FINAL TECHNICAL SUBMISSION

ON THE

WHALE TAIL EXPANSION PROJECT
WATER LICENCE AMENDMENT APPLICATION

NWB Water Licence 2AM-WTP1826

Prepared By:

NUNAVUT TUNNGAVIK INC.

And

KIVALLIQ INUIT ASSOCIATION

January 23, 2020

WITH SUPPORT FROM

Hutchinson Environmental Sciences Ltd. **And** **GeoVector Management Inc.**

Prepared For:

Nunavut Water Board

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Plain Language Executive Summary

Nunavut Tunngavik Inc. (NTI) and the Kivalliq Inuit Association (KivIA) have completed a technical review of Agnico Eagle Mines Limited's (Agnico Eagle) Whale Tail Pit – Expansion Project Water Licence Amendment Application. This application is associated to NWB Licence Number 2AM-WTP1826 and is located on Inuit Owned Land (IOL) approximately 150 kilometers north of the hamlet of Baker Lake. The IOL parcel involved is BL 43. The review has outlined the following areas where additional information is required to complete a full technical review of the application.

In general, Agnico Eagle's water licence application reflects the experience gained at earlier stages of the Meadowbank Mine and both the Whale Tail and Meliadine projects. We raised several concerns with respect to understanding potential impacts to water quality and quantity from the expansion project. These issues predominantly differed from the concurrent environmental impact assessment review. We also raised several concerns pertaining to water management and mitigation.

The KivIA has worked with Agnico Eagle throughout the technical review process to resolve these concerns. As of the technical hearings held in October 2019, 12 of the 21 issued had been resolved leaving 9 outstanding; the KivIA and Agnico Eagle have continued to work towards resolutions on the outstanding issues. Resolutions were reached through Agnico Eagle's provision of additional supporting documentation, clarifying ambiguities in their technical application, updating the water quality and quantity models and developing an Adaptive Management Plan to address concerns should the project deviate from the base case scenario.

As of this final technical submission, two of the nine outstanding issues were fully resolved, five have been resolved pending our review of a final Adaptive Management Plan to ensure it has adequately incorporated input from the KivIA and other intervenors, and two issues are unresolved due to concerns with Agnico Eagle's capacity to manage freshet 2020 should it prove to be wetter than the historical average.

Agnico Eagle submitted a draft of the amended Type A Water Licence for the Whale Tail project in December 2019 to address changes required for the expansion project. This draft is presented as Water Licence NO: 2AM-WTP~~1826~~2043. Drafts were also presented for amendments to Water Licence No: 2AM-MEA1525 and 2BB-MEA1828. KivIA provide comments on all three amended licences to improve consistency and clarity within each License. We want to ensure that there is no confusion as between the Meadowbank Project and the Whale Tail Project and that all proposed changes provide the necessary confidence level for KivIA, as well as other parties.

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1. Introduction

Nunavut Tunngavik Inc. (NTI) and the Kivalliq Inuit Association (KivIA) have completed a technical review of Agnico Eagle Mines Limited's (Agnico Eagle) Whale Tail Pit – Expansion Project Water Licence Amendment Application. This application was submitted to the Nunavut Water Board (NWB) in May 2019 and is associated to NWB Licence Number 2AM-WTP1826. The project is located on Inuit Owned Land (IOL) approximately 150 kilometers north of the hamlet of Baker Lake. The IOL parcel involved is BL 43.

The KivIA and NTI represent Inuit beneficiaries of the Nunavut Land Claim Agreement at the regional and territorial levels, respectively. In particular, both organizations manage Inuit Owned Lands (IOL) with the main aim of promoting self-reliance and social well-being of Inuit now and in the future. Both organizations manage IOL in order to support sustainable economic development opportunities for Inuit as long as it is completed in an environmentally and socially responsible manner.

The technical review was completed with support from Hutchinson Environmental Sciences Ltd. and GeoVector Management Inc. to ensure that the potential impacts and benefits were comprehensively assessed through scientific and socio-economic best practices, and to ensure Inuit Qaujimajatuqangit (IQ) values continue to be incorporated into impact determination, mitigation, project design and monitoring.

The initial documents reviewed consisted of the following:

- Water Licence Amendment Application for 2AM-WTP1826;
- Water Licence Amendment Application for 2AM-MEA1526;
- Water Licence Amendment Application for 2BB-MEA1828;
- Main Application Document;
- Executive summary in English and Inuktitut;
- Letter to NWB;
- Filled out Supplemental Information Guide table;
- NPC conformity determination;
- Compliance assessment;
- Certificate of Incorporation;
- List of Permits and Licenses for the Project;
- Record of consultations;
- Whale Tail Pit Waste Rock Management Plan dated May 2019;
- Thermal Monitoring Plan dated May 2019;
- Water Quality Monitoring and Management Plan for Dike Construction and Dewatering dated May 2019;
- Whale Tail Pit Expansion Project Landfill Design and Waste Management Plan dated April 2019;
- Whale Tail Pit Water Management Plan dated May 2019;
- Whale Tail Pit Water Quality and Flow Monitoring Plan dated May 2019;
- Whale Tail Pit – Expansion Project Landfarm Design and Management Plan dated April 2019;
- Whale Tail Pit – Incinerator and Composter Waste Management Plan dated April 2019;
- Whale Tail Pit - Expansion Project Haul Road Management Plan dated April 2019;
- Ammonia Management Plan Whale Tail Pit Expansion Project dated April 2019;

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- Meadowbank and Whale Tail Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan dated April 2019;
- Whale Tail Pit – Emergency Response Plan dated May 2019;
- Hazardous Materials: Meadowbank Mine Site, Whale Tail Pit Site, Baker Lake Facilities Management Plan dated May 2019;
- Spill Contingency Plan dated April 2019;
- Groundwater Monitoring Plan dated May 2019;
- Conceptual Fish Habitat Offsetting Plan dated April 2019;
- Operational ARD-ML Sampling and Testing Plan – Whale Tail Pit Expansion Project dated April 2019;
- Core Receiving Environment Monitoring Plan: 2015 Plan Update – Whale Tail Pit Expansion Addendum_NWB dated April 2019;
- Interim Closure and Reclamation Plan dated May 2019;
- Quality Assurance / Quality Control (QA/QC) Plan dated May 2019;
- Operation & Maintenance Manual Sewage Treatment Plant (STP) dated May 2019;
- Updated Hydrogeological Assessment, Whale Tail Pit, Expansion Project dated May 6, 2019;
- 2019 Mean Annual Water Balance Update, dated May 2019;
- Mine Site and Downstream Receiving Water Quality Predictions dated May 2019;
- Whale Tail Lake Thermal Assessment dated April 2019;
- Site layout;
- Pre-development layout;
- Planned site layouts for 2019 through 2025 and 2042 post-closure;
- Operation IVR Attenuation Pond Dikes Longitudinal Profiles and Sections;
- IVR WRSF cross-section drawing;
- Typical section and road widening;
- Appendix K – Project Design Considerations.

Agnico Eagle has provided additional supporting documentation throughout the technical review process; these documents were also included in our technical review and were as follows:

- 2AM-WTP1826 Technical Comment Responses Whale Tail Pit – Expansion Project and appendices
- Pre-Hearing Conference Decision in Respect of Applications for Amendments to Type “A” Water Licences No: 2AM-WTP1826 and No: 2AM-MEA1526 and Type “B” Water Licence No: 2BB-MEA1828
- Updated List of Waterbodies for Operational and Geological Drilling at the Whale Tail Expansion Project
- Water Infrastructure 20-Day Notice for the Whale Tail Pit Project 2AM-WTP1826
- Whale Tail Mine Site and Downstream Receiving Water Balance and Water Quality Under Climate Change Scenario RCP 8.5
- Effects of Wet Year Scenarios on Water Management
- Whale Tail Pit – Expansion Project Water Balance for Lake C38 (Nemo Lake)
- Technical Comment KivIA-WL-TC#9: Assessment of Lake D5 and Lake D1 to Expedite the Refilling Duration of Whale Tail Lake (North Basin) at Closure
- Effects of Cryo-Concentration on the Downstream Receiving Lakes Water Quality
- Mixing Zone Boundaries in Mammoth Lake and Whale Tail Lake (South Basin)

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- Permafrost Development – Thermal Data Report Whale Tail Project Expansion
- Whale Tail Pit Expansion Project Adaptive Management Plan
- Whale Tail WRSF Expansion and IVR WRSF Design Report and Drawings
- Interim Closure and Reclamation Plan Version 3
- Construction Summary Report Construction Water Treatment Plant and Arsenic Water Treatment Plant

2. Summary of Technical Submissions

Our final technical submission follows directly from both our technical review submitted in September 2019 and our completeness review submitted in July 2019. The completeness review highlighted 51 areas in which additional information was required to complete our full technical review. Agnico Eagle responded to those issues in August 2019, completely resolving 20 issues. Agnico Eagle provided sufficient information on an additional 26 issues such that a full technical review of those concerns could be conducted. Only five issues were not sufficiently resolved during the completeness review. Our full technical review of the water licence amendment highlighted 21 technical concerns. These issues predominantly followed from our information requests building on the additional information provided by Agnico Eagle.

In general, Agnico Eagle's water licence application reflects the experience gained at earlier stages of the Meadowbank Mine and both the Whale Tail and Meliadine projects. We raised several concerns with respect to understanding potential impacts to water quality and quantity from the expansion project. These issues predominantly differed from the concurrent environmental impact assessment review.

The KivIA has worked with Agnico Eagle throughout the technical review process to resolve these technical concerns. As of the technical hearings held in October 2019, 12 of the 21 issued had been resolved leaving 9 outstanding; the KivIA and Agnico Eagle have continued to work towards resolutions on the outstanding issues. As of this final technical submission, two issues have been fully resolved, five issues have been resolved pending our review of a final Adaptive Management Plan, and two issues are unresolved due to concerns with Agnico Eagle's capability to management freshet 2020 should it prove to be a wet year. All technical concerns raised by the KivIA and their status are summarized below. Full technical comments and their status are provided for the nine issues were outstanding as of the conclusion of the technical hearings in October 2019 in Appendix A.

- Agnico Eagle provided an assessment of potential concentrations of mercury in aquatic life based on literature for permanent reservoirs. Agnico Eagle updated those predictions for mercury concentrations in fish in the project area following a commitment made during the Nunavut Impact Review Board (NIRB) technical hearings. However, the model did not provide details on how the peak-increase-factor used to predict increased mercury concentrations in lake trout in the project area was calculated or provide definitive management actions in the event that predicted mercury concentrations in lake trout were exceeded.
    - Agnico Eagle has now clarified how the predicted mercury concentrations in fish were calculated as well as the communication-based strategy that will be used to ensure residents of Baker Lake are not exposed to elevated mercury in country food that may be associated with the project.

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- KivIA raised several concerns with respect to the water quality model. Specifically, interactions with pit walls were removed from the water quality model in the latest model update submitted with the water licence amendment application and cryo-concentration had yet to be incorporated. These concerns needed to be addressed to reduce the likelihood the water quality model has underpredicted concentrations of key parameters of concern in the receiving environment.
    - Agnico Eagle has now provided the requested model update accounting for cryo-concentration in the receiving environment. Concerns regarding potential arsenic leaching from the pit walls have been addressed through a) the draft Adaptive Management Plan that is currently being finalized with input from the KivIA and other intervenors, and b) through a quantitative assessment of the available water quantity in Nemo Lake as well as in lakes D1 and D5.
- It was unclear how excess water associated with a greater than 1:10-year flood event would be effectively dealt with using existing water management infrastructure.
    - Agnico Eagle has provided a draft Adaptive Management Plan indicating how excess water will be managed during operations. However, it is still unclear how excess water will be effectively managed during freshet 2020. Additional information is required from the proponent to demonstrate how contact water can be effectively managed during freshet 2020 should greater than average precipitation occur.
- Agnico Eagle had not factored climate change into the project design. In particular, the KivIA requested Agnico Eagle incorporate a wet year scenario into the water balance analysis to demonstrate that extreme annual flows can be handled by the water management plan. In addition, it was not clear how increased temperatures would affect estimates of permafrost dynamics beneath waterbodies and in the Waste Rock Storage Facility (WRSF), both during operations and after mine closure.
    - Agnico Eagle has now provided an in-depth climate change evaluation as well as improved thermal monitoring for the project. However, it is still unclear how excess water will be effectively managed during freshet 2020.
- Agnico Eagle committed to ensuring water quality in the open pits is not toxic to fish and other sensitive aquatic life post-closure, but it was not clear what water quality objectives were proposed for the pits prior to breaching the dikes.
    - Agnico Eagle has confirmed that water quality in the pits will meet Canadian Council of Ministers of the Environment (CCME) objectives for the Protection of Aquatic Life or site-specific water quality objectives (SSWQOs) prior to dike breaching in the expansion project as per the existing Water Licence for the approved project.
- Agnico Eagle had not presented a quantitative assessment of whether the two alternative discharge locations (Lakes D1 and D5) was feasible.
    - A quantitative assessment of water quantity in Lakes D1 and D5 have now been provided by Agnico Eagle. Further monitoring of the aquatic environment was also begun in the fall of 2019 and will continue throughout 2020 to assess those potential receiving environments.
- Updated information on water quality predictions for Lake A53 (a fish-bearing lake slated to be used for the IVR Attenuation Pond) had not been presented.
    - Agnico Eagle has confirmed that Lake A53 will be listed under Schedule 2 of the Metal and Diamond Mine Effluent Regulations (MDMER); water quality will no longer be a concern in that waterbody.

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- The water quality modelling presented in the application indicated that, due to arsenic leaching from the lithologies in the IVR Pit high walls, rehabilitation of the exposed walls would be needed to meet the water quality criteria. Agnico Eagle asserted that the IVR exposed walls above the final water level will be mined at a flatter angle so that they can be covered with overburden after closure. The feasibility of the mitigation needed to be demonstrated.
    - Agnico Eagle has clarified that the overburden will be covered / armoured with a stable thermal cap. Details have also been provided on the cap thickness as well as the constructed setback from the sloping and potentially less stable weathered pit walls.

We also raised several concerns pertaining to water management and mitigation. Those issues and their current status are summarized as follows:

- Trigger and threshold values had not yet been developed and applied to the Whale Tail project, raising uncertainty as to whether Agnico Eagle will be able to follow the procedures and protocols laid out in their core receiving environment monitoring program (CREMP) that are dependent on them.
    - Agnico Eagle has clarified that these triggers and thresholds will be submitted as part of the 2019 Whale Tail Project Annual Report. The KivIA will review those triggers and thresholds as part of our review of the Whale Tail annual report.
- The current interim closure plan assumes that mining equipment without salvage value will be decommissioned, cleaned, and disposed in the underground workings. We were concerned with the feasibility of this closure plan should Agnico Eagle default and the use of security be required to close the site.
    - Both the KivIA and Agnico Eagle are working to ensure security will be sufficient to ensure equipment and machinery left underground will not pose a residual risk.
- The short term (24 hour) maximum allowable limit for total suspended solids (TSS) during dike construction did not comply with federal guidelines for this parameter.
    - While a resolution was not been reached for the proposed TSS concentration for construction in a waterbody, Agnico Eagle has confirmed they are not planning to build any dikes or dams within waterbodies under the amendment application, so the generation of high TSS concentrations is not expected. If this situation changes or additional construction in a waterbody is proposed, we will reiterate the need to apply a short term TSS limit that meets either CCME or MDMER guidelines
- The current mine plan indicates that most of the overburden (rock and soil covering the mineral deposit) excavated for the Project will be disposed of as it is not adequate for revegetation purposes. Agnico Eagle did not justify why lakebed sediments (which make up most of the overburden) are not suitable for revegetation efforts.
    - Agnico Eagle has now clarified that the lake sediments lack appropriate geotechnical properties for revegetation during closure. Those sediments consist of water saturated soft soils which could cause instability and erosion into surface waters if used.
- It was not clear what monitoring schedule would be followed for used oil/waste fuel to ensure it meets standards for incineration on site.
    - Agnico Eagle clarified that it would use oil/waste fuel guidelines identified by the Nunavut Government and the associated monitoring schedule.
- The Fish Habitat Offsetting Plan was missing details on approach, timeline, monitoring, contingency options and complementary measures.

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- While the plan has not been finalized at this time, Agnico Eagle has committed to include the KivIA in discussions related to the Fisheries Act Authorization approval process.

- The thermal modelling report authored by O'Kane Consultants was provided by Agnico Eagle and reviewed by the KivIA. The thermal modelling that recommends the use of a thermal cap of 4.7 metres appears to be reasonable. However, the KivIA still requested that Agnico Eagle establish a sufficient number of thermistor strings in the Whale Tail WRSF and the bedrock beneath and in close proximity to the WRSF in order to ensure that the modelling is updated with local project data instead of thermistor readings from the Portage WRSF at the Meadowbank Gold Mine. This local data will best determine how effective the ARD/ML material has been isolated within the WRSF. In addition, it will allow for a better understanding of the depth and distribution of the active layer as it is related to permafrost distribution should be determined with the additional thermistor strings that will be established in the Whale Tail WRSF. This will also better determine the effectiveness of the freeze back in the WRSF, the water retention ability and capacity of WRSF dike, and the impact of water flow from the WRSF on the water quality in Mammoth Lake.
    - The number of thermistor strings that are now being installed will be sufficient. The on-going monitoring will determine if any adaptive management will be required.

3. Summary of Comments on Draft Water Licence

Agnico Eagle submitted a draft of the amended Type A Water Licence for the Whale Tail project in December 2019 to address changes required for the expansion project. This draft is presented as Water Licence NO: 2AM-WTP~~1826~~2043. Drafts were also presented for amendments to Water Licence No: 2AM-MEA1525 and 2BB-MEA1828. The KivIA offer comments on those licences in Appendix B, C and D. Our comments are generally offered to provide consistency and clarity within the License. We want to ensure that there is no confusion as between the Meadowbank Project and the Whale Tail Project and that all proposed changes provide the necessary confidence level for KivIA, as well as other parties.

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Appendix A. Outstanding Technical Comments as of the Technical Hearing in October 2019

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Removal of pit walls from water quality model predictions

Review Comment Number	KivIA-WL-TC#2 KivIA-WL-IR#32
Subject/Topic	Removal of pit walls from water quality model predictions
References	Mine site and downstream receiving water quality predictions Whale Tail Pit – Expansion Project Section 3.2.2.1 Surface facilities Table 4: Changes in surface facility inputs Page 24
Summary	Agnico Eagle has removed interactions with pit walls from the water quality model thereby excluding a significant source of arsenic and phosphorus. Insufficient rationale has been provided to justify the removal of pit walls from the water quality model.
Importance of issue	Removal of interactions with pit walls from the water quality model may underpredict concentrations of key parameters of concern in the receiving environment.
Detailed Review Comment	Agnico Eagle provides the following justification for removal of pit wall from the water quality model: • *"1 m interaction depth on pit benches and floors; no interaction with the pit walls"* • *"It is unlikely that surface runoff over the pit walls will significantly acquire a mass load; rather, the majority of the load will be sourced from pit benches and floors."* • *"At the Whale Tail pit sump, the largest source of arsenic is from runoff over pit benches and floors…. The largest source of phosphorus is the shallow groundwater seepage at the south wall*." Agnico Eagle's response to our information request provides further logic for the removal of pit walls from the model, stating that *"The main sources of leaching in an open pit are the benches due to the rubble zone that includes fine grained material that develops on account of over drilling and blasting."* While we agree that the most significant source will be the benches and pit floor, we disagree with the removal of pit walls all together from the model. The pit walls will be weathered over the course of mine life both during operation and throughout closure. We assert that removal of the pit walls as source terms for the water quality model removes a potentially significant source of arsenic and phosphorus and increases the likelihood that concentrations in the receiving environment are being underpredicted.
Recommendation/ Request	Please reintroduce the pit walls as source terms to the water quality model to more conservatively predict water quality concentrations in the receiving environment. Management and mitigation measures should be proposed along with a discussion of their effectiveness should concentrations of parameters of potential concern, including both phosphorus and arsenic, approach their respective discharge criteria and low action level thresholds. Also see "KivIA-WL-TC#12 Early warning trigger development".
Status	The KivIA established through discussions with the proponent prior to and during the technical hearings that the issue would be resolved if Agnico Eagle provided an adaptive management approach to water management as per KIA-WL-TC#6 for review prior to receipt of the water license. Agnico Eagle has since drafted an Adaptive Management Plan and provided the KivIA two opportunities for review – in December 2019 and January 2020.

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	We now consider this issue resolved pending review of the final Adaptive Management Plan to determine whether KivIA technical comments have been adequately incorporated.

Cryo-concentration in water quality model assumptions

Review Comment Number	KivIA-WL-TC#3 KivIA-WL-IR#31
Subject/Topic	Cryo-concentration in water quality model assumptions
References	Mine site and downstream receiving water quality predictions Whale Tail Pit – Expansion Project Section 2.1.1 Changes to FEIS Addendum Table 1: General water balance assumptions pertinent to the water quality model Page 11
Summary	Agnico Eagle committed to update the water quality model to include cryo-concentration during the NIRB technical hearings in June 2019. The water quality model accompanying the water licence submission does not include cryo-concentration and must be updated.
Importance of issue	The current water quality model predictions do not reflect changes committed to during the NIRB technical hearings.
Detailed Review Comment	The reviewer is aware that the information provided in the water license submission pertaining to cryo-concentrating inclusion in the water quality model is currently out of date and will be updated by the proponent as committed to during the EIS technical hearings in June 2019. Review of that documentation will be used to confirm whether water balance assumptions are appropriate. We note that the updated model has not been provided during the technical review period.
Recommendation/ Request	Please update the water quality model to include cryo-concentration. This update should be provided as soon as possible but no later than 30 days prior to the public hearings to provide sufficient time for technical review.
Status	Agnico Eagle has submitted a memorandum titled “Effects of cryo-concentration on the downstream receiving lakes water quality” dated December 18, 2019, which provides the requested information. We note that the updated cryo-concentration modelling for Mammoth Lake indicates the potential for short term (<1 year) exceedances of the arsenic site-specific water quality objective of 0.025 mg/L, and a prolonged shift (< 4 years) away from oligotrophic conditions in both Mammoth and Whale Tail lakes. However, this new concern is addressed through the Adaptive Management Plan Agnico Eagle is in the process of finalizing with input from the KivIA and other intervenors.

