Part E, Item 8 of the existing terms and conditions of the Licence in regards to the submission a Water Quality Model for pit reflooding as part of the Water Management Plan. The Model is to incorporate the data obtained through the Groundwater Monitoring Plan referenced above. The Model is to inform the subsequent interim and final closure and reclamation planning.				Appendix 11 - Meadowbank Water Management Plan Section 4, Meadowbank Water Quality Forecast Update



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NWB	MBK	AMENDMENT APPLICATION WATER LICENCE NO: 2AM-MEA1526 REASONS FOR DECISION Section VI Part B	Agnico Eagle is required to submit a Pore Water Quality Monitoring Program for Board review and approval within sixty (60) days of Minister’s approval of this Amendment. Upon receiving the Board’s approval for the subject Program, the Licensee is to incorporate the Program into all applicable management plans and programs, such as the Water Management Plan, Water Quality and Flow Monitoring Plan, and Aquatic Effects Management Plan, whose updated versions are to be submitted with the subsequent annual report.				Appendix 23 - Pore Water Quality Monitoring Program Appendix 50 - AEMP Appendix 11 - Water Management Plan Water Quality and Flow Monitoring Program will be updated following the approval of the Whale Tail Project Expansion
NWB	WT	Updated Groundwater Monitoring Plan; Type “A” Water Licence No. 2AM-WTP1826, Whale Tail Pit Project; Agnico Eagle Mines Limited - April 25, 2019		After reviewing the updated Plan and considering all representations made by interested persons, and Licensee, the NWB, hereby approves the updated Groundwater Monitoring Plan, Version 2.1, February 2019 through the Board Motion No. 2019-A1-002, dated April 24, 2019, as required by Part B, Item 13 of the Licence. The Licensee shall ensure that details of seepage monitoring, fully aligned with the Licence requirements and Licensee’s commitments are included within the next update to the Plan.			Appendix 61 - Groundwater Monitoring Plan Section 3.2
NWB	MBK	Groundwater Monitoring Plan, Meadowbank Interim Closure and Reclamation Plan, Pore Water Quality Monitoring Program, and Waste Rock and Tailings Management Report & Plan; Type “A” Water Licence 2AM-MEA1526, Meadowbank Gold Mine Project; Agnico Eagle Mines Ltd. - October 21, 2019		Reflection of the Licensee’s commitment to “revisit the Pore Water Quality Monitoring plan as part of the 2019 Annual Report and commit to organized [sic] a meeting with ECCC and CIRNAC to discuss of the sampling methodology prior to the update of the plan”			Appendix 23 - Pore Water Quality Monitoring Program



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NWB	MBK	Groundwater Monitoring Plan, Meadowbank Interim Closure and Reclamation Plan, Pore Water Quality Monitoring Program, and Waste Rock and Tailings Management Report & Plan; Type “A” Water Licence 2AM-MEA1526, Meadowbank Gold Mine Project; Agnico Eagle Mines Ltd. - October 21, 2019		Remove the references to a 2m cover design. Reflect that “(a)dditional monitoring and analysis are required to verify the performance of the cover against the design intent and inform on the final cover design. The final cover design will be subject to modification depending on the results obtained from the site trials as well as from data from the Thermal Monitoring Program” and “(m)odelling with the latest agreed upon climate scenario will serve as the input into the Final Closure Plan for the Tailings Storage Facility.”			Appendix 24 - Meadowbank Waste Rock and Tailings Management Plan, Section 7.1 and 7.3
NWB	MBK	Groundwater Monitoring Plan, Meadowbank Interim Closure and Reclamation Plan, Pore Water Quality Monitoring Program, and Waste Rock and Tailings Management Report & Plan; Type “A” Water Licence 2AM-MEA1526, Meadowbank Gold Mine Project; Agnico Eagle Mines Ltd. - October 21, 2019		Reflect that “travel blanks are to accompany the sample bottles throughout the collection, handling, storage and shipping of the samples”.			Appendix 60 - Groundwater Management Plan



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NWB	MBK	Groundwater Monitoring Plan, Meadowbank Interim Closure and Reclamation Plan, Pore Water Quality Monitoring Program, and Waste Rock and Tailings Management Report & Plan; Type “A” Water Licence 2AM-MEA1526, Meadowbank Gold Mine Project; Agnico Eagle Mines Ltd. - October 21, 2019		Reflect that “(t)emperature and piezometric records will be extracted and interpreted each year during operations to assess permafrost and piezometric behaviors in response to in-pit deposition. Considering the expected slow processes and changes of thermal and hydrogeological regimes, Agnico consider that these models should be updated only at the end of in-pit deposition operations, unless significant change in thermal regime is observed by existing thermistors... thresholds will be established as part of the Final Closure Plan.” As agreed, include the statement “(t)he assessment of the material deposited to date and pore water monitoring completed during operation, as presented in the Pore water quality monitoring plan and the Water Management Plan and reported as part of the Annual Report, will be used to inform potential mitigative measures, such as an adjustment of the depth of water cover, the implementation of an aggregate cover if deemed required, to comply with flooded pit water quality objectives - and that those mitigative measures are carried out once the Final Closure Plan is implemented.” Reflect the commitment that the final closure and reclamation plan “will reflect the monitoring horizon required for Meadowbank”			Appendix 55 - ICRP - Update 2019 Rev 1 Section 5.2.6.5, 5.2.6.5, 9.0, 9.1 and 9.2
TC	WT	Annual Report section 11.2.3 Agnico Eagle Mines Limited. Meadowbank Gold Project	As a result of ore hauling from the Approved Whale Tail Pit Project to Meadowbank, and the addition of a Power Plant and heating facilities at the Whale Tail site, diesel fuel needs have increased and calculations made prior to the Approval Project permitting process underestimated the requirements of fuel. To address the upcoming shortage, Agnico Eagle is proposing to add two (2) 10 million L diesel fuel storage tanks to the Marshalling Area Bulk Fuel Storage Facility in Baker Lake for a total of 80 million litres. Proposed infrastructures would be built starting in April 2019 pending all regulatory approvals have been received by then.	If Agnico Eagle mines expands their Oil Handling Facility at Meadowbank, their Oil Pollution Emergency Plan would need to be updated to reflect the changes in the facility’s characteristics.	The OPEP will be updated to reflect changes at the Baker Lake Oil Handling Facility. The updated management plan will be submitted to Transport Canada Inspector once completed and include in the 2019 Annual Report.		Appendix 38 - Meadowbank Oil Pollution Emergency Plan Version 11



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