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Uncertainty in Waste Rock Seepage Estimates

Review Comment Number	KivIA-WL-TC#4 KivIA-WL-IR#4
Subject/Topic	Uncertainty in Waste Rock Seepage Estimates
References	Water Management Plan, Section 3.1.4.5, pp. 31-33, Tables 3.7, 3.8
Summary	*As shown in tables 3.5 and 3.6, the update water balance shows an overall reduction in the inflow volume to the ponds. The reduction in water inflow to the ponds is due to the estimated reduction of seepage outflow from the WRSFs.*
Importance of issue	Moderate
Detailed Review Comment	As indicated in Agnico Eagle's response to KivIA-WL-IR#4, *"the change to the contact water volume reporting to the attenuation pond is not related to 2019 Weather data but due to a refinement of the Landform Water Balance for the WRSFs".* These updates show reduced volumes of seepage reporting to the IVR and Whale Tail attenuation ponds. Agnico Eagle has indicated that they have *"conducted flood routing analyses for the attenuation ponds based on the mine plan and construction sequence of the ponds considering 1:100 and 1:1000-year flood events. Pumping rates were also analyzed and adjusted when required in order to maintain a water level below or equal to the Maximum Water Level (MWL) in the ponds during the passage of the 1:100-Yr Flood. All flood routing charts indicate that extreme events can be managed within the infrastructures with adequate freeboards."* We are concerned with how excess water associated with a greater than 1:100-year flood event will be dealt with.
Recommendation/ Request	Please provide results from the flood routing analysis and the range of seepage and runoff that can be accommodated by the attenuation ponds and comment on their ability to handle increased variance in runoff or climatic extremes. Please compare these inflows to the 1:1000-year flood event analysis to provide confidence that relatively extreme events can be adequately managed through current water management infrastructure and the attenuation ponds.
Status	Agnico Eagle provided an updated evaluation of the "Effects of Wet Year Scenarios on Water Management" in a memo dated December 17, 2019. The updated evaluation confirms a potential for excess water in both 2020 under 1:10 year wet scenarios, and in 2025 under 1:100 wet year scenarios. The Adaptive Management Plan provides adequate options to deal with the potential risk in 2025. However, both Agnico Eagle's modelling and through discussion on the Adaptive Management Plan on January 8, 2020 in Winnipeg indicate un unmitigated risk for > 1:10 wet years for freshet 2020. Excess water during freshet in future years (i.e. after 2020) can be mitigated through the potential use of the groundwater storage ponds (GSPs); these structures will not be available for freshet 2020. We therefore request Agnico Eagle provide a memorandum supplemental to the Adaptive Management Plan addressing how contact water can be managed for freshet 2020 should a 1:10 wet year or greater occur. This issue is unresolved.

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Climatic inputs for water quality model

Review Comment Number	KivIA-WL-TC#6 KivIA-WL-IR#34
Subject/Topic	Climatic inputs for water quality model
References	Mine site and downstream receiving water quality predictions Whale Tail Pit – Expansion Project Section 4.0 Water quality predictions, Page 47 Water Management Plan
Summary	Agnico Eagle states, "*Predicted concentrations are monthly mean values during operations and closure. Given the uncertainties associated with the modeling exercise and use of an average climate year, the predicted concentrations are considered to be order-of-magnitude estimates*."
Importance of issue	Medium
Detailed Review Comment	Agnico Eagle has only conducted water balance modelling under mean annual precipitation conditions. This does not provide sufficient confidence that Agnico Eagle will be able to mitigate impacts from increased or decreased site water should conditions diverge from the historical mean during construction, operations and closure. This issue was raised during the EIS review, and in response Agnico Eagle committed to providing an adaptive management decision tree in the updated water management plan to provide confidence that greater than anticipated water quantity could be adequately managed. As of the technical review period, this decision tree has not been provided despite Agnico Eagle's response to our information request that *"the water management decision tree available for the technical comment review period."*.
Recommendation/ Request	Please update the water management plan with the decision tree for water quantity management as committed to in the EIS technical hearings in June 2019 and within the response to KivIA-WL-IR#34.
Status	Agnico Eagle committed to providing an Adaptive Management Plan to address water management concerns during the technical hearings in Yellowknife. Agnico Eagle has since drafted an Adaptive Management Plan and provided the KivIA two opportunities for review – in December 2019 and January 2020. We now consider this issue resolved pending review of the final Adaptive Management Plan to determine whether KivIA technical comments have been adequately incorporated.

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Climate Change and Project Timeline

Review Comment Number	KivIA-WL-TC#7 Re: KivIA-WL-IR3
Subject/Topic	Climate Change and Project Timeline
References	Water Management Plan, Section 2.1.5 p. 12, Section 2.1.1 Table 2.1, Section 3.4 p. 34 and Agnico Eagle Response to Information Request KivIA-WL-IR3 p. 46-47
Summary	Climate change was not factored into the water management plan due to the short duration of the project. Agnico Eagle considers that water management is *"sufficiently conservative"* however because of undercatch correction factors applied to the water balance and design features in the water management facilities which account for extreme weather events (in addition to average conditions). Agnico Eagle states that it may also run a wet year scenario for the water balance to make sure it can handle extreme annual flows. The water balance results for the wet weather scenario should be presented for technical review.
Importance of issue	High The wet weather scenario should be incorporated into the water balance to ensure that extreme annual flows are adequately considered in the water management plan.
Detailed Review Comment	The absence of climate change consideration over the project operations and closure period, coupled with projected changes in climate over the same period, reduces the certainty in the water budget and predictions. While Agnico Eagle states that the water management plan is *"sufficiently conservative" (Agnico Eagle Response p. 46)* because (i) the water balance corrects for under-recording at stations and (ii) water management facilities are designed to account for extreme events, Agnico Eagle acknowledges that *"for further conservatism in the design…[it] is considering running a wet year scenario for the water balance to ensure the water management can handle extreme annual flows" (Agnico Eagle Response p. 46).* The wet weather scenario should be run to improve confidence in the water budget and predictions.
Recommendation/ Request	Please provide water balance results for the wet weather scenario as described.
Status	Agnico Eagle provided an updated evaluation of the Effects of wet year scenarios on water management in a memo dated December 17, 2019. The updated evaluation confirms a potential for excess water in both 2020 under 1:10 year wet scenarios, and in 2025 under 1:100 wet year scenarios. The Adaptive Management Plan provides adequate options to deal with the potential risk in 2025. However, both Agnico Eagle's modelling and through discussion on the Adaptive Management Plan on January 8, 2020 in Winnipeg indicate un unmitigated risk for > 1:10 wet years for freshet 2020. Excess water during freshet in future years (i.e. after 2020) can be mitigated through the potential use of the groundwater storage ponds (GSPs); these structures will not be available for freshet 2020. We therefore request Agnico Eagle provide a memorandum supplemental to the Adaptive Management Plan addressing how excess contact water can be managed

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	during freshet 2020 should a 1:10 wet year or greater occur. This issue is unresolved.

Arsenic and ARD mitigation on Whale Tail Pit Wall

Review Comment Number	KivIA-WL-TC#9. KivIA-WL-IR#14
Subject/Topic	Arsenic and ARD mitigation on Whale Tail Pit Wall
References	Interim Closure and Reclamation Plan Sect. 5.2.2.6 p. 67 See also 5.2.2.7 p.68 5.2.2.9 Table 8.0-1
Summary	The release of arsenic under submerged conditions from arsenic salts generated from exposure during mining is being evaluated as part of the water quality predictions (Golder 2019c). The north greywacke has a variable ARD potential and testing suggests that the delay to onset of ARD is likely to be much longer than the construction, operations and closure phases of the Project combined. However, if the north greywacke (or any other PAG/ML rock) were to be left exposed in the long-term on the highwall above the water level, a permanent control mechanism would be required. Arsenic release from exposed Whale Tail and IVR Pit walls is a source of uncertainty in the prediction of the long-term water quality of the flooded pit lake and Whale Tail Lake (North Basin). The source of the uncertainty lies in the occurrence of arsenic in the wall rock in waste rock and its leachability, particularly with respect to the IVR Pit, which has shown through geochemical testing to leach higher amounts of arsenic than similar lithologies in Whale Tail Pit These results demonstrate a lack of certainty in predictions for water quality in the pits at closure and no response plan is specified.
Importance of issue	High
Detailed Review Comment	The release of arsenic from submerged pit walls is stated as an unknown and extended exposure of PAG rock will require a permanent control mechanism yet no mitigation is proposed. Section 5.2.2.8 and 5.2.2.8 speak to ongoing monitoring and in situ treatment but the feasibility of in-situ treatment is not addressed. Agnico Eagle's response to the original IR indicated that in the *"event water quality is different than predicted, mitigation options range from using the water treatment plant that will be on-site during filling of the pit, to increasing the rate of filling (this will stop oxidation sooner), to delaying the time to reconnect the lakes. While treatment is not expected to be required during closure, if it was, it would likely only be short in duration as the source of arsenic will be stopped as the pit fills."* The proposal of *"…increasing the rate of filling (this will stop oxidation sooner)…"* contradicts the statement that *"However, if the north greywacke (or any other PAG/ML rock) were to be left exposed in the long-term on the highwall above the water level, a permanent control mechanism would be required."* We also refer the reader to KivIA-WL-TC#2 "Removal of pit walls from water quality model predictions".
Recommendation/ Request	We therefore request Agnico Eagle provide documentation to support the assertion that water treatment can effectively reduce arsenic concentrations to safe levels. We further request Agnico Eagle provide documentation to support an increased fill

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	rate, and what the greatest potential rate may be, for the pits intended to prevent ongoing oxidation of the pit walls. Given the uncertainty in the occurrence of arsenic in the pit walls and their contribution to concentrations during closure, we request Agnico Eagle ensure treatment of pit water quality is addressed under security. We request the NWB include a condition within the water licence requiring Agnico Eagle to develop an Adaptive Management Plan that identifies thresholds and timelines for treatment or other mitigation should water quality not be suitable for discharge during closure. This is intended to ensure water quality is suitable for discharge by the intended start of post closure in 2043.
Status	Agnico Eagle committed to providing an Adaptive Management Plan to address water management concerns during the technical hearings in Yellowknife. Agnico Eagle has since drafted an Adaptive Management Plan and provided the KivIA two opportunities for review – in December 2019 and January 2020. We now consider this issue resolved pending review of the final Adaptive Management Plan to determine whether KivIA technical comments have been adequately incorporated.

Implications of rock fracturing on groundwater volumes

Review Comment Number	KivIA-WL-TC#10. KivIA-WL-IR47
Subject/Topic	Implications of rock fracturing on groundwater volumes
References	Appendix G.15 – Whale Tail Project Groundwater Monitoring Plan, May 2019, Section 2.0 Agnico Eagle. 2AM-WTP1826, Information Request Reponses, Whale Tail Pit – Expansion Project, page 102. August 1, 2019.
Summary	The site and hydrogeological conditions are summarized in this section, including current, operational and post-closure conditions. Hydraulic conductivities and seepage are described for the development timeline in the different subsurface strata to provide context for the monitoring program.
Importance of issue	High: Spatial-temporal hydrogeological conditions and their potential effects on water management and post-closure must be understood so that monitoring programs can be implemented that accurately represent the conditions of concern.
Detailed Review Comment	The potential effects of groundwater migration/infiltration due to rock fracturing from the pit (and eventual shaft) construction were not discussed. Given the large size and surface area of the pit, the reviewer assumes that rock fracturing will only occur relatively near to the pit and would not appreciably increase groundwater migration to it, overall, especially if freeze back occurs as Agnico indicated could happen. However, rock fracturing in near-surface areas where there is more water available, especially in early development when groundwater storage has not been depleted,

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	could affect the assumptions about early water intrusion to the pit. Previous hydrogeological investigations by Golder identified increased hydraulic conductivity related to jointing (fracturing) over 30 m from approximately 436 – 466 m deep (referenced in the Updated Hydrogeological Investigation, Whale Tail Pit, Expansion Project – Golder Associates, May 6, 2019). Agnico Eagle clarified that: *"Mechanical fracturing of rock along the pit perimeter may locally increase the hydraulic conductivity near the pit walls; however, flow to the pit will be primarily controlled by the vertical gradient induced by mine dewatering (i.e., it will be controlled the relative depth of the unfrozen portion of the pit and the lake elevation in the South Basin of Whale Tail Lake) and the bedrock hydraulic conductivity. Some small temporary increases in flow from storage release may occur, but these flows will be minimized by the portions of the pit perimeter that is located in permafrost, and they would be small in comparison to the flow through the weathered bedrock, which is significant due to its high hydraulic conductivity (1 x 10^{-5} m/s)."* (Agnico Eagle. 2AM-WTP1826, Information Request Reponses, Whale Tail Pit – Expansion Project, page 102. August 1, 2019.) The Agnico Eagle response is reasonable, however a quantity estimate of relative groundwater contributions from rock fracturing should be provided to substantiate the assumed minimal contributions.
Recommendation/ Request	Please provide a quantity estimate of relative groundwater contributions from rock fracturing.
Status	Agnico Eagle committed to provide thermistor data from Meadowbank to support the conclusion that the freeze-back of the pit walls will result in a negligible impact from rock fracturing on the overall water balance during the technical hearings in October 2019. This information was satisfactorily provided in a memorandum titled "Permafrost Development – Thermal Data Report Whale Tail Project Expansion" dated December 2019. We now consider Agnico Eagle's assertion that the contribution of groundwater infiltration in the pits will be a negligible contribution to the overall water balance to be substantiated. This issue is resolved.

Water Quality Contingencies

Review Comment Number	KivIA-WL-TC#18 Re: KivIA-WL-IR18
Subject/Topic	Water Quality Contingencies
References	Interim Closure and Reclamation Plan, Section 5.2.9.9 and Agnico Eagle Response to KivIA-WL-IR18 p. 67
Summary	Agnico Eagle states that it would consider using the O-WTP as a primary contingency option to treat water during the flooding sequence. However, this contingency treatment cannot achieve CWQG water quality guidelines for pit water unless high arsenic loadings from pit walls can be isolated and treated separately. The response does not indicate that pit water can be treated to levels protective of aquatic life.

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Importance of issue	High Water quality within and downstream of the pits post-closure is important for protecting aquatic life, including fish, in the area of the mine.
Detailed Review Comment	In Response to KivIA-WL-IR18, Agnico Eagle states that it *"would consider using the Operation Water Treatment Plant (O-WTP)"* (p. 67,) which could treat arsenic to 0.1 mg/L at a maximum flow of 1600 m^3/hr. This means that pit water could not be treated to CWQG levels unless the source terms (pit walls) could be isolated, and thus pit water would not have water quality levels protective of aquatic life.
Recommendation/ Request	Please describe how any high arsenic loadings from pit walls could be isolated and treated in order to maintain pit water quality within CWQG levels and provide evidence of the feasibility of the proposed management option.
Status	Agnico Eagle outlined mitigation measures associated with elevated arsenic loadings from the pit walls in the draft Adaptive Management Plan. The proposed mitigation measures include treatment of arsenic rich contact water and an accelerated flooding schedule in the pits to prevent ongoing oxidation by ensuring they were isolated from the air. Details on the water treatment plant's capacity to treat arsenic were outlined to our satisfaction in the Construction Summary Report for the Construction Water Treatment Plant (CWTP) and the Arsenic Water Treatment Plant (AsWTP) dated October 4, 2019. Agnico Eagle has also provided a quantitative assessment of water quantity in Nemo Lake as well as Lakes D1 and D5 to support the assertion that an increased rate of flooding was an available mitigation measure to prevent ongoing oxidation from the pit walls without resulting in an excessive draw on the source water bodies; Agnico Eagle must ensure that water withdrawal does not result in a deleterious impact aquatic life or aquatic habitat. This information was provided in two separate memos: "Whale Tail Pit – Expansion Project Water Balance for Lake C38 (Nemo Lake)" and "Technical Comment KivIA-WL-TC#9: Assessment of Lake D5 and Lake D1 to Expedite the Refilling Duration of Whale Tail Lake (North Basin) at Closure". These documents indicate that expedited reflooding using Lake D1 is a viable option to isolate the pit walls. Triggers for increasing arsenic treatment efficiency and to implement an accelerated reflooding schedule for the pits are outlined in the draft Adaptive Management Plan. Together these documents adequately address the KivIA's concern for water quality within the pits and downstream in the closure and post closure environments. We now consider this issue resolved pending review of the final Adaptive Management Plan to determine whether KivIA technical comments have been adequately incorporated.

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Waste Rock Storage Facility Design

Review Comment Number	KivIA-WL-TC#21 KivIA-WL-IR50
Subject/Topic	Waste Rock Storage Facility Design
References	Appendix G.17, Whale Tail Pit ARD-ML Sampling Plan v.5; Section 2.2.1, page 4.
Summary	The proponent will be a using a 4.7 metre thick NPAG / NML to host the thawed layer and prevent liquids from contacting the centre of the waste rock pile. The rational for this is based on results to date on thermal modeling that considers thermistor readings at the Portage waste rock facility.
Importance of issue	The proponent is basing the effectiveness of the 4.7 metre thick NPAG/NML on a Golders report that is "in preparation". Until this final report is available there is no way to determine if the 4.7 metres will be effective in isolating the ARD/ML material.
Detailed Review Comment	Until this final report is available there is no way to determine if the 4.7 metres will be effective in isolating the ARD/ML material.
Information Request	Provide the Golders report on thermal modeling that considers thermistor readings at the Portage waste rock facility as soon as is reasonable possible.
Proponent Response to the Information Request	The thermal modeling report authored by O'Kane Consultants was provided by Agnico Eagle and reviewed by the KivIA
KivIA Response	The thermal modeling that recommends the use of a thermal cap of 4.7 metres appears to be reasonable. However, the KivIA requests that Agnico Eagle establish a sufficient number of thermistor strings in the Whale Tail WRSF and the bedrock beneath and in close proximity to the WRSF in order to ensure that the modeling is updated with local project data instead of thermistor readings from the Portage WRSF at the Meadowbank Gold Mine. This local data will best determine how effective the ARD/ML material has been isolated within the WRSF. In addition, it will allow for a better understanding of the depth and distribution of the active layer as it is related to permafrost distribution should be determined with the additional thermistor strings that will be established in the Whale Tail WRSF. This will also better determine the effectiveness of the 1) freeze back in the WRSF, 2) the water retention ability and capacity of WRSF dike, and 3) the impact of water flow from the WRSF on the water quality in Mammoth Lake.
Status	This issue is now resolved.

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Appendix B. Proposed changes to Water Licence NO: 2AM-WTP~~18262~~2043

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NUNAVUT WATER BOARD

WATER LICENCE NO: 2AM-WTP20431826

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Licence No. 2AM-WTP2043~~1826~~

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

AGNICO EAGLE MINES LIMITED

(Licensee)

145, KING STREET EAST, SUITE 400, TORONTO, ONTARIO M5C 2Y7

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or deposit waste for a period of time subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	**2AM-~~WTP1826~~ WTP2043 / Type "A"**
Water Management Area:	**THELON, QUOICH & BACK WATERSHEDS (5, 9 & 31)**
Location:	**WHALE TAIL PIT MINE AND HAUL ROAD KIVALLIQ REGION, NUNAVUT**
Purpose:	**WATER USE AND DEPOSIT OF WASTE**
Description:	**MINING UNDERTAKING**
Quantity of Water not to be Exceeded:	**~~240,000~~ up to 700,359 CUBIC METRES ANNUALLY DURING CONSTRUCTION AND OPERATION AND up to ~~10,655,000~~~~12,803,606~~ 14,855,606 CUBIC METRES ANNUALLY DURING CLOSURE**
Date of Issuance:	**MAY 1~~29~~, ~~2018~~2020**
Expiry of Licence:	**~~MAY 28, 2026~~December 31, 2043**

This Licence issued **(Motion Number ~~2018-06-P17-06~~ TBD)** and recorded at Gjoa Haven, Nunavut includes and is subject to the annexed conditions.

Lootie Toomasie
Nunavut Water Board
Chair

APPROVED BY:

Carolyn Bennett
Minister of Crown-Indigenous Relations and Northern Affairs

DATE LICENCE APPROVED: _____

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

a. This Licence authorizes the Licensee to the use of Waters and deposit of Wastes in support of a m~~M~~ining Undertaking ~~classified as per Schedule 1 of the *Regulations*~~, at the Whale Tail Pit Project (the"Project") as outlined in the Type "A" Water Licence Application (Application) submitted to the Nunavut Water Board (hereinafter referred to as NWB or Board) on July 8, 2016 and the Project Amendment Application submitted May 16, 2019 and as reviewed throughout the regulatory process.

The Licensee may conduct mining and associated activities at the ~~Whale Tail Pit~~ Project in the Kivalliq Region of Nunavut at the following project extents:

Project Extents	Latitude	Longitude
Whale Tail Haul Road	65° 04' 53.3'' N	96° 01' 00.8'' W
	65° 23' 49.7'' N	96° 40' 35.8'' W
~~Whale Tail Pit~~ Project Area	65° 25' 22.2564~~241~~'' N	96° 46' 076.~~042~~'' ~~5868~~'' W
	65° 25' ~~12~~.09.3792~~707~~''	96° 35' 3244.0875~~100~~'' W
	65° 21' 1035.5036~~740~~'' N	96° 36' 5603.2353~~944~~'' W
	65° 21' 2645.3220~~248~~'' N	96° 46' 3324.9176~~463~~'' W
Whale Tail Pit Camp	65° 24' 36'' N	96° 41' 41'' W

In general, the scope of the activities, works and Undertaking~~s~~ authorized in accordance with the terms and conditions of the Licence are as follows:

1. ~~All bulk sampling and other~~ Certain ~~a~~activities included in the scope of the former 2BB-MEA 1828 as follows:
    - U~~u~~nderground development and ~~underground~~ exploration drilling (including the portal, ramp and ventilation raises);

~~1.~~ operation of stormwater management pond (A-P5) (to be converted into GSP-1).

-

2. Extraction of overburden, waste rock and ore via Open Pits and Underground mine facilities;

3. Withdrawal and use of water from ~~small~~ ponds and lakes proximal to drilling site~~ss for purposes of operational geological drilling~~;

~~2.~~4. Withdrawal and use of water from Nemo Lake for camp, mining, associated activities and domestic purposes;

~~3.~~5. Withdrawal and use of water from ~~unnamed lake~~Mammoth Lake ~~approximately 250 metres from the Emulsion Plant for use in explosives mixing~~;

~~4.~~6. Withdrawal and use of water from Whale Tail Lake (South Basin) for camp operation and re-flooding of pen pit following pit development during Closure and for withdrawal and use of water from water bodies proximal to the Whale Tail Haul

Road for dust suppression;

~~5.~~7. Dewatering of Whale Tail Lake North Basin, Lake A53 and other water bodies as described in the Application;

~~6.~~8. Quarrying of materials from specified locations;

~~7.~~9. Operation of a camp at the ~~Whale Tail Pit~~ Project site;

~~8.~~10. Construction and operation of the Whale Tail Haul Road, site roads, including associated water crossings and bridges;

~~9.~~11. Construction and operation of the Whale Tail Waste Rock Storage Facility and IVR Waste Rock Storage Facility~~iesy~~, ~~IVR~~ and o~~O~~re s~~S~~tockpiles;

~~10.~~12. Operation of satellite mine site facilities including bulk fuel storage, shops, offices warehouse and camp;

13. Operation of site water management facilities, including but not limited to:

- Operation of a Sewage Treatment Plant (STP);
- Operation of Operational Treatment Plan (O-WTP);
- Operation of a Saline water Treatment Plant (S-WTP);

~~11.~~14. ~~and controlled~~ Controlled discharges of ~~treated~~ Effluent during Ceonstruction, O~~o~~perations and Celosure;

15. Set-up and operation of diesel fired equipment including the w~~W~~aste i~~I~~ncinerator or approved equipment;

~~12.~~16. Set-up and operation of ~~a composter~~composting facilities;

~~13.~~17. Construction and operation of emulsion facilities, which may include emulsion storage facilities or E~~e~~mulsion P~~p~~lants~~an emulsion facility~~;

~~14. Construction and operation of the Whale Tail Landfill;~~

~~15. Use of the Landfarm or an approved landfarm facility;~~

~~16.~~18. Operation of the Whale Tail Attenuation Pond~~-~~and IVR Attenuation Pond~~s~~;

~~17.~~19. Management and disposal of Wastes associated with the Whale Tail satellite deposit including: waste rock storage facility, landfill, landfarm, I~~i~~ncinerator, composter, ore stockpiles, groundwater storage ponds, water treatment plants, attenuation ponds and other wastes as described in the Application;

~~18.~~20. Handling and storage of petroleum products and hazardous materials including explosives and other reagents;

21. Construction and operation of Contact Water and Non-Contact Water ~~management~~ collection systems;

~~19.~~22. Construction of Whale Tail site water management infrastructure including: Whale Tail Dike, Mammoth Dike, Waste Rock Storage Facility Dike, Northwest Dike, Mammoth Channel Culvert, Whale Tail and IVR Attenuation Ponds, and Whale Tail Diversion Channel; Whale Tail and IVR Waste Rock Storage Facility water collection systems, IVR Diversion, Groundwater Storage Ponds, IVR dikes;

~~20.~~23. Controlled and regulated Discharge of Effluent to Mammoth Lake, ~~-~~South Whale Tail Basin, Lake D1 and Lake D5 ~~from Whale Tail Attenuation Pond via Mammoth Lake Diffuser~~via diffusers;

~~21.~~24. Re-flooding of ~~Whale Tail~~ O~~o~~pen P~~p~~its and U~~u~~nderground following ~~pit~~ development; ~~and~~

25. Planning for, and carrying out Adaptive Management Plan;

~~22.~~26. Planning for, and carrying out P~~p~~rogressive Reclamation, Closure and Abandonment of on-site facilities and infrastructure.

b. This Licence is issued subject to conditions contained herein with respect to the use of Waters and the deposit of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or the existing *Regulations* are amended by the Governor in Council under the *Act*~~, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited,~~ this Licence shall be deemed to be subject to such requirements.

c. Compliance with the terms and conditions of this Licence does not absolve the Licensee

from responsibility for compliance with all applicable legislation~~,~~ guidelines and directives. ~~guidelines and directives~~.

2. DEFINITIONS

a. The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

3. ENFORCEMENT

a. Failure to comply with this Licence may be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*.

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*.

c. For the purpose of enforcing this Licence and with respect to the use of Waters and deposit of Waste by the Licensee, Inspectors appointed under the *Act* hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable laws.

PART B: GENERAL CONDITIONS

1. The amount of Water use fees shall be determined and payment of those fees shall be made in accordance with section 12 of the *Regulations.*

2. The Licensee shall file an Annual Report with the Board no later than March 31th in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B.

3. The Licensee shall retain and have a copy of this Licence available at the site of Oeperations at all times.

4. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing, Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

5. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

6. The Licensee shall submit one (1) electronic copy of all reports, studies, and Pplans to the Board unless otherwise requested by the Board. Unless otherwise directed by the Board, reports or studies submitted to the Board by the Licensee shall include an executive summary

in English, Inuktitut, and French.

7. This Licence is assignable as provided in Section 44 of the *Act*.

8. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.

9. Other than changes associated with Adaptive Management, ~~where practicable~~ ~~T~~The Licensee shall notify the Board of any changes in operating plans or conditions associated with this Project at least sixty (60) days prior to any such change.

10. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities and the Waste Disposal Facilities. All signs must be in English, Inuktitut and French and shall be located and maintained to the satisfaction of an Inspector.

11. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may request that the Licensee alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan. Unless the Board otherwise advises, Plans and amendments thereto submitted under this Licence shall be deemed to be approved by the Board within forty-five (45) days of submission by the Licensee. For greater clarity, an approved Plan remains in force until such time as it is replaced by a new approved Plan.

12. Unless otherwise directed by the Board in writing, if a Plan is not acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board. The Board shall issue a final approval decision upon receipt of the revised version of the Plan.

13. The Licensee shall implement the following Plans also required under the Type "A" Water Licence 2AM-~~MEA1526~~ MEA2043 as approved (or accepted) by the Board. Any future updates to these Plans approved (or accepted) under the Type "A" Water Licence 2AM-MEA2033~~1526~~ or this Licence shall be applicable to both 2AM-MEA1526 and 2AM-~~WTP1826~~ WTP2043 Licences. Any changes to the P~~p~~lans deemed significant by the Board~~shall be considered as an amendment to the Plan(s) or as a modification and~~ must be approved by the Board.

a. Aquatic Effects Monitoring~~anagement~~ Program (AEMP), Version 3 (November 2015)*[1];
b. Ammonia Management Plan - Whale Tail Pit Addendum, Version WT (June 2016)*;
c. Core Receiving Environment Monitoring Program (CREMP), Version WT (May~~June~~ 2018~~6~~)^;
~~c.~~d. Mercury Monitoring Plan (March 2019) [*Note this Plan appears as Appendix A to the CREMP*];
~~d.~~e. Dewatering Dikes: Operation, Maintenance and Surveillance Manual, Version ~~6~~ 2(~~February 2017~~March 2019)*;
~~e.~~f. Emergency Response Plan, Version WT (June 2016)^;
~~f.~~g. Groundwater Monitoring Plan, Version 10~~WT~~ (July 2019~~June 2016~~);

Commented [KG1]: Adaptive Management is being used interchangeably as an activity or as a Plan. Must consistently defined and used.

Commented [KG2]: This erodes the jurisdiction of the Board.

~~g.~~h. Hazardous Materials Management Plan: Meadowbank Mine Site, Whale Tail Pit Site, Baker Lake Facilities, Version WT 4 (March 2019~~June 2016~~)*;

~~h.~~i. Quality Assurance/Quality Control (QA/QC) Plan, Version 4~~3~~ (March 2019~~October 2015~~)* accepted by the Board;

~~i.~~j. Operational ARD/ML Testing and Sampling Plan, Version WT 4 (~~June 2016~~March 2019)^;

[1] The Plans identified as "Version WT" are addendums^ to existing Meadowbank Mine Project's plans; otherwise the most up-to-date Meadowbank plan is applicable*

~~j.~~k. Spill Contingency Plan, Version WT (June 2016)^.

14. The Licensee shall, for all Plans submitted under this Licence, implement the Plans as approved by the Board in writing. The Board has approved (or accepted) the following Plans for implementation under the relevant sections in the Licence. Any changes to the plans deemed significant ~~shall be considered as an amendment to the plan(s) or as a modification and must be approved~~ by the Board and must be approved by the Board.

    a. ~~Amaruq Gold~~Whale Tail Sewage Treatment ~~System~~Plant Operation and Maintenance Plan Version 2 (~~December 2015~~February 2019)*;
    b. Meadowbank and Whale Tail Bulk Fuel Storage Facilities: Environmental Performance Monitoring Plan, Version WT 4, (~~June 2016~~March 2019)~~^~~;
    c. Whale Tail Pit Interim Closure and Reclamation Plan, Version ~~WT~~ 3 (~~June 2016~~December 2019)^;
    d. Whale Tail Pit Landfill and Waste Management Plan, Version ~~1~~ 2 (~~January 2017~~April 2019);
    e. Whale Tail Pit Landfarm Design and Management Plan. Version 1 (April 2019);
    ~~d.~~f. Whale Tail Pit Incinerator and Composter Waste Management Plan Version 1 (April 2019);
    ~~e.~~g. Whale Tail Pit Haul Road Management Plan, Version 2~~1~~ (March 2019~~June 2016~~)
    ~~f.~~h. Whale Tail Pit Waste Rock Management Plan, Version 5~~1~~ (May 2019~~January 2017~~);
    ~~g.~~i. Whale Tail Pit Water Management Plan, Version 4~~1~~ (May 2019~~January 2017~~);
    ~~h.~~j. Whale Tail Pit Water Quality and Flow Monitoring Plan, Version 6~~2~~ (March 2019~~ay 2017~~); and
    ~~i.~~k. Whale Tail Pit Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version ~~1~~ 2 (~~January 2017~~May 2019).

15. Within sixty (60) days of approval of this Licence by the Minister, the Licensee shall submit to the Board, for approval in writing, the following updated management plans. The updates are to take into account commitments made with respect to submissions received during the technical review of the Application, ~~as well as final submissions and issues raised during the 2017-2018 Public Hearing process,~~ where applicable.

    ~~a. Whale Tail Pit Haul Road Management Plan, Version 1 (June 2016);~~
    ~~b.~~a. Whale Tail Pit Waste Rock Management Plan, Version ~~1~~ 5 (May 2019~~January 2017~~);
    b. Whale Tail Pit Water Management Plan, Version ~~1~~ 4 (~~January 2017~~May 2019);
    c. Whale Tail Pit Interim Closure and Reclamation Plan, Version 3 (December 2019);
    d. Spill Contingency Plan, Version 7 (April 2019);
    e. Hazardous Materials Management Plan: Meadowbank Mine Site, Whale Tail Pit Site, Baker Lake Facilities, Version 4 (May 2019);
    ~~c.~~ Emergency Response Plan, Version 1 (May 2019) ~~and~~
    f. ~~Mercury Monitoring Studies Program.~~
    ~~d.~~g. Adaptive Management Plan (insert date)

16. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence

Commented [Katz3]: Why is this removed?

should be contemplated in the development of a Plan where appropriate.

17. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made. ~~or a replacement Plan or Plans to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made when and as the need arises~~.

~~17. The Licensee may consolidate and streamline one or more approved Plans to support efficient site management and operations and communication with Inspectors and regulators.~~

18. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the ~~Licence, or any other regulatory requirement.~~Act.

Commented [Katz4]: Why has this language been removed? Suggest including it.

Commented [Katz5]: We don't agree with the process of streamlining.

19. The Schedules attached to this Licence provide details regarding the requirements associated with specific items in the main body of the Licence and are included in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. If the Board subsequently determines that an item in any of the Schedules requires revision in order to better reflect the intent and objectives of the Licence, the Board may at its discretion, and upon consulting and providing written notice to the Licensee and interested parties, revise the Schedule accordingly. Unless the Board directs otherwise, such revision may not necessarily be considered as an "Amendment" to the Licence.

20. Unless otherwise stated, references in the Licence to any specific legislation, policy, guideline or other regulatory requirement are deemed to refer to the regulatory requirement as may be amended or as may be expressly replaced by successor legislation, policy, guidelines or other regulatory requirements after the Licence is approved by the Minister.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall, within thirty (30) days following the approval of this Licence by the Minister, furnish and maintain security with the Minister in the amount for a total of $~~2413,400~~143,000.25,331,754 As set out in the *Whale Tail Security Management Agreement*, ~~September 5, 2017 [update]Version~~, the amount secured under this Part constitutes 50% of the total global security amount of $~~26,286~~48,800,000~~50~~,663,508 that is required to reclaim the Undertaking and reflects that the other 50% of the global security amount will be held outside the Licence by the Kivalliq Inuit ~~Organization~~Association, in accordance with the terms and conditions of the *Whale Tail Security Management Agreement*.

Commented [Katz6]: This needs the updated final security values once agreed upon by the parties

2. The security held under Part C, Item 1 shall be in a form that is satisfactory to the Minister and consistent with the *Act* and *Regulations*.

3. The Licensee shall, within ten (10) days after furnishing security with the Minister, provide evidence to the ~~NWB~~ Board and the Kivalliq Inuit Association, that the security has been received by the Minister, indicating the amount, form, nature and conditions of the security.

4. The Licensee shall, within ten (10) days after furnishing security with the Kivalliq Inuit Association, provide evidence to the ~~NWB~~ Board and to the Minister, that the security has been received by the Kivalliq Inuit Association, indicating the amount, form, nature and conditions of the security.

5. The Licensee shall provide the Board with at least ninety (90) days written notice prior to any parties' termination of the *Whale Tail Security Management Agreement*, or any material change to the *Whale Tail Security Management* Agreement that may affect the amount of security held under Part C, Item 1.

6. The Licensee shall provide the Board with at least ninety (90) days written notice prior to any material changes to the Undertaking or the risk of environmental damage associated with the Undertaking that could result in a material change to the reclamation liability associated

with the Undertaking (including, but not limited to, updates to the Rreclamation costestimate arising from unexpected changes or modifications of the works and activities associated with the Undertaking).

7. The Licensee shall, within twelve (12) months following the commencement of Operations and when the Licensee files a Final Reclamation and Closure Plan as required under the Licence, submit to the Board for review an updated reclamation cost estimate, using the ~~INAC~~ CIRNAC RECLAIM Reclamation Cost Estimating Model (Version 7.0 or the most current version in use at the time the updated reclamation cost estimate is submitted to the Board).

8. Upon the Board receiving notice under Part C, Items 5 or 6, or upon receiving an updated Rreclamation cost estimate as required under Part C, Item 7, the Board may, on its own initiative, or upon application by the Licensee, the Minister and/or the Kivalliq Inuit Association, conduct a periodic review of the outstanding Rreclamation liability associated with the Undertaking and may, as the Board considers appropriate, amend the amount of security held under Part C, ~~Item 1. Any submission requesting an amendment to~~Item 1. If the Nunavut Water Board determines it to be necessary or upon the request of the Proponent, the Minister and or the Kivalliq Inuit Association~~IA~~, the Nunavut Water Board may issue further direction with respect to the process for the Board's conduct of periodic reviews of security and associated amendments to the amount of security to be furnished and maintained under the Licence. ~~the security provisions of the Licence shall include supporting evidence to justify the amendment and will be processed by the Board as an amendment to the terms and conditions of the Licence.~~

~~8.~~9. The Licensee may, once yearly,~~at any time,~~ submit to the Board for consideration and approval, a request to change the amount of security outlined in Part C, Item 1. The submission shall include supporting evidence to justify the request, and the Minister and the Kivalliq Inuit Association will be consulted by the Board during the Board's consideration of this request. Such requests shall take into account the Water Monitoring Reduction Framework attached as Schedule C.

Commented [Katz7]: Why is KIA's role limited to being consulted. This request should only be made once annually. Disagree with limit to only being consulted.

~~9.~~10. If the Board determines it to be necessary, or upon the request of Licensee, the Minister and/or the Kivalliq Inuit Association, the Board may issue further directions under this Part with respect to the process for amending the amount of security to be furnished and maintained under the Licence.

11. The security referred to in Part C, Item 1 shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Final Reclamation and Closure Plan and as it is fully or in part refunded by the Minister pursuant to Section 76(5) of the Act. This clause shall survive the expiry of the Licence or renewals thereof and until full and final Rreclamation has been completed to the satisfaction of the Minister.

12. The Board may modify to the Monitoring Program for all phases of mining as set out in Schedule I ~~withtou~~without amendment or a public hearing. Requests for changes to the Monitoring Program should be forwarded to the Board in writing and shall~~should~~ include

justification for the change. Such requests may take into consideration the Water Monitoring Reduction Framework attached as Schedule C.

PART D: CONDITIONS APPLYING TO CONSTRUCTION AND OPERATION

1. The Licensee shall submit to the Board for review, at least ~~sixty~~ thirty (30~~60~~) days prior to Construction, final design and Construction drawings accompanied, with a detailed report, for the following:

   a. ~~Water works, including:~~ Water Intake and causeway,
   ~~a.~~b. ~~Water control structures (D~~dikes, berms, jetties~~, channels~~); ~~and Water crossings (culverts, bridges);~~
   c. ~~Waste disposal facilities including:~~ Wastewater Treatment Plant,
   d. Sewage Treatment Plant,
   e. Saline Treatment Plant
   f. Discharge Diffuser~~r~~,
   g. Waste Rock Storage Facility,
   h. Overburden stockpiles, ~~and~~
   ~~b.~~i. Landfill; and
   ~~c.~~j. ~~Whale Tail~~ Bulk Fuel Storage Facility.

2. The detailed report(s) referred to in Part D, Item 1 shall include:

a. Design rational, requirements, criteria, parameters, standards analysis, methods, assumptions and limitations;
b. Site specific data and analysis to support the design and management decisions;
c. Geochemical analysis of Waste Rock and fill, demonstrating the Acid Rock Drainage (ARD) and Metal Leaching characteristics of these materials;
d. Construction methods and procedures outlining how infrastructure will be put in place, including Qquality Aassurance and Qquality Ccontrol measures and equipment to be used;
e. Technical specifications for sedimentation, erosion control and bank stabilization measures, including proposed materials, location and extent, place methods and quantities required;
f. Timetable for submission, including date of Construction and proposed date of commissioning of infrastructure; and
g. Where applicable, bBe signed and sealed by the appropriately qualified Engineer.

3. The Licensee shall submit to the Board for review, at least twentythirty (2330) days prior to Construction, final design and Construction drawings accompanied, with a detailed report, for the following:
a. Whale Tail Dike
b. Whale Tail WRSF water collection system;
c. –IVR WRSF water collection system;
d. , IVR diversion;
e. , IVR attenuation pond infrastructure;
f. , IVR pit water management infrastructure;
g. , Dewatering A47;
h. , Dewatering A49;
i. , Dewatering A53;
j. , Dewatering A-P21;
k. , Dewatering A50;
l. , Dewatering A51;
m. , Dewatering A52;
n. , Whale Tail South Basin Diffuser;
o. , IVR Dike 1 and& spillway;and
p. , Pad H Extension.

3. The detailed report shall include items referred to in Part D Item 2.

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4. The Licensee shall use Waste rock and fill material for Construction only from approved sources that have been demonstrated, by appropriate geochemical analyses, to not produce Acid Rock Drainage (ARD) and to be Non-Metal Leaching, and free of contaminants.

5. During dike Cconstruction, the Licensee shall implement the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering and associated action plans outlined if:

a. Total Suspended Solids (TSS) levels in a single sample exceed the Short Term

Maximum TSS concentration defined in Part D Item 6;

b. The 7-day moving average TSS concentration exceeds the Maximum Monthly Mean TSS concentration defined in Part D Item 6.

6. The Licensee shall compare TSS levels as required in Part D Item 5 to the following Maximum Monthly Mean and Short Term Maximum concentrations:

Parameter	Maximum Monthly Mean (mg/L)	Short Term Maximum (mg/L)
TSS in areas where there is spawning habitat and at times when eggs or larvae are expected to be present	6	25
TSS in all other areas and at times when eggs/larvae are not present	15	50
TSS in impounded areas at all times in all areas.	15	50

7. Effluent from dewatering activities shall be monitored at Monitoring Program Stations ST-DD-1 to ST-DD-TBD and not exceed the following Effluent quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids (TSS)	15.0 mg/L	~~22.5~~30 mg/L
~~Turbidity~~	~~15 NTU~~	~~30 NTU~~
~~pH~~	~~6.0 to 9.0~~	~~6.0 to 9.0~~
~~Total Aluminium~~	~~1.5 mg/L~~	~~3.0 mg/L~~

8. Effluent from dewatering of ~~Whale Tail Lake (North Basin)~~A-49, A-38, ~~A-P67, A-47,~~ A-46, A-47, A-49, ~~A-P68, A-P21,~~ A-50, A-51, A-52, A-53, A-P21, A-P10, A-P67, ~~A-P38,~~ A-P68 ~~A-P10~~ will be discharged to Whale Tail Lake ~~(~~South Basin~~)~~, if discharge water quality criteria are met.

9. All Effluent from Sewage Treatment Plant shall be directed to the Whale Tail Attenuation Pond.

10. The Licensee shall monitor the Whale Tail and IVR Attenuation Ponds and Whale Tail Lake South water quality in accordance with the Licence criteria. Effluent from Whale Tail Attenuation Pond may be discharged to Mammoth Lake via the Mammoth Lake D~~d~~iffuser, if Effluent discharge criteria are met.

11. The Licensee shall implement sediment and erosion control measures prior to and during Construction, and Operations where necessary, to prevent entry of sediment into Water.

12. The Licensee shall inspect daily, all C~~c~~onstruction activities for signs of erosion that may affect surface water flowing to Nemo Lake, Mammoth Lake and Whale Tail Lake.

13. All surface runoff during the C~~c~~onstruction of any facilities, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids (TSS)	50.0	100.0

14. The Licensee shall, during the C~~c~~onstruction of all E~~e~~ngineered S~~s~~tructures, provide the required supervision and field checks by an appropriately qualified and experienced Engineer in such a manner that the P~~p~~roject specifications can be enforced and, where required, the quality control measures can be followed. The Licensee shall maintain all C~~c~~onstruction records of all E~~e~~ngineered S~~s~~tructures to be made available at the request of the Board and/or an Inspector.

15. The Licensee shall submit to the Board for review, within ninety (90) days of completion of

each facility designed to contain, withhold, divert or retain Waters or Wastes during ~~the c~~Construction ~~phase~~, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.

16. The Licensee shall submit to the Board for review, within ninety (90) days of completion of the Whale Tail Haul Road, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.

17. The Licensee shall prevent any chemicals, petroleum products, fuel or wastes associated with the Undertaking from entering any Water body except in accordance with this Licence.

18. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during Cconstruction activities.

19. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.

20. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, a distance of at least thirty one (31) metres above the ordinary High Water Mark of any water body in order to minimize impacts on surface drainage and water quality.

21. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's Ooperations.

22. The Licensee shall limit any in-stream activity to low Water periods. In-stream activity is prohibited during fish migration.

23. The Licensee shall, for the purposes of culvert and bridge construction, ensure that all activities remain outside of the natural channel width by the placement of abutments, footings or armouring above the ordinary High Water Mark so that there is no restriction to the natural channel processes.

24. The Licensee shall operate the Bulk Fuel Storage Facility in accordance with all applicable legislation and industry standards, including:

    a. Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003 (Updated in 2013) or most recent; CCME; and
    b. National Fire Code, 2010 or most recent.

25. The Licensee shall consider apply the principles of adaptive management in Cconstruction and Ooperations. For greater clarity, Adaptive Management strategy actionsActions identified in an approved Adaptive Management Plan may be implemented by the Licensee upon notice to the Board and the Kivalliq Inuit Association and do not require Mmodification or Aamendment to this Licence prior to implementation.

    New Adaptive Management Actions may be implemented by the Licencee upon 21 days written notice to the Board and the Kivalliq Inuit Association and do not require Mmodification or Aamendment to this Licence prior to implementation.

Notice to the Board must include:

- A description of the rationale for the action (s);
- An estimate as to the amount of security that may be required;
- Confirmation that the primary purpose for the action(s) is to prevent, stabilize, or reverse an adverse change in environmental conditions or to otherwise protect the Rreceiving Eenvironment;
- A description and location of any facilities and or works to be constructed;
- A description of any new monitoring required, including sampling locations, parameters measured and frequency of sampling;
- A proposed schedule for construction;
- Drawings of Engineered Structures stamped by a Professional Engineer (where applicable); and
- If required, any proposed sediment and erosion control measures.

PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

~~1.~~ The Licensee shall obtain fresh Water in the following volumes, from the following locations, for the following uses ~~from Nemo Lake at Monitoring Station ST-WT-5 using the Nemo Lake Water Intake for domestic camp use, construction, operation and~~

1. ~~associated use~~ or as otherwise approved by the Board in writing. ~~The use of Waters from Nemo Lake, for all purposes, shall not exceed a total of one hundred seventy five thousand (175,000) cubic metres *per* year from the Licence approval date for construction, forty five thousand seven hundred and fifty (45,750) cubic metres per year for dust suppression on the road, one hundred and ninety one thousand seven hundred and fifty (191,750) cubic metres per year for operation, notification of closure.~~

Purpose	Volume (Annual)	Source
Consumption (domestic camp use, construction, operations, dust suppression)	209,544 m^3	Nemo Lake at Monitoring Station ST-WT-5 using the Nemo Lake Water Intake
Consumption (~~E~~emulsion P~~p~~lant)	2,500 m^3	Mammoth Lake
Dewatering	153,735 m^3	A53 and other lakes listed as per Application
Drilling	109,135 m^3	In total from all sources (this includes 25,037 m^3 from Nemo Lake)
Dust suppression around haul road	109,135 m^3	Ponds/small lakes proximal to Haul Road
	Subtotal: 584~~1~~,0~~5~~49 m^3	
Contingency (20%)	118~~6~~,8~~3~~10 m^3	Above described sources
	Total: 700~~697~~,3~~8~~59 m^3	

2. The ~~Licensee shall~~ Licensee shall obtain fresh Water in the following volumes, from the following ~~locations~~sources, for the following ~~uses~~purposes during C~~e~~losure~~obtain fresh Water from Whale Tail Lake for domestic camp use during Closure, not to exceed a maximum of seventy thousand and six hundred (17,600) cubic metres *per* year~~, or as otherwise approved by the Board in writing.

	Volume (Annual)	Source ~~Location~~
Re-flooding	10,655,000 m^3	Whale Tail South

Re-flooding	1,710,000 m^3	Lake D1
Consumption	14,672 m^3	Nemo Lake
Subtotal	12,379,672 m^3	-
Contingency (20%)	2,475,934 m^3	All
Total	14,855,606 m^3	

3. The Licensee shall ~~obtain fresh Water from Whale Tail Lake North Basin for mining and associated use, including dewatering of~~dewater lakes A-49, A-P67, A-47, A-46, A-P68, A-P21, A-50, A-51, A-52, A-P38, A-P10 ~~Whale Tail Lake North Basin to South Basin~~ as required for construction and O~~o~~perations, or as otherwise approved by the Board in writing.

~~4. The Licensee shall obtain fresh Water from the unnamed lake for the purposes of explosives mixing and associated use, not to exceed a maximum of two thousand five hundred (2,500) cubic metres *per* year from approval of the Licence by the Minister through to Closure, or as otherwise approved by the Board in writing.~~

~~5.~~ As per Part E Item 2 above, t~~T~~he Licensee shall obtain fresh Water from Whale Tail Lake South Basin at Monitoring Station ST-WT-8 for re-flooding of ~~Whale Tail Pit~~O~~o~~pen P~~p~~its and associated use, or as otherwise approved by the Board in writing. The use of Waters from Whale Tail ~~Lake~~ South Basin shall not exceed a total of ten million six hundred fifty five thousand (10,655,000) cubic metres *per* year commencing when notification of Closure is received by the Board through to the Expiry of the Licence. ~~Additional volumes of up to 1,710,000 m^3 may be extracted Aannually from Lake D1 for reflooding purposes and as updated in accordance with the *Final Reclamation and Closure Plan.*~~

4.

~~6~~5. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.

~~7~~6. The Licensee shall submit an updated *Water Management Plan* on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plan shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary.

~~8~~7. The Licensee shall submit a Water Quality Model for pit re-flooding and for WRSF ~~c~~Contact ~~w~~Water mixing into Mammoth Lake post-Closure as part of the Water Management Plan which shall be re-calibrated as necessary and updated A~~a~~nnually following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.

~~9~~8. The Licensee shall, on an annual basis during Closure, compare the predicted water quantity and quality within the pit and lake, to the measured water quantity and quality. Should the

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difference between the ~~predicted base case values~~~~FEIS –~~ Final Environmental Impact Statement water quantity and quality predictions 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.

9. The Licensee may include appropriate Site Specific Water Quality Objectives site-specific water quality objectives within the R~~r~~eceiving E~~e~~nvironment applicable during construction and O~~o~~perations in the approved Water Quality and Flow Monitoring Plan, which Plan may be further modified by the Licensee and approved by the Board from time to time.

10. The Licensee shall not breach dikes until the water quality in the re-flooded area meets Canadian Council of the Mnister of Environment (*CCME) Water Quality Guidelines for the Protection of Aquatic Life*, ~~baseline~~ Final Environmental Impact Statement predictions ~~concentrations~~, or appropriate site-specific water quality objectives. ~~Subject to the Board approval, I~~if water quality parameters are above *CCME Guidelines* or Final Environmental Impact Statement and Addendum, unless otherwise approved by the Board a site-specific risk assessment must be conducted to identify Site Specific Water Quality Objectives ~~specific water quality objectives~~ for the site that are protective of the aquatic environment. Where they are required, S~~s~~ite S~~s~~pecific W~~w~~ater Q~~q~~uality O~~o~~bjectives shall be incorporated in the approved *Final Reclamation and Closure Plan*.~~.~~

11. The Licensee shall carry out weekly inspections of all water management structures during periods of flow and the records of inspections shall be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the ~~*annual updated*~~ *Water Management Plan*.

12. The Licensee shall implement measures to minimize the generation and deposition of dust and/or sediment into Water arising from road use.

13. The Licensee shall provide at least thirty (30) days' notice to the ~~NWB~~ Board and Inspector prior to the commencement of re-flooding of Open Pit~~pit~~.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall direct all Contact Water from the water collection ponds to Whale Tail and IVR Attenuation Ponds, or as otherwise approved by the Board in writing.

2. The Licensee shall direct all Sewage to the Sewage Treatment Plant for treatment prior to its discharge to Whale Tail Attenuation Ponds, or as otherwise approved by the Board in writing

3. The Licensee shall dispose of all sludge removed from the Sewage Treatment Plant and Wastewater Treatment Plant in the Waste Rock Storage Facility or the Tailings Storage Facility or in a L~~l~~andfarm as a nutrient amendment in accordance with the Sewage ~~Wastewater~~ Treatment ~~System~~ Plant Operation and Maintenance Plan~~, dated December 2015, as approved by the Board~~.

4. The Discharge of Effluent from the Whale Tail Attenuation Pond at Monitoring Program Station ST-WT-2 shall be directed to Mammoth Lake, at Monitoring Program Stations ST-

WT-26 for South Whale Tail Basin, and at Monitoring Station TBD for Lake D1 and Lake D5 through the approved diffusers ~~through the Mammoth Lake Diffuser~~ and unless otherwise approved by the Board as part of a Plan shall not exceed the following Effluent quality limits:

Commented [Katz9]: Suggest leaving this out of the licence as it is still TBD.

Parameter	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab Sample
Conventional Constituents			
pH		6.0 to 9.5	6.0 to 9.5
Total Suspended Solids TSS	mg/L	15	30
~~Total Dissolved Solids TDS~~	~~mg/L~~	~~1400~~	~~1400~~
Nutrients			
Total Ammonia (NH_3-N)	mg-N/L	16	32
Total Phosphorous (P)	mg-P/L	0.3	0.6
Total Metals			
Aluminum (Al)	mg/L	0.5	1.0
Arsenic (As)	mg/L	0.1	0.2
Cadmium (Cd)	mg/L	0.002	0.004
Chromium (Cr)	mg/L	0.02	0.04
Copper (Cu)	mg/L	0.1	0.2
Iron (Fe)	mg/L	1.0	2.0
Lead (Pb)	mg/L	0.05	0.1
Mercury (Hg)	mg/L	0.004	0.008
Nickel (Ni)	mg/L	0.25	0.5
Zinc (Zn)	mg/L	0.1	0.2
Other			
Total Petroleum Hydrocarbons (TPH)	mg/L	3.0	6.0

~~5.~~ The Discharge of Effluent from a Final Discharge Point at Monitoring Program Stations ST-WT-2 at Monitoring Program Station ST-WT-26 for South Whale Tail Basin, and at Monitoring Station TBD for Lake D1 and Lake D5 shall be demonstrated to be Acutely non-Lethal ~~under the following test and as stipulated in Schedule I of the Licence:~~

~~6.~~

~~7.~~5. ~~Acute Lethality of Effluents to Rainbow Trout (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13 Second Edition December 2000 (with May 2007 amendments).~~in accordance with the MDMER.

~~8.~~6. All water collected prior to discharge from the Non-Contact Water diversions at Monitoring Program Stations ST-WT-7 and ST-WT-13, and Whale Tail Dike Seepage at Monitoring Program Stations ~~ST-S-1 to TBD~~ST-WT-17, during Operations shall not exceed the following Effluent quality limits:

Parameter	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab Sample

TSS	mg/L	15	30

~~9.~~7. The Discharge of Effluent to land from the LandFarm at Monitoring Station ST-WT-27, from the Whale Tail Bulk Fuel Storage Facility at Monitoring Station ST-WT-12 and from the Secondary Containment Powerhouse Tank ST-WT-16, and shall not exceed the following Effluent quality limits:

Parameter	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab sample
pH		6.0 to 9.5	6.0 to 9.5
Total Arsenic (As)	mg/L	*0.5	1.0
Total Copper (Cu)	mg/L	*0.3	0.6
Total Nickel (Ni)	mg/L	*0.5	1.0
Total Zinc (Zn)	mg/L	*0.5	1.0
Total Suspended Solids (TSS)	mg/L	*15	30
Ammonia	mg/L	6.0	6.0
Benzene	µg/L	370	370
Toluene	µg/L	2	2
Ethylbenzene	µg/L	90	90
Lead	mg/L	*0.2	0.4
Oil and Grease	mg/L	5 and no visible sheen	5 and no visible sheen

* Metal and Diamond Mining~~es~~ Effluent Regulations (MDMER)

~~10.~~8. The Licensee shall, under Part F, Item 7, discharge Effluent to a location at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any Water body, in such a manner as to minimize surface erosion to where direct flow into a Water body is not possible and no additional impacts are created, or as otherwise approved by the Board in writing.

~~11.~~9. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any Water body such that the quality, quantity or flow of Water is not impaired, or as otherwise approved by the Board in writing.

~~12.~~10. All Effluent at Monitoring Stations ST-WT-12 and ST-WT-16 and ST-WT-27, that exceeds the Effluent quality limits under Part F, Item 7, shall be transferred to the WTP or Whale Tail Attenuation Pong and ~~/~~IVR Attenuation Pond, or other facility for treatment.

~~13.~~11. The Licensee shall confirm compliance with Effluent quality limits in Part F, Items 4, 5, 6, and 7 prior to Discharge.

~~*14. The Licensee shall submit to the Board for approval in writing a site-specific Operation and Maintenance Manual(s) for the Wastewater Treatment Plant(s), including the Sewage Treatment Plant, at least ninety (90) days prior to the Construction/installation of facilities,*~~

~~prepared in accordance with the "*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest*~~

~~*Territories; 1996".* The Manual(s) shall include sludge management and disposal information and contingency measures in the event of plant malfunction.~~

~~15.~~12. The Licensee shall provide at least three~~en~~ (3~~10~~) days notice to the Inspector prior to any planned Discharges from any facilities. The notice shall include the estimated volume proposed for Discharge and the receiving location.

~~16.~~13. Unless otherwise approved by the Board in writing, the Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters.

~~17.~~14.The Licensee is authorized to dispose of and contain all non-hazardous, solid Wastes at the Whale Tail Landfill in accordance with the approved *Whale Tail Pit Landfill and Waste Management Plan*, ~~dated January 2017~~, or as otherwise approved by the Board in writing.

~~18.~~15.With the exception of petroleum hydrocarbon contaminated soils to be remediated as per the *Landfarm Management Plan*,t~~T~~he Licensee shall remove from the Project site, all solid and liquid Hazardous Wastes generated through the course of Project activities, for disposal at an approved H~~h~~azardous W~~w~~aste disposal facility in accordance with the approved *Hazardous Materials Management Plan*~~, Version WT, dated June 2016~~;

~~19.~~16.The Licensee shall maintain records of all Waste backhauled and confirmation of proper disposal through the use of Waste manifest tracking systems and registration with the Government of Nunavut, Department of Environment.

~~20. The Licensee shall dispose of all petroleum hydrocarbon contaminated soils in an approved landfarm facility.~~

~~21.~~17.The Licensee shall dispose of waste rock in accordance with the approved *Whale Tail Pit Waste Rock Management Plan*, ~~dated January 2017,~~ or as otherwise approved by the Board in writing.

~~22.~~18.The Licensee shall incorporate Seepage management at Quarries using best management practices including ditches, diversions, sumps and berms where necessary.

~~23.~~19.The Licensee shall provide to the Board, at least thirty (30) days prior to any planned disposal of Waste in a facility operated by the Hamlet of Baker Lake, documented authorization from the Hamlet for the use of any waste disposal facility operated by the Hamlet.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications of Water Supply Facilities and Waste Disposal Facilities ~~of water and waste management facilities~~ provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
b. Such Modifications do not place the Licensee in contravention of the Licence or the *Act;*
c. Such Modifications are consistent with the applicable terms and conditions of the NIRB Project Certificate No. 008;
d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
e. The Board has not rejected the proposed Modifications.

2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only with approval from the Board in writing.

3. Applications for M~~m~~odifications shall contain:

a. A description of the facilities and/or works to be constructed;
b. The proposed location of the structure(s);
c. Identification of any potential impacts to the R~~r~~eceiving E~~e~~nvironment;
d. A description of any monitoring required, including sampling locations, parameters measured, and frequencies of sampling;
e. A proposed schedule for construction;
f. Drawings of Engineered Structures stamped by a Professional Engineer; and
g. Proposed sediment and erosion control measures.

4. Where a proposed Modification is located outside the existing footprint, the Licensee must also confirm that the Modification is in conformity with the applicable land use plan and that it is not a significant modification as that term appears in section 88 and subparagraphs 89 of the *Nunavut Planning and Project Assessment Act*. For greater clarity, Modifications located within the project footprint are not deemed "~~-~~significant modifications"~~-~~ under the *Nunavut Planning and Project Assessment Act*.~~-~~

Commented [Katz10]: We suggest removal of the concept of project footprint. It is vague.

~~4~~5. The Licensee shall provide to the Board, within ninety (90) days of completion of the Modification, as-built plans and drawings of the Modifications referred to in this Part. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING

1. The Licensee shall implement the *Emergency Response Plan~~, Version WT~~*, ~~dated June 2016~~, and the *Spill Contingency Plan~~, Version WT~~*, ~~dated June 2016~~, as approved by the Board. The Licensee shall comply with the Plan(s) and any changes deemed significant shall require the submission and subsequent approval of the Board in writing.

2. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the Project from entering Water.

3. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.

4. The Licensee shall perform weekly inspections of petroleum products storage and containment facilities, fuel tanks and connectors, for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request. More frequent

inspections may be requested by an Inspector.

5. If the Licensee provides notification under Part J, Item 4, the Licensee shall submit to the Board an Addendum to the *Emergency Response Plan* and the *Spill Contingency Plan*, detailing the changes in Oo~~o~~perations, personnel, responsibilities, availability of equipment and access to the site for assistance.

6. The Licensee shall keep a copy of the *Emergency Response Plan* and the *Spill Contingency Plan* at each site of operation.

7. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste to prevent and contain spills.

8. The Licensee shall, subject to Section 16 of the *Regulations*, report any unauthorized dischargesepositsdeposits or foreseeable unauthorized ~~deposits~~ discharges of waste ~~and/or discharges of Effluent~~in excess of the *Regulations* thresholds set out in the Nunavut *Spill Planning and Reporting Regulations*, and:

   a. Employ the Spill Contingency Plan;
   b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130, fax at (number) or by electronic mail and to the Inspector at (867) 975-4295 or by electronic mail;
   ~~b.~~c. Information that is reported in person or by telephone must also be reported in writing to an inspector without delay; and
   ~~c.~~d. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

9. The Licensee shall, in addition to Part H, Item 8, regardless of the quantity of release of a harmful substance, report to the NWT/NU Spill Line if the release is near or into a Water body.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

1. The Licensee shall comply with the *Aquatic Effects Monitoring~~anagement~~ Program* (AEMP~~), dated November 2015, as approved by the Board~~). The AEMP shall include:

   a. Comprehensive R~~r~~eceiving E~~e~~nvironment monitoring to identify changes to the aquatic environment associated with mine activities;
   b. Linkage between monitoring results and adaptive management response;
   c. Monitoring of lake productivity;
   d. Sampling and analysis plans; and
   e. Monitoring under Fisheries Authorizations, NWB Licence Compliance Monitoring,

~~*Metal Mining Effluent Regulations* (MMER)~~*MDMER* Environmental Effects Monitoring, and Groundwater Monitoring.

2. The Licensee shall implement the Core Receiving Environmental Monitoring Program (CREMP) ~~(November 2015)~~ and combined with Whale Tail Pit CREMP Addendum ~~(January 2016), as approved by the Board~~.

~~3. The Licensee shall submit for Board approval, at least ninety (90) days prior to Operations an updated CREMP. The Program shall include all comments provided during the technical review of Application and shall include a comparison of monitoring results for receiving waters to model predictions (including base case predictions) and to thresholds identified for management actions, should trends indicate water quality objectives may be exceeded.~~

~~4.~~3. The Licensee shall implement the *Whale Tail Pit Water Quality and Flow Monitoring Plan*, ~~*Version 2*, dated May 2017, as approved by the Board~~.

~~5. The Licensee shall submit to the Board for approval and implementation, within sixty (60) days of the approval of the Licence by the Minister, a *Mercury Monitoring Studies Program*. The Program shall include all comments and recommendations provided during the technical review of Application.~~

~~6.~~4. The Licensee shall install and maintain flow meters or other such devices, or implement suitable methods required for the measuring of Water use and Effluent discharge volumes, to be operated and maintained to the satisfaction of an Inspector.

~~7.~~5. The Licensee shall undertake the Monitoring Program provided in the Tables 1 and 2 of Schedule I. The Licensee shall establish the locations and GPS coordinates for all additional Monitoring Program Stations in consultation with an Inspector.

~~8.~~6. ~~The Licensee shall establish the locations for the proposed compliance and internal monitoring locations as they relate to existing drainage courses beneath the Whale Tail Waste Rock Storage Facility's and other Dikes to ensure potential Seepage locations are adequately identified in accordance with the *Groundwater Monitoring Plan*, *Version WT*, dated June 2016, as approved by the Board.~~

~~9.~~7. The Licensee shall install and maintain signs that identify Monitoring Program Stations. The signs shall be posted in English, Inuktitut and French.

~~10.~~8. The Licensee shall measure and record the following on a Monthly basis in cubic metres or as otherwise stated:

a. The volume of fresh Water obtained from Nemo Lake;
~~b.~~ The volume of fresh Water obtained from Whale Tail Lake;
~~c. The volume of fresh Water de-watered from Whale Tail Lake (North Basin);~~
~~d~~b. The volume of fresh Water obtained from Mammoth Lake for the purposes of explosives mixing;
c. The volume of fresh Water obtained for drilling;
~~e~~d. The volume of Effluent and fresh Water transferred to the pit lakes;
~~f~~e. The volume of fresh Water obtained for dust suppressant ~~within the project footprint~~ and along the Whale Tail Pit Haul Road;

Commented [Katz11]: Suggest removal of this term.

~~g.~~f. The flow during periods of discharge from the Landfill, Landfarm, Waste Rock Storage Facilities, Wastewater Treatment Plant, Contact Water Collection System, and area Sumps collecting Contact Water;
~~h.~~g. The volume of water transferred from the Whale Tail Bulk Fuel Storage Facility;
~~i.~~h. The volume of sludge removed from the Sewage Treatment Plant and Wastewater Treatment Plant and Saline Water Treatment Plant; and
~~j.~~i. Tonnes of mineralized and un-mineralized waste rock stored.

~~11.~~9. The Licensee shall undertake the Thermal Monitoring Program detailed in the *Whale Tail Waste Rock Management Plan* as approved by the Board.

~~12.~~10. The Licensee shall undertake a geotechnical inspection, to be carried out Aannually by a Geotechnical Engineer, between the months of July and September. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable and take into account all major earthworks, including:

a. Dikes;
b. Coffer Dams;
c. Pit walls;
d. Underground portal;
~~d.~~e. Waste Rock Storage Facilities;
f. Landfill;
~~e.~~g. Landfarm;
~~f.~~h. Shoreline protection at the location of the Mammoth Lake Diffuser;
~~g.~~i. Geotechnical instrumentation;
~~h.~~j. Haul Road and site roads, in particular water ~~course~~ crossings;
~~i.~~k. Quarries;
~~j.~~l. Bulk Fuel Storage Facilities, including secondary containment;
~~k.~~m. Attenuation Ponds; and
~~l.~~n. Collection Ponds and Sumps.

~~13.~~11. The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.

~~14.~~12. The Licensee shall submit to the Board as part of the Annual Report required under Part B, Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.

~~15.~~13. The Licensee shall monitor and record Seepage observations pursuant to Part I, Item 8 in accordance with the following:

Characterization of seepage including: precise location; discharge rates and volumes; respective hazard(s) and consequences and prescribed mitigative measures	Minimum Frequency of Observation
Seepage (of any kind) through any Dike(s)	Monthly
Seepage and Runoff from the Landfill(s)	Quarterly
Seepage and Runoff from Waste Rock Storage Facility	Quarterly
Seepage and Runoff from Ore piles	Quarterly
Seepage at Pit Wall and Pit Wall Freeze/Thaw and Permafrost Aggradation	Quarterly

~~16.~~14. The Licensee shall submit the results and interpretation of the Seepage monitoring required in Part I Item 15 in the Annual Report required under Part B, Item 2.

~~17.~~15. The Licensee shall implement the Inspection and Maintenance procedures for the Haul Road in accordance with the *Whale Tail Pit Haul Road Management Plan*~~, *Version WT*, dated June 2016, as approved by the Board.~~.

~~18.~~16. The Licensee shall keep a digital photographic record of all the Project's watercourse crossings before, during, and after Construction has been completed.

~~19.~~17. The Licensee shall maintain and implement the *Quality Assurance / Quality Control Plan* ~~dated June 2014, accepted by the Board under the Licence 2AM-MEA1525~~ that includes requirements for independent third party sampling and analysis. The QA/QC Plan shall be updated as needed in accordance with, and in consultation with, the accredited laboratory conducting the analyses. This Plan shall be developed and maintained in accordance with current Standard Methods and the *1996 Quality Assurance (QA) and Quality Control (QC) Guidelines for Use by Class "A" Licensees in Meeting SNP Requirements* ~~(INAC).~~

~~20.~~18. The Licensee shall A~~a~~nnually review the approved QA/QC Plan and modify the ~~Plan~~ plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.

~~21.~~19. All analyses shall be conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.

~~22.~~20. All compliance analyses shall be performed in an accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

~~23.~~21. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:

a. All data and information required by this Part and generated by the Monitoring Program in the Tables of Schedule I; and

b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Parts D and F.

~~24.~~22. As noted in Part B, Item 19, changes to the Schedules, including Schedule I, which provides details of the Monitoring Program, may, at the Board's discretion, be considered without requiring an Amendment to the Licence. However, the Board must approve any changes to the Monitoring Program, as outlined in Part I and Schedule I; any request for changes to the Monitoring Program should be submitted to the ~~NWB~~ Board in writing, and should include the justification for the change.

~~25. Additional monitoring may be imposed by the Inspector.~~

PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

1. The Licensee shall implement the ~~*Whale Tail Pit*~~ *Interim* ~~*Whale Tail Pit*~~ *Closure and Reclamation Plan*~~, *Version WT*, dated June 2016~~.

2. The Licensee shall submit to the Board for approval within three~~twelve~~ (3~~12~~) years~~months~~ of Operations, an updated Interim Whale Tail Pit Closure and Reclamation Plan prepared in accordance with the *"Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories", issued by the Mackenzie Valley Land and Water Board (MVLWB) and Aboriginal Affairs and Northern Development Canada (AANDC) in 2013 (MVLWB/AANDC 2013)* and consistent with the ~~INAC~~ *Mine Site Reclamation Policy for Nunavut, 2002.* The Plan shall include all mine related facilities and Whale Tail Pit Haul Road.

3. The Licensee shall submit to the Board for approval at least twelve (12) months prior to the expected end of planned mining, a Final Closure and Reclamation Plan. The Final Closure and Reclamation Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include:

   a. Soil Quality Remediation Objectives reflecting the applicable *CCME Guidelines* and *the Government of Nunavut Environmental Guideline for Site Remediation*;
   b. Environmental Site Assessment plans in accordance with the applicable Canadian Standards Association (CSA) criteria; and
   c. An evaluation of the human health and ecological risks associated with the Closure options proposed.

4. The Licensee shall notify the Board in writing, at least sixty (60) days prior to, or as soon as practically possible, of the Licensee's intention to enter into a Care and Maintenance Phase.

5. The Licensee shall provide the Board, within thirty (30) days of the Licensee providing notice of intent to enter into Care and Maintenance under Part J, Item 4, a Care and Maintenance Plan that details the Licensee's plans for maintaining compliance with the Terms and Conditions of the Licence.

6. The Licensee shall review the Plans referred to in this Part as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to the Plans should incorporate design changes and ~~adaptive engineering~~Adaptive Management required and implemented during Construction and reflect actual site conditions and monitoring results over the life of the Project.

7. The Licensee shall complete all R~~r~~eclamation work in accordance with the Plan(s) referred to in this Part~~, as and when approved by the Board in writing~~.

8. The Licensee shall implement Progressive Reclamation, including progressive covering of Waste Rock, and if practicable, re-vegetation.

9. The Licensee shall remove any culverts and ~~to the extent practicable,~~ restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.

10. All roads and airstrip, if any, shall be re-graded ~~to match natural contours~~ to reduce erosion.

11. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's *Environmental Guideline for Site Remediation*, (2010 version or current version in place at the time of Reclamation).

~~12. The Licensee shall notify the Board in writing, at least sixty (60) days prior to the Licensee intending to seek Recognized Closed Mine status for the Project.~~

Commented [Katz12]: Why is this removed?

SCHEDULES

Schedule A: Scope, Definitions, and Enforcement

In this Licence: **2AM-~~WTP1826~~WTP2043**

"**Abandonment**" means the permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures;

"***Act***" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

"**Acid Rock Drainage (ARD)**" means the production of acidic leachate, seepage or drainage from Uunderground workings, O~~o~~pen P~~p~~its, ore piles, waste rock, construction rock that can lead to the release of metals to groundwater or surface water during the life of the Project and after Closure;

"**Acutely Lethal Effluent**" means acutely lethal effluent as defined in the *Metal and Diamond Mining Effluent Regulations* ~~SOR/2002-222 dated June 6, 2002, last amended on December 8, 2017~~ and as may be further amended from time to time;

Commented [KG13]: This term is not used in the Licence. It can be deleted as it is not used.

"**Adaptive Management Plan**" means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework ~~for mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded;~~to identify specific thresholds and associated management actions to be taken by the Licensee when ~~specified~~defined thresholds are exceeded. Mitigation measures may include special studies, operational changes, revised or new water and waste management systems, structures and or facilities, or implementing mitigation activities to prevent, stabilize or reverse a change in environmental conditions or to otherwise protect the R~~r~~eceiving E~~e~~nvironment;

"**Addendum**" means the supplemental text that is added to a full plan or report, usually included at the end of the document and is not intended to require a full resubmission of the revised report. It may also be considered as an appendix or supplement;

"**Amendment**" means a change to any terms and conditions of this Licence through application to the ~~NWB~~Board, requiring a change, addition, or deletion of specific terms and conditions of the Licence not considered as a M~~m~~odification. ~~and for greater clarity, proceeding with Adaptive Management and or a New Adaptive Management Action shall not require an Amendment~~;

"**Analyst**" means an Analyst designated by the Minister under section 85 (1) of the *Act*;

"**Annually**" means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;

"**Aquatic Effects Management Program (AEMP)**" means an overarching "umbrella" program that conceptually provides an opportunity to integrate results of individual, but related, monitoring programs in accordance with the Licence. ~~and which may be consolidated and streamlined with other plans in accordance with the Licence;~~

~~"**Biannual**" means, in the context of monitoring frequency, one sampling event occurring every six months with a minimum of one hundred eighty days between sampling events;~~

"**Board**" means the Nunavut Water Board established under Article 13 of the *Nunavut Agreement* and under section 14 of the *Act*;

~~"**Borrow Pits**" means sites where materials, such as gravel or sand, are excavated for the purposes of constructing site infrastructure and facilities;~~

"**Canadian Council of the Minister of Environment (CCME)**" means the organization of the Canadian Ministers of Environment that sets guidelines for environmental protection across Canada such as the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life*;

"**Care and Maintenance**" in respect of a mine, means the status of the facility when the Licensee ceases production or ~~c~~Commercial ~~o~~Operation temporarily for an undefined period of time;~~;~~

~~"**Chief Administrative Officer**" means the Executive Director of the Nunavut Water Board;~~

~~"**Chief Executive Officer**" means the Chair or Chairperson of the Nunavut Water Board;~~

"**Closure**" means when ~~an Operator~~the Licensee ceases operations at a facility without the intent to resume mining activities in the future;

"**Commercial Operation**" in respect of a mine, means an average rate of production that is equal to or greater than 25% of the design capacity of the mine over a period of ninety consecutive days;

Commented [Katz14]: This term is not used in the Licence.. It can be deleted as it is not used.

"**Construction**" means any activities undertaken to construct or build any component of, or associated with, the development of the ~~Whale Tail Pit~~ Project, as described in the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted to the Board throughout the regulatory process;

"**Contact Water**" means any water that ~~may be physically or chemically affected~~has interacted with mine facilities or ~~by~~ mining activities, including all runoff and seepage from WRSF and~~,~~ Ore Stockpiles~~ and other mine facilities~~;

"**Contact Water Collection System**" means the system of trenches, sumps and attenuation ponds designed to manage water that may ~~be affected physically or chemically by~~interact with any mine development activities, including but not limited to pre-development activities as described in the ~~Water Licence Application document entitled "~~*Whale Tail Pit Water Management Plan*~~" dated January 2017~~and as may be modified from time to time in accordance with this Licence;

"**Core Receiving Environmental Monitoring Program or CREMP**" means a monitoring program designed to determine the short and long-term effects in the aquatic environment resulting from the Project, to evaluate the accuracy of impact predictions, to assess the effectiveness of planned impact mitigation measures and to identify additional impact mitigation measures to avert or reduce environmental effects.~~s or Adaptive Management and which may be consolidated and streamlined with other plans in accordance with the Licence;~~

"**Dam Safety Guidelines**" means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG)*, (published in 2007, revised in 2013 or subsequent approved editions);

"**Deleterious Substances**" means a substance as defined in section 34(1) of the Federal *Fisheries Act;*

"**Deposit**" means the placement of waste rock, tailings or other solids materials on land or in water;

"**Diffuser**" means a Effluent discharge pipeline within a water body designed to discharge and enhance mixing of Effluent in the Rreceiving Eenvironment as described in the *Water Management Plan*, as modified from time to time in accordance with the Licence;

"**Discharge**" means the release of any water or waste to the Rreceiving Eenvironment;

"**Dissolved Metals**" means the suite of metals referred to in Group 2 of Table 1 – Monitoring Groups located in Schedule J of this Licence. Dissolved metals shall be analyzed on a filtered sample;

"**Domestic Waste**" means all solid waste generated from the accommodations, kitchen facilities and all other site facilities, excluding those hazardous wastes associated with the ~~Whale Tail Pit~~ Project;

"**Effluent**" means treated or untreated liquid waste material that is discharged into the Receiving Environment~~environment~~ from all site water management facilities;

"**Emulsion Plant (Explosives Mixing Facility)**" means the facility designed for storage of Ammonium Nitrate, detonators, and explosives; and designed for the mixing and storage of Ammonium Nitrate Fuel Oil (ANFO), as indicated in the ~~Water Licence Application Document entitled: "*Ammonia Management Plan – Whale Tail Pit Addendum, Version WT*", dated June 2016 and illustrated in Drawing No. 6108-446-210-001 Amaruq Emulsion Plant General Arrangement Building Layout, dated May 24, 2016~~ *Ammonia Management Plan*, and as modified in accordance with this Licence from time to time;

"**Engineer**" means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

~~"**Engineering Geologist**" means a professional geologist registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the investigation and interpretation of geological conditions for civil engineering purposes;~~

"**Engineered Structure**" or "Engineered Structures" means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

"**Environmental Assessment**" means, in respect of the Project, all material filed with the Nunavut Impact Review Board (NIRB) on the NIRB's Public Registry (established under the authority of

Commented [Katz15]: This term is not used in the Licence.. It can be deleted as it is not used.

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Commented [Katz17]: This term is not consistently capitalized throughout the agreement. needs to be consistent.

Commented [Katz18]: This term is not consistently capitalized throughout the agreement. needs to be consistent.

Commented [Katz19]: This term is not used in the Licence. It can be deleted as it is not used..

Article 12 of the *Nunavut Agreement*) that is associated with the NIRB's impact assessment (Review) of the Project and associated with the scope of the activities, works and Undertakings authorized in accordance with the terms and conditions of the Licence;

"**Final Discharge Point**" in respect of an effluent, means, as defined in the *Metal and Diamond Mining Effluent Regulations*~~, SOR/2002-222 (as amended, December 2017 and~~ as may be further amended from time to time)~~ an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent~~;

"**Fresh Water Intake**" means the facility or facilities consisting of vertical filtration wells fitted with vertical turbine pumps connected to the pump house with piping buried under a rockfill causeway for the purpose of supplying freshwater to the Whale Tail Pit Project as described in the "*Whale Tail Pit Water Management Plan*" and as modified from time to time in accordance with the Licence;

"**Geotechnical Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the engineering properties of earth materials in dealing with manmade structures and earthworks. Such structures and earthworks can include shallow and deep foundations, retaining walls, dams, and embankments;

"**Grab Sample**" means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

"**Greywater**" means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), but excluding S~~s~~ewage;

"**Ground Water**" means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

"**Hazardous Waste**" means materials or contaminants which are categorized as dangerous goods under the *Transportation of Dangerous Good Act* 1992 (1992, c. 34) and/or that are no longer used for their original purpose and are intended for recycling, treatment, disposal or storage;

"**High Water Mark**" means the usual or average level to which a body of water rises at its highest point and remains for a sufficient time so as to change the characteristics of the land (ref. *Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities*);

"**ICP Metals Scan**" means elements detected using Inductively Coupled Plasma (ICP) mass spectrometer. Metal parameters chosen to be included in an ICP Metals Scan under the Licence should be consistent with baseline data previously collected and include any metals of concern or interest;

Commented [Katz20]: This term is not used in the licence. It can be deleted as it is not used.

"**Incinerator**" means the dual chamber, high temperature facility designed with the capacity to service the ~~Meadowbank Mine~~mine site camp as described in the ~~Water Licence Application document entitled "~~*Incineration Waste Management Plan*~~" dated March 2016~~ and as modified

from time to time in accordance with this Licence;

"**Independent Geotechnical Expert Review Panel**" means the panel of geotechnical specialists established by Agnico Eagle to review the designs and performance of the dikes and dams;

"Inspector" means an Inspector designated by the Minister under section 85 (1) of the *Act*;

"**Interim Closure and Reclamation Plan**" means a ~~conceptual detailed~~ plan addressing 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~~, and which may be consolidated and streamlined with other plans in accordance with the Licence~~;

"~~**Landfarm**~~" means a lined engineered facility designed to contain and treat hydrocarbon contaminated sediments and soils as described in the *Landfarm Design and Management Plan* and as ~~may be~~ modified from time to time in accordance with this Licence;

"Landfill" means the facility to be constructed and operated until the end of the mine life designed to contain non-salvageable, non-organic, non-hazardous solid wastes from mining activities that cannot be incinerated, as described in the *Whale Tail Pit Landfill and Waste Management Plan* and as may be modified from time to time under this Licence;

"**Licence**" means this Type "A" Water Licence 2AM-~~WTP1826~~WTP2043, issued by the Nunavut Water Board in accordance with the *Act*, to Agnico Eagle Mines Limited (Agnico Eagle) for the Whale Tail Pit Project;

"**Licensee**" means the entity to whom the Licence is issued or to whom the Licence is subsequently assigned;

"Mammoth Channel Culvert" means the structure designed to divert non-~~c~~Contact ~~w~~Water from the west shore of the ~~o~~Open ~~p~~Pit to Lake A16 (Mammoth Lake), if deemed necessary and as may be modified from time to time in accordance with this Licence;

"**Mammoth Dike**" means the structure designed to protect the mine site area from potential backwatering from Lake A16 (Mammoth Lake) during the operational and Closure phases as indicated in the ~~Water Licence Application Document entitled "~~*Whale Tail Pit Water Management Plan*~~" dated January 2017, and illustrated in Drawing No. 627215-1000-4G-DD-0005-00: Dewatering Dikes Plan View, Profiles and Typical Sections~~, and as modified from time to time in accordance with this~~e~~ Licence;

~~"**Mammoth Lake Diffuser**" means the effluent discharge pipeline within Lake A16 (Mammoth Lake), designed to discharge and enhance mixing of effluent after final treatment from the Whale Tail Attenuation Pond in the receiving environment as described in the Water Licence Application document entitled "Whale Tail Pit Water Management Plan" dated January 2017, as modified from time to time in accordance with the Licence;~~

"**Maximum Average Concentration**" means the average concentration of any four consecutively

collected samples taken from the identical sampling location and taken during any given timeframe;

"**Maximum Monthly Mean**" means the average concentration of all samples collected over a thirty day period from the identical sampling location;

"**Meadowbank Gold Mine Project**" means the Meadowbank Gold Project (Meadowbank Gold Mine) as outlined in the Final Environmental Impact Statement and supplemental information submitted by Cumberland Resources Limited to the Nunavut Impact Review Board (NIRB) as well as the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by Agnico Eagle Mines Limited to the ~~NWB~~ Board throughout the regulatory process;~~. It comprises an open pit mine, an all-weather private access road from Baker Lake to the mine site, and a marshalling facility in the Hamlet of Baker Lake;~~

Commented [Katz21]: This term is not used in the licence. It can be deleted as it is not used.

"**Metal Leaching**" means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

~~"**Mine Water**" means any water, including groundwater, that is pumped or flows out of any underground workings or open pit;~~

"**Minister**" means the Minister of Crown-Indigenous Relations and Northern Affairs (CIRNAC, formerly the Minister of Indigenous and Northern Affairs Canada);

"**Modification**" means an alteration to a physical work that introduces a new structure or revises or eliminates an existing structure and does not alter the purpose or function of the work.~~, but does not include Adaptive Management or a New Adaptive Management Action;~~

"**Monitoring Program**" means the program to collect data on surface water and Ground Water quality to assess impacts to the environment of an appurtenant Undertaking;

"**Monthly**" means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty one (21) days between sampling events;

~~"**Nemo Lake Fresh Water Intake**" means the facility consisting of vertical filtration wells fitted with vertical turbine pumps connected to the pump house with piping buried under a rockfill causeway for the purpose of supplying freshwater to the Whale Tail Pit Project as described in the Water Licence Application document entitled "*Whale Tail Pit Water Management Plan*" dated January 2017, and illustrated in Drawing No. 6108-692-210-001: Nemo Fresh Water Intake General Arrangement - Typical Cross-Section and Plan View of Freshwater Intake as modified from time to time in accordance with the Licence;~~

~~"~~**New Adaptive Management Action**~~"~~ means an Adaptive Management A~~a~~ction that is not included in an ~~approved plan~~Adaptive Management Plan but is recommended by the Licensee or others to prevent, stabilize, or reverse a change in environmental conditions or to otherwise protect the R~~r~~eceiving E~~e~~nvironment;

"**Non-Contact Water**" means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas;

"**North Channel**" means the structure designed to divert non-~~c~~Contact ~~w~~Water from the north shore of the ~~o~~Open ~~p~~Pit to Lake A16 (Mammoth Lake) in accordance with the "*Whale Tail Pit Water Management Plan*", if deemed necessary and as modified from time to time in accordance with the Licence;

"**Northeast Dike**" means the structure designed to raise Lake A47, Lake A48, Lake A113, Pond A-P38, and Pond A-P68, and to divert runoff to the Lake C38 (Nemo Lake) watershed as indicated in the ~~Water Licence Application Document entitled "~~*Whale Tail Pit Water Management Plan*~~" dated January 2017, and illustrated in Drawing No. 627215-1000-4G-DD-0006-00: RSF and North East Dikes Plan View & Typical Sections~~ and as modified from time to time in accordance with the Licence;

"**Northeast Pond**" means the facility to divert non-~~c~~Contact ~~w~~Water towards the C Watershed runoff that will be drawn-down into the ~~o~~Open ~~p~~Pit before the dike will be decommissioned as described in the ~~Water Licence Application document entitled "~~*Whale Tail Pit Water Management Plan* and~~"~~ as modified from time to time in accordance with the Licence~~dated January 2017~~;

"**Nunavut Agreement**" means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*," including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"Open Pits" means the open pits to mine the satellite deposits located on the Amaruq Exploration property approximately 150 km north of Hamlet of Baker Lake and 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut.

"**Operations**" means the set of activities associated with mining, ore processing and recovery of gold; excluding Construction, Care and Maintenance, decommissioning and permanent Closure activities;

~~"**Operator**" means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;~~

"**Plans**" include initial design plans submitted by the Licensee, which include objectives, methods, contingencies, roles and responsibilities, monitoring and mitigation and which may be subsumed and replaced by operational management plans based on design plans which are streamlined to better support the Licensee's obligations under the License and the Act, site operations and inspections.

~~(a)~~

"**Progressive Reclamation**" means actions that can be taken during ~~mining~~ Ooperations before permanent Closure, to take advantage of cost and operating efficiencies by using the resources available from ~~mine~~ Ooperations to reduce the overall R~~r~~eclamation costs incurred. It enhances

Commented [Katz22]: This term is not used in the licence. It can be deleted as it is not used.

Commented [Katz23]: This term is not used in the licence. It can be deleted as it is not used.

Commented [Katz24]: This term is not used in the licence. It can be deleted as it is not used.

Commented [KG25]: This definition must be confined to the WT project area/lease.

Commented [Katz26]: This term is not consistently capitalized. Needs to be consistent

Commented [Katz27]: This word is not consistently capitalized. Needs to be consistent.

environmental protection and shortens the timeframe for achieving the final Reclamation objectives and goals;

"**Project**" means the Whale Tail Pit Project Proposal and the Whale Tail Expansion Proposal ~~and the Whale Tail Expansion Proposal~~ as outlined in the Final Environmental Impact Statement, Addendum and supplemental information submitted by Agnico Eagle Mines Limited (Agnico Eagle) to the Nunavut Impact Review Board (NIRB) as well as the associated Water Licence Applications, Supporting Documents, and Technical Meeting Information Supplement documents submitted by Agnico Eagle to the ~~NWB~~ Board throughout the regulatory process~~. It comprises an open pit mine, and haul road from Meadowbank Gold Mine site to the Project site~~;

"**Quarry or Quarries**" means the ~~areas of surface excavation for~~sites where ~~extracting rock~~ materials such as rock, gravel, sand or esker are excavated for use ~~as construction materials~~ at the Project, including in the development of infrastructure and facilities, Operations and Closure;

Commented [KG28]: The term "quarries" is still used in the document.

Commented [Katz29]: Is it necessary to change the definition? Suggest rejecting the change and including the definition of "quarries"

"**Quality Assurance / Quality Control (QA/QC)**" Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

"**Quarterly**" means, in the context of monitoring frequency, one sampling event occurring every three months with a minimum of ninety days between sampling events;

"**Receiving Environment**" means both the aquatic and terrestrial environments that receive any deposit or discharge of waste including Effluent, seepage, or Contact Water ~~resulting~~ from the Project;

"**Reclamation**" means activities which facilitate the return of areas affected by the Project to a state as described in the Interim Closure and Reclamation Plan or Final Closure Plan~~the process of returning a disturbed site to its natural state or one for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety~~;

Commented [Katz30]: This term is not consistently capitalized throughout the agreement.

~~"**Recognized Closed Mine**" means a recognized closed mine as defined in the *Metal and Diamond Mining Effluent Regulations*, SOR/2002-222 (as amended, December 2017 and as may be further amended from time to time);~~

"**Regulations**" means the *Nunavut Waters Regulations*, SOR/2013-69;

~~"**Remediation**" means the removal, reduction, or neutralization of substances, wastes or hazardous material from a site in order to prevent or minimize any adverse effects on the environment and public safety now or in the future;~~

~~"**Saddle/Coffer Dam**" means the water retention structures to provide a barrier between the facilities and surrounding lakes until the water quality (seepage and runoff collected from facilities, and from the back-flooded area) is considered acceptable for release to the environment without treatment, as described in the Water Licence Application document entitled "*Whale Tail Pit Water Management Plan*" dated January 2017;~~

~~"**Seepage**" means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged~~

"**Seepage**" means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged ~~d~~ through open pits, ~~runoff from~~ Waste Rock storage facilities, ore stockpile areas, quarries, landfill or landfarm areas;

"**Sewage**" means all toilet wastes and G~~g~~reywater;

"**Sewage Treatment Plant**" means the ~~rotary biological contactor~~ sewage treatment plant described in the ~~Water Licence Application document entitled~~ "*Whale Tail Pit Water Management Plan*" ~~dated January 2017~~as modified from time to time under this Licence;

"**Short Term Maximum**" means the maximum concentration of all samples collected over a 24 hour period, or less, taken from the identical sampling location;

"**Site Specific Water Quality Objective**" (SSWQO) means a numerical concentration or narrative statement which has been established for specified waters;

~~"**Soil Quality Remediation Objectives (SQROs)**" means the numerical concentration established as target value for soil quality remediation for contaminated sites as determined with guidance provided by the *Canadian Council of Ministers of the Environment (CCME)*.~~

"**Sump**" means a structure or depression that collects, retains or transfers ~~, controls, and filters~~ water or liquid waste before it is released to the Receiving E~~e~~nvironment or Project infrastructure~~. This structure should be designed to prevent erosion while allowing percolation of liquid waste~~;

~~"**Traditional Knowledge**" means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;~~

"**Total Metals**" means the suite of metals referred to in Group 2 of Table 1 – Monitoring Groups located in Schedule I of this Licence. Total M~~m~~etals shall be analyzed on an un-filtered sample;

"**Underground**" means the underground workings to mine the satellite deposits located on the Amaruq Exploration property approximately 150 km north of Hamlet of Baker Lake and 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut;

Commented [KG31]: This definition must be confined to the WT project area/lease.

"**Undertaking or Undertakings**" means an undertaking or undertakings in respect of which Water is to be used or Waste is to be deposited, as classified in Schedule 1 of the *Regulations*;

"**Use**" means use as defined in section 4 of the *Act*;

"**Waste**" means waste as defined in section 4 of the *Act*;

"**Waste Disposal Facilities**" means all facilities designated for the disposal of Wwaste or Waste Rock including: the mine site Oopen Ppits, Uunderground, Sewage Treatment Plant, Wastewater Treatment Plant, Landfarm, Landfill, and Waste Rock Storage Facility;

"**Waste Rock**" means all unprocessed rock materials that are or were produced as a result of mining operations and that have no current economic value;

""**Waste Rock Storage Facility**" means the structure designed for the placement of Waste Rock as described in the "*Waste Rock Management Plan* and" as may be modified from time to time under this Licence;

"**Waste Rock Storage Facility Collection Pond**" means the structure designed to collect runoff and seepage from the a Waste Rock Storage Facility WRSF which is to be pumped to the Whale Tail Attenuation Pondattenuation ponds for treatment in the WTP as described in the Water Licence Application Document entitled "*Whale Tail Pit Water Management Plan* and" as may be modified from time to time under this Licence, dated January 2017;

"**Waste Rock Storage Facility Dike**" means the a structure designed to confine cContact wWater in the Whale Tail WRSF Collection Pondfrom a waste rock storage facility before it is pumped to the Whale Tail Attenuation Pond as indicated in the Water Licence Application Document entitled attenuation ponds as described in the "*Whale Tail Pit Water Management Plan*" dated January 2017, and illustrated in Drawing No. 627215-1000-4G-DD-0006-00: RSF and North East Dikes Plan View & Typical Sectionsand as may be modified from time to time under this Licence;

"**Wastewater**" means the water generated by site activities or that originates on-site and that requires treatment or any other water management activity;

"**Wastewater Treatment Plant**" means the facilities designated for the treatment of cContact wWater from attenuation and collection ponds (Whale Tail Attenuation and WRSF Collection Ponds) prior to discharge to the Rreceiving Eenvironment during all phases of mine operations, including during Closure/post- Closure as described in the Water Licence Application documents entitled "*Whale Tail Pit Water Management Plan*" dated January 2017 and "*Whale Tail Pit Waste Rock Management Plan*" dated January 2017 and as may be modified from time to time under this Licenceillustrated in the Drawing No. 6108-693-210-002: Construction Water Treatment Plant Plan & Elevation Conceptual Design WTP Actiflo – Actiflo Water Treatment Plant Schematic;

"**Water**" means water as defined in section 4 of the *Act*;

"**Water Supply Facilities**" means the facilities designated for the supply of water including the Nemo Lake Fresh Water IntakeFresh Water Intakes and associated infrastructure as described in the Water Licence Application document entitled "*Whale Tail Pit Water Management Plan* " and as may be modified from time to time under this Licencedated January 2017;

"**Water Licence Application**" for the purposes of this Licence includes the totality of relevant documents filed by Agnico Eagle on the NWB and NIRB Public Registries in support of Agnico Eagle's Water Licence Application filed on July 8, 2016 and its subsequent Water Licence Aapplication filed on May 16, 2019, and includes Supporting Documents, and Technical Meeting

Information Supplement documents;

"**Weekly**" means, in the context of monitoring frequency, one sampling event occurring every 7 days with a minimum of ~~5~~ 24 ~~days~~ hours between sampling events;

"**Whale Tail Attenuation Pond**" means the facility located in a deep part of Whale Tail Lake (North Basin) where mine site Contact Water will be discharged, be treated by the WTP prior to discharge to the R~~r~~eceiving E~~e~~nvironment in Lake A16 (Mammoth Lake) as described in the Water Licence Application document entitled "*Whale Tail Pit Water Management Plan*" dated January 2017;

Commented [Katz32]: Insert back the definition of Whale Tail Attenuation Pond

"**Whale Tail Bulk Fuel Storage Facility**" means the fuel storage and all associated infrastructure as described in the ~~*Water Licence Application document entitled "*~~*Meadowbank and Whale Tail Bulk Fuel Storage Facilities: Environmental Performance Monitoring Plan*~~"~~ ~~dated June 2016~~and as may be modified ~~under this Licence~~ from time to time under this Licence;

"**Whale Tail Camp**" means a permanent life of mine camp proposed at the mine site proposed to include a S~~s~~ewage T~~t~~reatment P~~p~~lant, water intake, accommodation buildings, power plant, bulk fuel storage area, warehouse, maintenance shop as described in the Water Licence Application ~~dated June 2016~~;

"**Whale Tail Dike**" means the structure designed to raise Whale Tail Lake (South Basin) ~~to an elevation of 156 metres above sea level (masl),~~ and divert runoff downstream to the Lake A16 (Mammoth Lake) watershed through the Whale Tail Lake (South Basin) diversion channel, and to permit dewatering of Whale Tail Lake (North Basin) and mining of the Whale Tail Pit as described in the ~~Water Licence Application Document entitled "~~*Whale Tail Pit Water Management Plan*~~" dated January 2017, and illustrated in Drawing No. 627215-1000-4G-DD-0005-00: Dewatering Dikes Plan View, Profiles and Typical Sections: Cross-Section Whale Tail Dike~~ and as may be modified ~~under this Licence~~ from time to time under this Licence;

"**Whale Tail Diversion Channel**" means the structure designed to divert runoff downstream to the Mammoth Lake watershed from Whale Tail Lake (South Basin) once the Whale Tail Dike is constructed and the Whale Tail Lake (South Basin) level is raised ~~to 156 metres above sea level (masl)~~ as described in the ~~Water Licence Application document entitled "~~*Whale Tail Pit Water Management Plan*~~" dated January 2017, and illustrated in Drawing No. 627215-1000-4G-DD-0007-00: Channels and Ponds Plan View, Profiles and Sections: Cross-Section Whale Tail Diversion Channel~~and as may be modified ~~under this Licence~~ from time to time under this Licence;

"**Whale Tail Haul Road**" means the ~~64.1 km.~~ haul road and associated water crossings between the Whale Tail Pit and Project site and the Meadowbank Mine site as described in the ~~Water Licence Application document entitled "~~*Whale Tail Pit Haul Road Management Plan*~~" dated June 2016.~~and as may be modified ~~under this Licence~~ from time to time under this Licence;

"**Whale Tail Lake (North Basin)**" means the northern portion of Whale Tail Lake that will be dewatered to allow the mining of Whale Tail Pit once the Whale Tail Dike is constructed. The water will be pumped to either Whale Tail Lake (South Basin) or to Mammoth Lake through the discharge diffuser as described in the Water Licence Application document entitled "*Whale Tail Pit Water Management Plan*" dated January 2017;

"**Whale Tail Lake (South Basin)**" means the southern portion of Whale Tail Lake that will receive water from Whale Tail Lake (North Basin) once the Whale Tail Dike is constructed, and from which water will be diverted ~~for re-flooding of the mined out open pit and Whale Tail Lake (North Basin) at the Closure phase~~ as described in the ~~Water Licence Application document entitled "~~*Whale Tail Pit Water Management Plan*~~"~~ ~~dated January 2017~~and as may be modified ~~under this Licence~~ from time to time under this Licence;

"**Whale Tail Landfill**" means the facility to be constructed and operated until the end of the mine life designed to contain non-salvageable, non-organic, non-hazardous solid wastes from mining activities that cannot be incinerated, as described in the Water Licence Application document entitled "*Whale Tail Pit Landfill and Waste Management Plan*" dated January 2017, and illustrated in Drawing No. 6108-697-210-001: Whale Tail Landfill Plan View, Section & Detail Arrangement Stage Design;

"**Whale Tail Pit**" means the satellite deposit located on the Amaruq Exploration property approximately 150 km north of Hamlet of Baker Lake and 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut that the Licensee will mine ~~as an open pit~~;

"**Whale Tail Security Management Agreement**" means the agreement between Kivalliq Inuit Association, (KIA or KivIA), Agnico Eagle Mines Limited (Agnico Eagle) and Her Majesty Queen in Right of Canada as represented by the Minister of Crown-Indigenous Relations and Northern Affairs Canada (the Minister), dated September 5, 2017 and signed by KIA, Agnico Eagle and Minister on September 26, 2017~~, as amended on [(date, 2020]) ;~~

"**Whale Tail Waste Rock Storage Facility (WRSF)**" means the facility designed to store Waste Rock from the Whale Tail open pit as described in the Water Licence Application document entitled "*Whale Tail Pit Waste Rock Management Plan*" dated January 2017, and illustrated in the Drawing No. 627215-1000-4G-DD-0006-00: Typical cross-section of the Whale Tail Waste Rock Storage Facility and North East Dike;

Schedule B: General Conditions

The Annual Report referred to in Part B, Item 2, shall include:

CONSTRUCTION

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

WATER

~~2.~~ Monthly and annual volume of fresh Water obtained from ~~Nemo Lake.~~
~~3. Monthly and annual volume of fresh Water obtained from Whale Tail Lake.~~
~~4.~~2. ~~Monthly and annual volume of fresh Water obtained from unnamed water bodies for Whale Tail Haul Road dust suppressant and for the Emulsion plant~~water sources.
~~5. Results of lake level monitoring conducted under the protocol developed as per Part D Item 5 for Whale Tail Lake (South Basin).~~
~~6.~~3. Summary of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E Items 7-9.

WASTE

~~7.~~4. A summary of the ~~G~~geochemical monitoring results including:
   a. Operational acid/base accounting and paste pH test work used for Waste Rock designation (PAG and NPAG rock);
   b. As-built volumes of Waste Rock used in construction and sent to the Waste Rock Storage Facility with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal ~~toxicity~~content;
   ~~c.~~ All monitoring data with respect to geochemical analyses on site and related to roads, quarries, and the Whale Tail Haul Road;
   ~~d.~~c. ~~Leaching observations and tests on pit slope and dike exposure;~~ and
   ~~e.~~d. Any geochemical outcomes or observations that could imply or lead to ~~environmental impact~~greater than predicted impacts to the Receiving Environment.

~~8.~~5. Volumes of Waste Rock used in construction and placed in the Waste Rock Storage Facility.
~~9.~~6. Volumes of ore stockpiled and overburden stored at Whale Tail Pit site.
~~10.~~7. Summary of quantities and analysis of Seepage and runoff monitoring from the Landfill, Waste Rock Storage Facility and associated dikes/berms.
~~11.~~8. A summary report of all general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.
~~12.~~9. Reporting of Incinerator test results including the materials burned and the efficiency of the Incinerator ~~in relation to effects on Water and the potential Deposit of Waste into Water~~.

SPILLS

~~13.~~10. A list and description of all unauthorized discharges in excess of the thresholds set out in the Nunavut *Spill Planning and Reporting Regulations* including volumes, spill report line identification number and summaries of follow-up action taken.

MODIFICATIONS

~~14.~~11. A summary of Modifications and/or major maintenance work carried out on all Water and Waste-related structures and facilities.

MONITORING

~~15.~~12. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.
~~16.~~13. A summary of t~~T~~he results of monitoring related to the Aquatic Effects Monitoring Program (AEMP) including:
   a. Core Receiving Environment Monitoring Program (CREMP);
   b. Metal and Diamond Mining Effluent Regulation (MDMER) Monitoring;
   c. Water q~~Q~~uality and f~~F~~low m~~M~~onitoring;
   d. Visual ~~Whale Tail~~ Haul Road water quality monitoring;
   e. Blast ~~Monitoring~~monitoring; and
   f. Groundwater ~~Monitoring~~monitoring.

CLOSURE

~~17.~~14. A summary of any ~~progressive Closure and Reclamation work~~Progressive Reclamation undertaken, including photographic records of site conditions before and after completion of the work~~operations~~, and an outline of any ~~work anticipated~~Progressive Reclamation planned for the next year~~, including any changes to implementation and scheduling~~.
~~18. A summary of on-going field trials to determine effective capping thickness for the Waste Rock Storage Facility for the purpose of long term environmental protection.~~
~~19.~~15. An updated estimate of the current restoration liability ~~based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking~~.

PLANS/REPORTS/STUDIES

~~20.~~16. A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.

~~21.~~17. Where applicable, a summary of any Plans that were revised over the past year~~revisions as Addenda, with an indication of where changes have been made, for Plans, Reports, and Manuals~~.

~~22.~~18. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence.

GENERAL

~~23.~~19. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

OTHER

~~24.~~20. A summary of public consultation and participation with local organizations and the residents of the nearby communities on water and waste-related matters, including a schedule of upcoming community events and information sessions.

~~25.~~21. Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.

Schedule D: Conditions Applying to Construction

1. The Construction Summary Report referred to in Part D Items 15-16 shall include:

   a All final design and Construction drawings (must be stamped and signed by a Professional Engineer);~~.~~
   b A summary of Construction activities including photographic records before, during and after Construction;
   c As-built drawings (or piping and instrumentation diagrams, where applicable) for Waste Disposal Facilities and Water Supply Facilities;~~.~~
   d Documentation and detailed explanation of field decisions reflecting any deviations from original Construction drawings and plans, and how such deviations may affect performance of Eengineered S~~s~~tructures;
   e Discussion of mitigation measures implemented during Construction and effectiveness of measures taken;
   f Monitoring undertaken in compliance with Part D of the Licence;
   g Blast vibration monitoring for quarrying activities carried out in close proximity to fish bearing waters;
   h Monitoring for sediment release from Construction areas; and
   i Monitoring and reporting on use of Water to manage dust emissions from crushing and Construction activity.

Schedule I: Conditions Applying to General and Aquatic Effects Monitoring

TABLE 1 – MONITORING GROUP

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia nitrogen, total metals (aluminum, arsenic, barium, cadmium, chloride, chromium, copper, fluoride, iron, lead, manganese, mercury, molybdenum, nickel, nitrite, nitrate, selenium, silver, thallium, zinc) sulphate, TDS, TSS.
2	**Total and Dissolved metals**: aluminum, antimony, arsenic, boron, barium, beryllium, cadmium, copper, chromium, iron, lithium, manganese, mercury, molybdenum, nickel, lead, selenium, tin, strontium, titanium, thallium, uranium, vanadium and zinc. **Nutrients**: Ammonia-nitrogen, total ~~k~~Kjeldahl nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate, total phosphorous, total organic carbon, total dissolved organic carbon and reactive silica. **Conventional Parameters**: bicarbonate alkalinity, chloride, carbonate alkalinity, conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, and TSS, turbidity.
3	MDMER parameters (arsenic, copper, lead, nickel, zinc, total suspended solids, pH), sulphate, turbidity and total aluminum.
4	Total Arsenic, Total Copper, Total Lead, Total Nickel, Total Zinc, TSS, Benzene, Toluene, Ethylbenzene, Xylene, TPH, pH.
MDMER	Arsenic, copper, lead, nickel, zinc, total suspended solids, pH, effluent volumes and flow rate of discharge, acute lethality (Rainbow Trout and Daphnia magna) and environmental effects monitoring (EEM).

TABLE 2 – MONITORING PROGRAM

Station	Description	Phase	Monitoring Parameters	Frequency
		Mine Site		
ST-DC-1 to TBD	Monitoring Program Stations during dike Construction as defined in the Whale Tail Water Quality Monitoring and Management Plan for Dike Construction and Dewatering	Construction	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in Part D, Item 5	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in Part D Item 5
ST-DD-1 to TBD	Monitoring Program Stations during dike dewatering as defined in the Whale Tail Water Quality Monitoring and Management Plan for Dike Construction and Dewatering	Construction	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in Part D, tem 5	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in part D, Item 5
ST-S-1 to TBD	Seeps (to be determined)	Operations	Group 1	Monthly or as found
		Closure	Group 1	Monthly or as found
ST-GW-1 to TBD	Groundwater wells (to be determined) as required under Groundwater Monitoring Plan	Operations	Group 2	Annually
		Closure	Group 2	Annually
ST-WT-1	Attenuation Pond, pre-treatment	Operations	Group 1	Four times per calendar year
ST-WT-2	Attenuation Pond, posttreatment; last point of control before discharge	Operations	Volume (m^3)	Daily during periods of discharge
			Field Measurements	Weekly during periods of discharge
			Group 1	Weekly during periods of discharge

			Group1 MDMER Effluent	Four times per calendar year
			Group 3 MDMER Acute Toxicity	Once prior to discharge and Monthly thereafter
			3 MMER sub-lethal toxicity	Two times per calendar year
ST-WT-3	Waste Rock Storage Facility (WRSF) Pond prior to pumping to Attenuation Pond	Operations	Group 1	Four times per calendar year, when water is present
		Closure	Group 1	Four times per calendar year, when water is present
	Waste Rock Storage Facility (WRSF) Pond prior to discharge to Mammoth Lake	Post-Closure	Group 1	Four times per calendar year, when water is present
ST-WT-4	Whale Tail Pit or pit sump	Operations	Group 1	Four times per calendar year
ST-WT-5	Water Intake from Nemo Lake	Construction	Volume (m^3)	Monthly
		Operation	Volume (m^3)	Monthly
ST-WT-6	Lake A47	Construction	Group 2	Monthly during open water
		Operations	Group 2	Monthly during open water
		Closure	Group 2	Monthly during open water
ST-WT-7	East diversion channel	Operations	Group 3	Three times (freshet, summer, fall) per calendar year
ST-WT-8	Water Intake from Whale Tail Lake	Closure	Volume (m^3)	Monthly
ST-WT-9	North Whale Tail Lake (as the basin fills and when it is	Closure	Group 1	Four times per calendar year

	~~connected to the south basin and prior to or when connected to the downstream environment)~~	~~Post-Closure~~	~~Group 2~~	~~Four times per calendar year~~
~~ST-WT-10~~	~~Pit Lake (as the Pit fills)~~	~~Closure~~	~~Group 2~~	~~Four times per calendar year~~
		~~Post-Closure~~	~~Group 2~~	~~Four times per calendar year~~
~~ST-WT-11~~	~~Sewage Treatment Plant~~	~~Operations~~	~~Group 1~~	~~Four times per calendar year~~
		~~Closure~~	~~Group 1~~	~~Four times per calendar year~~
~~ST-WT-12~~	~~Secondary containment at Whale Tail Bulk Fuel Storage Facility~~	~~Operations~~	~~Group 4~~	~~Prior to discharge or transfer of effluent~~
		~~Closure~~	~~Group 4~~	~~Prior to discharge or transfer of effluent~~
~~ST-WT-13~~	~~Lake A45~~	~~Operations~~	~~Group 3~~	~~Flow, Monthly during open water~~
		~~Closure~~	~~Group 3~~	~~Flow, Monthly during open water until water level have returned to baseline level~~
~~ST-WT-14~~	~~Lake A16 outlet~~	~~Construction~~	~~Group 2~~	~~Monthly during open water~~
		~~Operations~~	~~Group 2~~	~~Monthly during open water~~
		~~Closure~~	~~Group 2~~	~~Monthly during open water~~
~~ST-WT-15~~	~~Lake A15~~	~~Construction~~	~~Group 2~~	~~Monthly during open water~~
		~~Operations~~	~~Group 2~~	~~Monthly during open water~~
		~~Closure~~	~~Group 2~~	~~Monthly during open water~~

Station	Description	Phase	Monitoring Parameters	Frequency

Mine Site				
ST-DC-1 to TBD	Monitoring Program Stations during dike Construction as defined in the Whale Tail Water Quality Monitoring and Management Plan for Dike Construction and Dewatering	Construction	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in Part D, Item 5	As defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in Part D Item 5
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		Closure	Group 1	Monthly or as found
ST-GW-1 to TBD	Groundwater wells (to be determined) as required under Groundwater Monitoring Plan	Operations	Group 2	Annually
		Closure	Group 2	Annually
ST-WT-1	Attenuation Pond, pre-treatment	Operations	Group 1	Four times per calendar year
ST-WT-2	Attenuation Pond, posttreatment; last point of control before discharge in Mammoth Lake	Operations	Volume (m^3)	Daily during periods of discharge
			Field Measurements	Weekly during periods of discharge
			Group 2	Weekly during periods of discharge

			Effluent characterization (MDMER)	Four times per calendar year
			Acute Toxicity (MDMER)	Once prior to discharge and Monthly thereafter
			Sub-lethal toxicity (MDMER)	MDMER Schedule
ST-WT-3	Waste Rock Storage Facility (WRSF) Pond prior to pumping to Attenuation Pond	Operations	Group 1	Four times per calendar year, when water is present
		Closure	Group 1	Four times per calendar year, when water is present
	Waste Rock Storage Facility (WRSF) Pond prior to discharge to Mammoth Lake	Post-Closure	Group 1	Four times per calendar year, when water is present
ST-WT-4	Whale Tail Pit or pit sump	Operations	Group 1	Four times per calendar year
ST-WT-5	Water Intake from Nemo Lake	Construction	Volume (m^3)	Monthly
		Operation	Volume (m^3)	Monthly
ST-WT-6	Lake A47	Construction	Group 2	Monthly during open water
		Operations	Group 2	Monthly during open water
		Closure	Group 2	Monthly during open water
ST-WT-7	East diversion channel	Operations	Group 3	Three times (freshet, summer, fall) per calendar year
ST-WT-8	Water Intake from Whale Tail Lake	Closure	Volume (m^3)	Monthly
ST-WT-9	North Whale Tail Lake (as the basin fills and when it is	Closure	Group 1	Four times per calendar year

	connected to the south basin and prior to or when connected to the downstream environment)	Post-Closure	Group 2	Four times per calendar year
ST-WT-10	Pit Lake (as the Pit fills)	Closure	Group 2	Four times per calendar year
		Post-Closure	Group 2	Four times per calendar year
ST-WT-11	Sewage Treatment Plant	Operations	Group 1	Four times per calendar year
		Closure	Group 1	Four times per calendar year
ST-WT-12	Secondary containment at Whale Tail Bulk Fuel Storage Facility	Operations	Group 4	Prior to discharge or transfer of effluent
		Closure	Group 4	Prior to discharge or transfer of effluent
ST-WT-13	Lake A45	Operations	Group 3	Flow, Monthly during open-water
		Closure	Group 3	Flow, Monthly during open-water until water level have returned to baseline level
ST-WT-14	Lake A16 outlet	Construction	Group 2	Monthly during open water
		Operations	Group 2	Monthly during open water
		Closure	Group 2	Monthly during open water
ST-WT-15	Lake A15	Construction	Group 2	Monthly during open water
		Operations	Group 2	Monthly during open water
		Closure	Group 2	Monthly during open water
ST-WT-16	WT Bulk Fuel Storage Facility Power House	Operation	Group 4	Prior to discharge or water transfer
		Closure	Group 4	Prior to discharge or water transfer

		Operations	Volume (m3)	During transfer
		Closure	Volume (m3)	During transfer
ST-WT-17	Whale Tail Dike Seepage	Operation	Group 1	Monthly during discharge
ST-WT-18	IVR Pit or sump	Operations	Group 1	Four times per calendar year
ST-WT-19	IVR Pit Lake	Closure	Group 2	Four times per calendar year
		Post-closure	Group 2	Four times per calendar year
ST-WT-20	Groundwater Storage Pond 1	Operations	Group 1	Four times per calendar year
ST-WT-21	Groundwater Storage Pond 2	Operations	Group 1	Four times per calendar year
ST-WT-22	Groundwater Storage Pond 3	Operations	Group 1	Four times per calendar year
ST-WT-23	IVR Attenuation Pond	Operations	Group 1	Four times per calendar year
		Closure	Group 1	Four times per calendar year
ST-WT-24	Whale Tail Pit Lake (North Wall)	Closure	Group 2	Four times per calendar year
		Post-Closure	Group 2	Four times per calendar year
ST-WT-25	Whale Tail South Discharge to Mammoth Permanent Diffuser	Construction	Group 3	Monthly during discharge
ST-WT-25A	Whale Tail South Discharge to Mammoth Temporary Diffuser	Construction	Group 3	Monthly during discharge
			Volume (m^3)	Daily during periods of discharge

ST-WT-26	Attenuation Pond, posttreatment; last point of control before discharge in Whale Tail South Basin	Operations	Field Measurements	Weekly during periods of discharge
			Group 2	Weekly during periods of discharge
			Effluent characterization (MDMER)	Four times per calendar year
			Acute toxicity (MDMER)	Once prior to discharge and Monthly thereafter
			Sub-lethal toxicity (MDMER)	MDMER Schedule
ST-WT-27	Landfarm	Operations	Group 4	Prior to discharge
		Operations	Volume	During discharge

Appendix C. Proposed changes to Water Licence NO: 2AM-MEA1525

NTI – P.O. Box 1269, Cambridge Bay, Nunavut, X0B 0C0, Tel; (867) 983-5600, Fax: (867) 983-5624
KIVIA- P.O. Box 340, Rankin Inlet, Nunavut, X0C 0G0, Tel: (867) 645-2800, Fax: (867) 645-3855

NUNAVUT WATER BOARD

WATER LICENCE NO: 2AM-MEA1525

TABLE OF CONTENTS

Licence No. 2AM-~~MEA1525~~MEA2033

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

AGNICO-EAGLE MINES LIMITED
(Licensee)

145, KING STREET EAST, SUITE 400, TORONTO, ONTARIO M5C 2Y7
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or deposit waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	**2AM-MEA1525 / Type "A"**
Water Management Area:	**QUOICH / BACK WATERSHEDS (09 / 31)**
Location:	**MEADOWBANK GOLD MINE KIVALLIQ REGION, NUNAVUT**
Purpose:	**WATER USE AND DEPOSIT OF WASTE**
Description:	**MINING UNDERTAKING**
Quantity of Water not to be Exceeded:	**9,120,000 CUBIC METRES ANNUALLY AS PER PART E**
Date Licence Issuance:	**JULY 23, 2015**
Expiry of Licence:	**JULY 22, ~~2025~~2033**

This Licence issued **(~~Motion Number 2015-15-P9-06~~TBD)** and recorded at Gjoa Haven, Nunavut includes and is subject to the annexed conditions.

Lootie Toomasie
Nunavut Water Board
Hearing Chair

APPROVED BY: Minister of Crown-Indigenous Relations and Northern Affairs~~Aboriginal Affairs and Northern Development~~ Canada

DATE LICENCE APPROVED: _____

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

- **SCOPE**

a.a.

This Licence authorizes Agnico-Eagle Mines Ltd. ("AEM" or "Licensee") to use Waters and Ddeposit of Waste in support of a mMining Undertaking classified as per Schedule 1 of the Regulations, at the Meadowbank Gold Mine (Project) as outlined in the Type "A" Water Licence Renewal Application (Application) submitted to the Nunavut Water Board (NWB) on August 05, 2014 and as reviewed throughout the regulatory process. The scope of the activities, works and Undertakings authorized under this Licence also includes Meadowbank Gold Mine Project infrastructure used by the Whale Tail Pit Project as outlined in the water licence applications submitted by AEM to the Nunavut Water Board (NWB) on July 8, 2016 and May 16, 2019

a.a.

The Licensee may conduct mining, milling and associated activities at the Meadowbank Gold Mine in the Kivalliq Region of Nunavut (65° 01' 33'' N, 96° 04' 01'' W) including, in general, as follows:

- Use of water from Third Portage Lake for mining and milling, associated activities and domestic purposes;
- Withdrawal and use of water from unnamed lake approximately 250 metres from the Emulsion Plant for use in explosives mixing;
- Withdrawal and use of water from Third Portage Lake and Wally Lake for the re-flooding of open pits following pit development;
- Quarrying of materials from specified locations;
- Operation of mine site facilities including bulk fuel storage, mill, shops, offices, laboratory, warehouse, camp, and explosives mixing;
- Operation of a camp at the Meadowbank Mine site;
- Operation of the Baker Lake Marshalling Facility;
- Operation of the All Weather ~~Private~~ Access Road, site roads, airstrip, and Water crossings;
- Construction and operation of the Portage Waste Rock Storage Facility and the Vault Waste Rock Storage Facility;
- Operation of a Sewage Treatment Plant and controlled discharge of treated Effluent during operations;
- Set-up and operation of a diesel fired equipment including the Waste Incinerator;
- Construction and operation of Contact Water and Non-Contact Water ~~management~~ collection systems;
- Construction and operation of an oOperations lLandfill and a dDemolition lLandfill in the Portage Waste Rock Storage Facility;

Commented [Katz1]: Why remove the word private? It is a private access road.

- Operation of a Landfarm;
- Operation of the Portage Attenuation Ponds and the Vault Attenuation Pond;

- Management and disposal of Wastes associated with the Sewage Treatment Plant, the Portage Waste Rock Storage Facility, Vault Waste Rock Storage Facility, Portage Attenuation Pond, Vault Attenuation Pond, Reclaim Pond, oOperations lLandfill, dDemolition lLandfill, Landfarm, cComposter, Incinerator, and other wastes as described in the Water Licence Application;
- Handling and storage of petroleum products and hazardous materials including explosives, cyanide and other reagents;
- Construction of a Central Dike, Stormwater Dike, Saddle Dams, Portage Attenuation Pond and Reclaim Pond needed for the operation of the northwest arm of Second Portage Lake as a Tailings Storage Facility;
- Deposition of tailings into the Tailings Storage Facility;
- Controlled and regulated Discharge of Effluent to Third Portage Lake from the Portage Attenuation Pond;
- Controlled and regulated Discharge of Effluent to Wally Lake from the Vault Attenuation Pond;
- Re-flooding of Portage, Goose Island, and Vault open pits following pit development; and
-
- Management and disposal of Wastes associated with the Whale Tail Pit Project; and
- Progressive Reclamation and Abandonment planning of on-site facilities and infrastructure.

b. This Licence is issued subject to conditions contained herein with respect to the use of Waters and the Ddeposit of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements.

Commented [Katz2]: Reject deletion

c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives. guidelines and directives.

- **DEFINITIONS**

a. The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

- **ENFORCEMENT**

a. Failure to comply with this Licence may be a violation of the Act, subjecting the Licensee to the enforcement measures and the penalties provided for in the Act.

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the Act.

c. For the purpose of enforcing this Licence and with respect to the use of Waters and Ddeposit of Waste by the Licensee, Inspectors appointed under the Act, hold all powers, privileges and protections that are conferred upon them by the Act or by other applicable laws.

PART B: GENERAL CONDITIONS

1. The amount of Water use fees shall be determined and payment of those fees shall be made in accordance with section 12 of the *Regulations.*

2. The Licensee shall file an Annual Report with the Board no later than March 31th in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B.

3. The Licensee shall retain and have a copy of this Licence available at the site of operations at all times.

4. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing, Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

5. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

6. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board unless otherwise requested by the Board. Reports or studies submitted to the Board by the Licensee shall include an executive summary in English, Inuktitut, and French.

7. This Licence is assignable as provided in Section 44 of the *Act*.

8. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.

9. ~~Other than changes associated with Adaptive Management, where practicable T~~The Licensee shall notify the Board of any changes in operating plans or conditions associated with this Project at least sixty (60) days prior to any such change.

10. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities and the Waste Disposal Facilities. All signs must be in English, Inuktitut and French and shall be located and maintained to the satisfaction of an Inspector.

11. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may request that the Licensee alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan. Unless the Board otherwise advises, Plans and amendments thereto submitted under this License shall be deemed to be approved by the Board within forty-five days of submission by the Licensee. For greater clarity, an approved Plan remains in force until such time as it is replaced by a new approved Plan.

12. In the event that a Plan is not found acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board. The Board shall issue a final approval decision upon receipt of the revised version of the Plan.

13. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing. The Board has approved (or accepted) the following Plans for implementation under the relevant sections in the Licence: Any changes to the ~~p~~Plans deemed significant by the Board ~~shall be considered as an amendment to the plan(s) or as a modification and~~ must be approved by the Board.

    a. Aquatic Effects ~~Management~~ Monitoring Program (AEMP), Version ~~2~~ 3 (~~Dec. 2012~~November 2015);
    b. Core Receiving Environment Monitoring Program (CREMP), Design Document, Version ~~1~~ 2 (~~Dec. 2012~~November 2015);
    c. Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 4 (~~April 2010~~June 2016);
    d. Groundwater Monitoring Plan, Version ~~4~~ 10 (~~Jan. 2014~~July 2019);
    e. Quality Assurance/Quality Control (QA/QC) Plan, Version ~~2~~ 4 (~~June, 2014~~March 2019) accepted by the Board;
    f. Water Quality and Flow Monitoring Plan, Version ~~4~~ 5 (~~January 2015~~March 2016);
    g. Emergency Response Plan, Version 6 (Aug. 2013);
    h. Hazardous Material Management Plan, Version ~~3~~ 4 (~~Oct. 2013~~March 2019);
    i. Spill Contingency Plan, Version ~~4~~ 7 (~~Nov. 2013~~April 2019);
    j. Operational ARD/ML Testing and Sampling Plan, Version 2 (Nov. 2013);

Commented [Katz3]: Suggest rejecting the change.

Commented [Katz4]: This erodes the jurisdiction of the Board

Commented [KG5]: Timing is problematic.

k. Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version ~~3~~ 4 (~~June 2014~~August 2018);
l. Meadowbank Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version ~~2~~ 4 (~~June 2014~~March 2018);
m. Incinerator Waste Management Plan, Version ~~5~~ 8 (~~June 2014~~September 2018);
n. Interim Closure and Reclamation Plan, Version ~~2~~ 0 (~~Jan.2014~~May 2019);

o. Landfarm Design and Management Plan, Version 43 (Feb. 2013March 2017);
p. Landfill Design and Management Plan, Version 24 (March 2013September 2018);
q. 2013 Water Management Report and Plan, Version 7 1 (March 201994);
r. Ammonia Management Plan, Version1 Version2 (Feb. 2013March 2015);
s. Dewatering Dike : Operation, Maintenance and Surveillance Manual, Version 3 8 (Sept. 2013February 2019);
t. Tailings Storage Facility : Operation, Maintenance and Surveillance Manual, Version 3 9 (Sept. 2013February 2019);
u. Mine Waste Rock and Tailings Management Plan, Version 91 (March 2014July 2019);
v. Operation and Maintenance Manual: Sewage Treatment Plan, Version 4 6 (Apr. 2013March 2017); and
w. Freshet Action Plan, (April 2014March 2019).

14. The Licensee shall update and revise for submission to the Board for approval in writing, within sixty (60) days of issuance of this Licence, the following management plans. The updates are to take into account commitments made with respect to submissions received during the technical review of the Application, as well as final submissions and issues raised during the Public Hearing Process, where applicable.

a. Aquatic Effect Management Program (AEMP);
b. Core Receiving Environment Monitoring Program (CREMP);
c. Water Management Report and Plan;
d. Freshet Action Plan;
e. Ammonia Management Plan; f. Groundwater Monitoring Plan;
g. Tailings Storage Facility: Operation, Maintenance and Surveillance Manual;
h. Operation and Maintenance Manual: Sewage Treatment Plan; and
i. Spill Contingency Plan.

15.14. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

16.15. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made. to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made. or a replacement Plan or Plans when and as the need arises.

16. The Licensee may consolidate and streamline one or more approved Plans to support efficient site management and operations and communication with Inspectors and regulators.

17.16. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirementAct.

Commented [Katz6]: Reject concept of streamlining.

Commented [KG7]: reject

~~18.~~17. The Schedules attached to this Licence provide details regarding the requirements associated with specific items in the main body of the Licence and are included in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. If the

Board subsequently determines that an item in any of the Schedules requires revision in order to better reflect the intent and objectives of the Licence, the Board may at its discretion, and upon consulting and providing written notice to the Licensee and interested parties, revise the Schedule accordingly. Unless the Board directs otherwise, such revision may not necessarily be considered as an "Amendment" to the Licence.

20. Unless otherwise stated, references in the Licence to any specific legislation, policy, guideline or other regulatory requirement are deemed to refer to the regulatory requirement as may be amended or as may be expressly replaced by successor legislation, policy, guidelines or other regulatory requirements after the Licence is approved by the Minister.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall, within thirty (30) days following the approval of this Amendment by the Minister, furnish and maintain security with the Minister in the amount of $44,713,873. As set out in the Meadowbank Security Management Agreement, May 17, 2016 Version (as subsequently updated by the parties), the amount secured under this Part constitutes 50% of the total global security amount of $89,427,746 that is required to reclaim the Undertaking, and also reflects that the remaining 50% of the ~~global~~ security ~~amount~~ will be held outside the Licence by the Kivalliq Inuit Association, in accordance with the terms and conditions of the Meadowbank Security Management Agreement.~~The Licensee shall, within thirty (30) days following the approval of this Licence by the Minister, furnish and maintain security with the Minister in the amount for a total of seventy one million seven hundred thousand dollars ($71,700,000) in the form, of the nature, subject to such terms and conditions, in accordance with, the Regulations, or that is satisfactory to the Minister.~~

~~1.Upon the Licensee filing evidence, in writing with the Board and with notice to the Minister and Kivalliq Inuit Association that the Licensee has furnished and maintained security with the Kivalliq Inuit Association in an amount that the Kivalliq Inuit Association confirms is sufficient to secure the mine closure and reclamation costs (including cumulative and legacy liabilities) estimated to be required for the portion of the Project located on Inuit-owned lands, the Board may reduce the amount of security required to be held under Part C, Item 1. The Board shall ensure that the reduced amount of security furnished under Part C, Item 1 is equal to the estimated anticipated mine closure and reclamation costs (including cumulative legacy liabilities) for the portion of the Project located on Crown-owned lands.~~

~~2.The Licensee, the Minister or Kivalliq Inuit Association, may apply to amend the amount of security required to be held under the Licence. The submission shall include supporting evidence to justify the amendment and will be processed by the Board as an amendment to the terms and conditions of the Licence.~~

~~3.The security referred to in Part C, Item 1 shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to Section 76(5) of the Act. This clause shall~~

survive the expiry of this Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.

4. In the event that the amount of security required to be held under Part C, Item 1 is reduced on the basis of evidence that the Licensee has furnished and maintained security with the Kivalliq Inuit Association as set out under Part C, Item 2, the Licensee is required to provide the Board and the Minister with sixty (60) days written notice prior to any material change affecting the security arrangements between the Licensee and the Kivalliq Inuit Association, including, but not limited to the form of security, quantum of security or terms associated with holding, accessing or releasing the security.

5. If the Board determines it to be necessary, or upon the request of Licensee, the Minister and/or the Kivalliq Inuit Association, the Board may issue further directions under this Part

~~with respect to the process for amending the amount of security to be furnished and maintained under the Licence.~~

2. The security held under Part C, Item 1 shall be in a form that is satisfactory to the Minister and consistent with the Act and Regulations.

3.The Licensee shall, within ten (10) days after furnishing security with the Minister, provide evidence to the NWB and the Kivalliq Inuit Association, that the security has been received by the Minister, indicating the amount, form, nature and conditions of the security.

4.The Licensee shall, within ten (10) days after furnishing security with the Kivalliq Inuit Association, provide evidence to the NWB and to the Minister, that the security has been received by the Kivalliq Inuit Association, indicating the amount, form, nature and conditions of the security.

5.The Licensee shall provide the Board with at least ninety (90) days written notice prior to any parties' termination of the ~~Whale Tail~~Meadowbank Security Management Agreement, or any material change to the ~~Whale Tail~~Meadowbank Security Management Agreement that may affect the amount of security held under Part C, Item 1.

Commented [Katz8]: Why is this mentioning whale tail security management? This should be referencing Meadowbank?

6.The Licensee shall provide the Board with at least ninety (90) days written notice prior to any material changes to the Undertaking or the risk of environmental damage associated with the Undertaking that could result in a material change to the R~~r~~eclamation liability associated arising from unexpected changes or modifications of the works and activities associated with the Undertaking~~)~~.

7.The Licensee shall, within twelve (12) months following the commencement of Operations and when the Licensee files a Final Reclamation and Closure Plan as required under the Licence, submit to the Board for review an updated R~~r~~eclamation cost estimate, using the CIRNAC RECLAIM Reclamation Cost Estimating Model (Version 7.0 or the most current version in use at the time the updated R~~r~~eclamation cost estimate is submitted to the Board).

8.Upon the Board receiving notice under Part C, Items 5 or 6, or upon receiving an updated R~~r~~eclamation cost estimate as required under Part C, Item 7, the Board may, on its own initiative, or upon application by the Licensee, the Minister and/or the Kivalliq Inuit Association, conduct a periodic review of the outstanding R~~r~~eclamation liability associated with the Undertaking and may, as the Board considers appropriate, amend the amount of security held under Part C, Item 1. If the Nunavut Water Board determines it to be necessary or upon the request of the Proponent, the Minister and ~~or~~ the ~~KIA~~Kivalliq Inuit Association, the Nunavut Water Board may issue further direction with respect to the process for the Board's conduct of periodic reviews of security and associated amendments to the amount of security to be furnished and maintained under the Licence.

9.The Licensee may, once yearly~~at any time~~, submit to the Board for consideration and approval, a request to change the amount of security outlined in Part C, Item 1. The submission shall include supporting evidence to justify the request, and the Minister and the Kivalliq Inuit

Association will be consulted by the Board during the Board's consideration of this request.

Commented [Katz9]: Why is this limited to consultation?

10. If the Board determines it to be necessary, or upon the request of Licensee, the Minister and/or the Kivalliq Inuit Association, the Board may issue further directions under this Part with respect to the process for amending the amount of security to be furnished and maintained under the Licence.

11. The security referred to in Part C, Item 1 shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Final Reclamation and Closure Plan and as it is fully or in part refunded by the Minister pursuant to Section 76(5) of the Act. This clause shall survive the expiry of the Licence or renewals thereof and until full and final R~~r~~eclamation has been completed to the satisfaction of the Minister.

12. The Board may modify ~~to~~ the Monitoring Program for all phases of mining as set out in Schedule I without amendment or a public hearing. Requests for changes to the Monitoring Program shall~~should~~ be forwarded to the Board in writing and should include justification for the change.

PART D: CONDITIONS APPLYING TO NEW CONSTRUCTION

1. The Licensee shall submit to the Board for approval, at least six (6) months prior to Construction of the Saddle Dams, or new dikes, final design and construction drawings accompanied by a detailed assessment report from the Independent Geotechnical Expert Review Panel.

2. The Licence shall submit to the Board for review, at least one (1) year prior to commissioning, final design and construction drawings of the Demolition Landfill.

3. If it is determined that the easternmost channel of Third Portage Lake requires capacity upgrading, the Licensee shall submit to the Board and DFO for review, at least six (6) months prior to construction, a management plan including final design and construction drawings of the channel modification.

4. The Licensee shall use fill material for construction only from approved sources that have been demonstrated by appropriate geochemical analyses to not produce Acid Rock Drainage (ARD) and to be Non-Metal Leaching, and free of contaminants.

5. The Licensee shall submit for approval, at least thirty (30) days prior to new construction, a Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering. The Plan shall include a protocol to monitor and maintain Water levels in Third Portage Lake, Second Portage Lake and Wally Lake within natural variation.

6. During new dike construction, the Licensee shall implement the action plans outlined in the approved Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering if:

a. Total Suspended Solids (TSS) levels in a single sample exceed the Short Term Maximum TSS concentration defined in Part D Item 7;
b. The 7-day moving average TSS concentration exceeds the Maximum Monthly Mean TSS concentration defined in Part D Item 7.

7. The Licensee shall compare TSS levels as required in Part D Item 6 to the following Maximum Monthly Mean and Short Term Maximum concentrations:

Parameter	Maximum Monthly Mean (mg/L)	Short Term Maximum (mg/L)
TSS in areas where there is spawning habitat and at times when eggs or larvae are expected to be present (applied at monitoring stations located closest to the high value shoal areas starting Sept 1, 2008)	6	25
TSS in all other areas and at times when eggs/larvae are not present	15	50
TSS in impounded areas (e.g. northwest arm of Second Portage Lake) at all times in all areas.	15	50

8. Effluent from new dewatering activities shall be monitored at Monitoring Stations ST-DD-1 to ST-DD-TBD and not exceed the following Effluent quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids (TSS)	15.0 mg/L	22.5 mg/L
Turbidity	15 NTU	30 NTU
pH	6.0 to 9.0	6.0 to 9.0
Total Aluminium	1.5 mg/L	3.0 mg/L

9. All Effluent from the Sewage Treatment Plant shall be directed to the Stormwater Management Pond. Any discharge of the Stormwater Management Pond shall be directed to the Tailings Storage Facility.

10. The Licensee shall implement sediment and erosion control measures prior to and during Construction, and Operations where necessary, to prevent entry of sediment into Water.

11. The Licensee shall inspect daily, all construction activities for signs of erosion that may affect surface water discharging to Third Portage Lake, Second Portage Lake and Wally Lake.

12. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids (TSS)	50.0	100.0

13. The Licensee shall, during the construction of all Eengineered Sstructures, provide the required supervision and field checks by an appropriately qualified and experienced Engineer in such a manner that the pProject specification can be enforced and, where required, the quality control measures can be followed. The Licensee shall maintain all construction records of all Eengineered Sstructures to be made available at the request of the Board and/or an Inspector.

14. The Licensee shall submit to the Board for review, within ninety (90) days of completion of each facility designed to contain, withhold, divert or retain waters or wastes during the construction phase, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.

15. The Licensee shall prevent any chemicals, petroleum products, fuel or wastes associated with the undertaking from entering any Water body except in accordance with this Licence.

16. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.

17. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.

18. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, a distance of at least thirty one (31) metres above the ordinary High Water Mark of any water body in order to minimize impacts on surface drainage and water quality.

19. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's operations.

20. The Licensee shall limit any in-stream activity to low Water periods. In-stream activity is prohibited during fish migration.

21. The Licensee shall, for the purposes of ~~culvert and~~ bridge construction, ensure that all activities remain outside of the natural channel width by the placement of abutments, footings or armouring above the ordinary High Water Mark so that there is no restriction to the natural channel processes.

22. The Licensee shall operate the Mine Site and Marshalling Area Bulk Fuel Storage Facilities in accordance with all applicable legislation and industry standards, including:

    a. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003 (Updated in 2013) or most recent; CCME;* and
    b. *National Fire Code, 2010 or most recent.*

The Licensee shall ~~consider~~ apply the principles of A~~a~~daptive M~~m~~anagement in construction and operations. For greater clarity, Adaptive Management ~~strategy~~ A~~a~~ctions identified in an approved Adaptive Management Plan may be implemented by the Licensee upon notice to the Board and the Kivalliq Inuit Association and do not require Modification or Amendment to this Licence prior to implementation.

New Adaptive Management Actions may be implemented by the Licencee upon 21 days written notice to the Board and the Kivalliq Inuit Association and do not require Modification or Amendment to this Licence prior to implementation.

Notice ~~to the Board~~ must include:

- A description of the rationale for the action (s);
- An estimate as to the amount of security that may be required;
- Confirmation that the primary purpose for the action(s) is to prevent, stabilize, or reverse an adverse change in environmental conditions or to otherwise protect the R~~r~~eceiving E~~e~~nvironment;
- A description and location of any facilities and or works to be constructed;
- A description of any new monitoring required, including sampling locations, parameters measured and frequency of sampling;
- A proposed schedule for construction;
- Drawings of Engineered Structures stamped by a Professional Engineer (where applicable); and
- If required, any proposed sediment and erosion control measures.

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PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The Licensee shall obtain fresh Water from Third Portage Lake at Monitoring Station ST-1 using the Fresh Water Intake Barge for domestic camp use, mining and milling, re-flooding of Portage and Goose Pits and associated use, or as otherwise approved by the Board in writing. The use of Waters from Third Portage Lake, for all purposes, shall not exceed a total of two million three hundred fifty thousand (2,350,000) cubic metres *per* year from the Licence approval date to December 31, 2017, followed by a maximum of four million nine hundred thirty five thousand (4,935,000) cubic metres *per* year, starting in 2018 through to the Expiry of the Licence.

2. The Licensee shall obtain fresh Water from Wally Lake at Monitoring Station ST-2 for re-flooding of Vault Pit and associated use, or as otherwise approved by the Board in writing. The use of Waters from Wally Lake shall not exceed a total of four million one hundred eighty five thousand (4,185,000) cubic metres *per* year starting in 2018 through to the Expiry of the Licence.

3. The Licensee shall obtain fresh Water from the unnamed lake at Monitoring Station ST-3 for purposes of explosives mixing, not to exceed a maximum of two thousand four hundred (2,400) cubic metres *per* year from Licence issuance date to December 31, 2017, or as otherwise approved by the Board in writing.

4. The total volume of fresh Water for all uses and from all sources, shall not exceed two

million three hundred and fifty thousand (2,350,000) cubic metres *per* year from the Licence approval date to December 31, 2017 followed by nine million one hundred and

twenty thousand (9,120,000) cubic metres *per* year in 2018 through to the expiry of the Licence.

5. The Licensee shall maximize to the greatest practical extent, the use of reclaim water from the Tailings Storage Facility for use in the mill.

6. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.

7. The Licensee shall submit a Water Management Plan on an annual basis to the Board for review following the commencement of Operations. The Plan must include an updated Water Balance. The Water Management Plans shall include an action plan to be implemented if predicted re-flooded pit water quality indicates that treatment is necessary. The Licensee shall not breach dikes until the water quality in the re-flooded area meets CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Board

approval, if water quality parameters are above CCME Guidelines, a site specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.

8. The Licensee shall submit a Water Quality Model for pit re-flooding as part of the Water Management Plan which shall be re-calibrated as necessary and updated at a minimum of once every two (2) years following commencement of Operations. The results and implications of the predictive model shall be reported to the Board.

9. The Licensee shall, on an annual basis during Operations and Closure, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the Final Environmental Impact Statement water quantity and quality predictions ~~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.

10. The Licensee may include appropriate Site Specific Water Quality Objectives within the Receiving Environment applicable during construction and operations in the approved Water Quality and Flow Monitoring Plan, which Plan may be further modified by the Licensee and approved by the Board from time to time.

~~10.~~11. The Licensee shall carry out weekly inspections of all water management structures during periods of flow and the records be kept for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information is to be included in the ~~annual~~ Water Management Plan.

~~11.~~12. The Licensee shall implement measures to minimize the generation and deposition of dust and/or sediment into Water arising from road use.

~~12.~~13. The Licensee shall provide at least thirty (30) days' notice to the NWB and Inspector prior to the commencement of re-flooding of each pit.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall direct all Sewage and Greywater to the Sewage Treatment Plant as described in the Operation and Maintenance Manual: Sewage Treatment Plant, or as otherwise approved by the Board.

2. The Licensee shall dispose of Sewage Effluent and direct all sludge removed from the Sewage Treatment Plant to the Tailings Storage Facility or to the Landfarm as a nutrient amendment in accordance with the Operation and Maintenance Manual: Sewage Treatment Plant~~, dated April 2013~~ as approved by the Board.

3. The Discharge of Effluent from the Portage Attenuation Pond at Monitoring Station ST-9 shall be directed to third Portage Lake through the Third Portage Lake Outfall Diffuser and shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
pH	6.0 to 9.0	6.0 to 9.0
TSS (mg/L)	15	30
~~TDS (mg/L)~~	~~1400~~	~~1400~~
Turbidity (NTU)	15	15
Total (T)-Al (mg/L)	1.5	1.5
Dissolved (D)–Al (mg/L)	1.0	1.0
T-As (mg/L)	0.3	0.6
T-Cd (mg/L)	0.002	0.004
T-CN (mg/L)	0.5	1.0
T-Cu (mg/L)	0.1	0.2
T-Hg (mg/L)	0.0004	0.0008
NH_3-N (mg/L)	16	32
T-Ni (mg/L)	0.2	0.4
T-NO_3-N (mg/L)	20	40
T-Pb (mg/L)	0.1	0.2
T-P (mg/L)	1.0	2.0
T-Zn (mg/L)	0.4	0.8
T-Cl^- (mg/L)	1000	2000
Total Petroleum Hydrocarbons (TPH) (mg/L)	3	6

4. The Discharge of Effluent from the Vault Attenuation Pond at Monitoring Station ST-10 shall be directed to Wally Lake through the Wally Outfall Diffuser and shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
pH	6.0 to 9.0	6.0 to 9.0
TSS (mg/L)	15	30
TDS (mg/L)	1400	1400
Turbidity (NTU)	15	15
Total (T)-Al (mg/L)	1.5	3.0
Dissolved (D)-Al (mg/L)	1.0	2.0
T-As (mg/L)	0.1	0.2
T-Cd (mg/L)	0.002	0.004
T-Cu (mg/L)	0.1	0.2
T-Hg (mg/L)	0.004	0.008
NH_3-N (mg/L)	20	40
T-Ni (mg/L)	0.2	0.4
T-NO_3-N (mg/L)	50	100
T-Pb (mg/L)	0.1	0.2

T-P (mg/L)	1.5	3.0
T-Zn (mg/L)	0.2	0.4
$T\text{-}Cl^-$ (mg/L)	500	1000

5. The Discharge of Effluent from a Final Discharge Point at Monitoring Program Stations ST-9 and ST-10, shall be demonstrated to be non-Acutely Lethal under the following test and as stipulated in Schedule I of the Licence:

   a. Acute Lethality of Effluents to Rainbow Trout (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13 Second Edition December 2000 (with May 2007 amendments).

6. All water collected prior to discharge from the Non-Contact Water diversions (Monitoring Stations ST-5 and ST-6) and East Dike Seepage (Monitoring Station ST-8) during Operations shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Allowable Grab Sample Concentration (mg/L)
TSS	15	30

7. Effluent from the Mine Site Bulk Fuel Storage Facility and other fuel containment facilities that are within proximity of the Stormwater Management Pond shall be directed to the Stormwater Management Pond.

8. The Discharge of Effluent to land from fuel containment facilities at the Baker Lake Bulk Fuel Storage Facility and Meadowbank Fuel Storage Facility (ST-37 through ST-40), shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (MAC)	Maximum Concentration of any single Grab sample
pH	6.0 to 9.5	6.0 to 9.5
Total Arsenic (mg/L)	**0.5	1.0
Total Copper (mg/L)	**0.3	0.6
Total Nickel (mg/L)	**0.5	1.0
Total Zinc (mg/L)	*0.5	1.0
Total Suspended Solids (mg/L)	*15	30
Ammonia (mg/L)	6.0	6.0
Benzene (µg/L)	370	370
Toluene (µg/L)	2	2
Ethylbenzene (µg/L)	90	90
Lead (mg/L)	0.1	0.1
Oil and Grease (mg/L)	5 and no visible sheen	5 and no visible sheen

* Environmental Guideline for Industrial Waste Discharges in the NWT, 2004

** Metal and Diamond Mininges Effluent Regulations (MMER)

9. The Licensee shall, under Part F, Item 8, discharge Effluent in such a manner as to minimize surface erosion at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any Water body, where direct flow into a Water body is not possible and no additional impacts are created, or as otherwise approved by the Board in writing.

10. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any Water body such that the quality, quantity or flow of Water is not impaired, or as otherwise approved by the Board in writing.

11. The Licensee shall confirm compliance with Effluent quality limits in Part F, Items 3, 4 and 8 prior to Discharge.

12. The Licensee shall provide at least thre~~en~~ (3~~10~~) days notice to the Inspector prior to any planned Discharges from any facilities. The notice shall include the estimated volume proposed for Discharge and the receiving location.

13. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.

14. The Licensee is authorized to dispose of and contain all-non-hazardous solid Wastes at the on-site Landfills in accordance with the approved Landfill Design and Management Plan, dated March 2013, or as otherwise approved by the Board in writing.

15. The Licensee shall direct all solid Waste generated at the Baker Lake Marshalling Facility to the approved Landfill at Meadowbank Mine site.

16. The Licensee shall remove from the Project site, all solid and liquid hazardous Wastes generated through the course of the Operation, for disposal at an approved hazardous waste disposal facility.

17. With the exception of petroleum hydrocarbon contaminated soils to be remediated as per the Landfarm Management Plan, t~~T~~he Licensee shall maintain records of all Waste backhauled and confirmation of proper disposal through the use of Waste manifest tracking systems and registration with the Government of Nunavut, Department of Environment.

18. The Licensee shall dispose of all petroleum hydrocarbon contaminated soils and operate the Landfarm in accordance with the approved Landfarm Design and Management Plan, dated February 2013. Water accumulating in the L~~l~~andfarm shall be contained within the Landfarm and not be discharged to the environment.

19. The Licensee shall dispose of tailings and operate the Tailings Storage Facility in accordance with the approved Mine Waste Rock and Tailings Management Plan (March 2017), Meadowbank Tailings Storage Facility Management Plan for Whale Tail Pit (January 2017) submitted as part of water licence application for the Whale Tail Pit Project ~~submitted~~ by

AEM to the NWB on July 8, 2016, and Guide to the Management of Tailings Facilities (Mining Association of Canada September 1998). The tailings solids fraction shall be permanently contained within the Tailings Storage Facility. ~~Licensee shall dispose of tailings and operate the Tailings Storage Facility in accordance with the approved Mine Waste Rock and Tailings Management Plan, dated March 2014, and *Guide to the Management of Tailings Facilities* (Mining Association of Canada~~

~~September 1998). The tailings solids fraction shall be permanently contained within the Tailings Storage Facility.~~

~~20.~~19. The Licensee shall incorporate Seepage management at Quarries using best management practices including ditches, diversions, sumps and berms where necessary.

~~21.~~20. The Licensee shall provide to the Board, at least thirty (30) days prior to any planned disposal of Waste in a facility operated by the Hamlet of Baker Lake, documented authorization from the Hamlet for the use of any waste disposal facility operated by the Hamlet.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications of Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

    a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
    b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
    c. Such Modifications are consistent with the NIRB Screening Determination;
    d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
    e. The Board has not rejected the proposed Modifications.

2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only with approval from the Board in writing.

3. Applications for modifications shall contain:

    a. A description of the facilities and/or works to be constructed;
    b. The proposed location of the structure(s);
    c. Identification of any potential impacts to the R~~r~~eceiving E~~e~~nvironment;
    d. A description of any monitoring required, including sampling locations, parameters measured, and frequencies of sampling;
    e. Schedule for construction;
    f. Drawings of Engineered Structures stamped by a Professional Engineer; and
    g. Proposed sediment and erosion control measures.

4. Where a proposed Modification is located outside the existing Project footprint, the Licensee must also confirm that the Modification is in conformity with the applicable land use plan and that it is not a "significant modification" as that term appears in section 145 and 146 of the *Nunavut Planning and Project Assessment Act*. For greater clarity, Modifications located

within the ~~p~~Project footprint are not deemed "significant modifications" under the *Nunavut Planning and Project Assessment Act*.

Commented [Katz10]: Reject the inclusion of the notion of project footprint? This is vague.

5.

The Licensee shall provide to the Board, within ninety (90) days of completion of the Modification, as-built plans and drawings of the Modifications referred to in this Part. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING

1. The Licensee shall implement and maintain the Emergency Response Plan, dated August 2013, and the Spill Contingency Plan, dated November 2013, as approved by the Board. The Licensee shall comply with the Plan and any changes deemed significant shall require the submission and subsequent approval of the Board in writing.

2. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the Project from entering Water.

3. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.

4. The Licensee shall perform weekly inspections of petroleum products storage and containment facilities, fuel tanks and connectors, for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request. More frequent inspections may be requested by an Inspector.

5. If the Licensee provides notification under Part J, Item 4, the Licensee shall submit to the Board, an Addendum to the Emergency Response Plan and the Spill Contingency Plan, detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.

6. The Licensee shall keep a copy of the Emergency Response Plan and the Spill Contingency Plan at each site of operation.

7. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste to prevent and contain spills.

8. If, during the period of this Licence an unauthorized discharge~~s~~ or forseeable unauthorized discharge~~s~~ of waste ~~and or Effluent occurs, or if such discharge is foreseeable, the Licensee shall:~~I- in excess of the Regulations and the thresholds set out in the Nunavut Spill Planning and Reporting Regulations, ~~and~~ the Licensee shall:

   a. Employ the Spill Contingency Plan;
   b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130, fax at (number) or by electronic mail and to the Inspector at (867) 975-4295 or by electronic mail;
   ~~b.~~c. Information that is reported in person or by telephone must also be reported in writing to an Inspector without delay; and
   ~~c.~~d. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

Commented [KG11]: Why delete Effluent?

9. The Licensee shall, in addition to Part H, Item 8, regardless of the quantity of release of a harmful substance, report to the NWT/NU Spill Line if the release is near or into a Water body.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

1. The Licensee shall comply with the Aquatic Effects Management Plan (AEMP~~), dated December 2012,)~~as approved by the Board. The AEMP shall include:

   a. Comprehensive R~~r~~eceiving E~~e~~nvironment monitoring to identify changes to the aquatic environment associated with mine activities;
   b. Linkage between monitoring results and A~~a~~daptive M~~m~~anagement response;
   c. Monitoring of lake productivity;
   d. Sampling and analysis plans; and
   e. Monitoring under Fisheries Authorizations, NWB Licence Compliance Monitoring, Metal and Diamond Mining Effluent Regulations (MDMER) Environmental Effects Monitoring, and Groundwater Monitoring.

2. The Licensee shall implement the Core Receiving Environmental Monitoring Program (CREMP), ~~dated December 2012,~~ as approved by the Board. The updated CREMP shall include all comments provided during the technical review of Application.

3. The Licensee shall implement the Water Quality and Flow Monitoring Plan~~, dated January 2015, ,~~as approved by the Board.

4. The Licensee shall install and maintain flow meters or other such devices, or implement suitable methods required for the measuring of Water use and Effluent discharge volumes, to be operated and maintained to the satisfaction of an Inspector.

5. The Licensee shall undertake the Monitoring Program provided in the Tables 1 and 2 of Schedule I. The Licensee shall establish the locations and GPS coordinates for all additional monitoring stations in consultation with an Inspector.

6. The Licensee shall establish the locations for the proposed compliance and internal monitoring locations as they relate to existing drainage courses beneath the Portage and Vault Waste Rock Storage Facilities and Tailing Storage Facility dikes to ensure potential seep locations are adequately identified in accordance with the Groundwater Monitoring Plan, ~~dated January 2014,~~ as approved by the Board.

7. The Licensee shall install and maintain signs that identify monitoring stations. The signs shall be posted in English, Inuktitut and French.

8. The Licensee shall measure and record the following on a Monthly basis in cubic metres or as otherwise stated:

   a. The volume of fresh Water obtained from Third Portage Lake;
   b. The volume of fresh Water obtained from Wally Lake;

c. The volume of fresh Water from the unnamed lake for purposes of explosives mixing;
d. The volume of reclaim water obtained from the Tailings Storage Facility for process water;
e. The volume of Effluent and fresh Water transferred to the pit lakes;
f. The flow during periods of discharge from the Landfarm, Landfills, Waste Rock Storage Facilities, Sewage Treatment Plant, Contact Water Collection System, and area Sumps collecting Contact Water;
g. The volume of water transferred from the Marshalling Area Bulk Fuel Storage Facility;
h. The volume of Sewage sludge removed from the Sewage Treatment Plant;
i. Quantity of mill tailings placed within the Tailings Storage Facility;
j. Tonnes of mineralized and un-mineralized waste rock stored; and
k. Tonnes of ore processed through the mill.

9. The Licensee shall undertake the Thermal Monitoring Program detailed in the Mine Waste Rock and Tailings Management Plan ~~(2014)~~ as approved by the Board.

10. The Licensee shall undertake a geotechnical inspection, to be carried out Aannually by a Geotechnical Engineer, between the months of July and September. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable and take into account all major earthworks, including:

a. Dewatering Dikes;
b. Stormwater Dikes;
c. Saddle Dams;
d. Pit walls;
e. Tailings Storage Facility;
f. Shoreline protection at the location of the Wally Lake and Portage Lake Outfall Diffusers;
g. Geotechnical instrumentation;
h. All Weather Private Access Road and site roads, in particular water course crossings;
i. Quarries;
j. Landfills;
k. Landfarm;
l. Bulk Fuel Storage Facilities at both the Meadowbank mine site and Baker Lake Marshalling area;
m. Attenuation Ponds;
n. Reclaim Pond; and
o. Sumps.

11. The Licensee shall submit to the Board as part of the Annual Report, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.

12. The Licensee shall submit to the Board as part of the Annual Report required under Part B, Item 2, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.

13. The Licensee shall monitor Seepage observations pursuant to Part I, Item 6 according to the following:

Characterization of seepage including: precise location; discharge rates and volumes; respective hazard(s) and consequences and prescribed mitigative measures	**Minimum Frequency of Observation**
Lake water Seepage Through Dewatering Dikes	Monthly
Seepage (of any kind) Through Central Dike	Monthly
Seepage and Runoff from the Landfill(s)	Quarterly
Subsurface Seepage and Surface Runoff from Waste Rock Piles	Quarterly
Seepage at Pit Wall and Pit Wall Freeze/Thaw and Permafrost Aggradation	Quarterly

14. The Licensee shall submit the results and interpretation of the Seepage monitoring required in Part I, Item 13 in the Annual Report required under Part B, Item 2.

15. The Licensee shall obtain a digital photographic record of all the watercourse crossings before, during, and after construction has been completed.

16. The Licensee shall maintain a Quality Assurance / Quality Control Plan, accepted by the Board that includes requirements for independent third party sampling and analysis. The QA/QC Plan shall be prepared and updated as needed in accordance with and in consultation with the accredited laboratory conducting the analyses. The Plan shall include a cover letter from the accredited laboratory confirming approval of the Plan for analyses to be performed under this Licence. This Plan shall be developed in accordance with current Standard Methods and the 1996 Quality Assurance (QA) and Quality Control (QC) Guidelines for Use by Class "A" (INAC).

17. The Licensee shall Aannually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.

18. All analyses shall be conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.

19. All compliance analyses shall be performed in an accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

20. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:

a. All data and information required by this Part and generated by the Monitoring Program in the Tables of Schedule I;
b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Parts D and F.

21. The NWB can modify the Monitoring Program as set out in Schedule I without a public hearing. Requests for changes to the Program should be forwarded to the NWB in writing, and should include the justification for the change.

22. ~~Additional monitoring may be imposed by the Inspector.~~

Commented [KG12]: Why is this deleted?

PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

~~1.~~ The Licensee shall notify the Board in writing, at least sixty (60) days prior to any intent to ~~achieve Recognized Closed Mine status.~~

Commented [KG13]: Why is this deleted?

~~2.~~1. The Licensee shall complete all P~~p~~rogressive R~~r~~eclamation work in accordance with the Interim Closure and Reclamation Plan ~~(2014)~~ referred to in this Part as approved by the Board.

~~3.2.~~The Licensee shall submit to the Board for approval at least twelve (12) months prior to the expected end of planned mining, a Final Closure and Reclamation Plan. The Final Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include:

a. Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut Environmental Guideline for Site Remediation;
b. Environmental Site Assessment plans in accordance Canadian Standards Association (CSA) criteria; and
c. An evaluation of the Human Health and Ecological Risk associated with C~~c~~losure options.

~~4.~~3. The Licensee shall notify the Board in writing, at least sixty (60) days prior to, or as soon as practically possible, any intent to enter into a Care and Maintenance Phase.

~~5.~~4. The Licensee shall provide the Board, within thirty (30) days of the Licensee providing notice of intent to enter into Care and Maintenance under Part J, Item 4, a Care and Maintenance Plan that details the Licensee's plans for maintaining compliance with the Terms and Conditions of the Licence.

6.5. The Licensee shall review the Plans referred to in this Part as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to the Plans should incorporate design changes and ~~adaptive engineering~~Adaptive Management required and implemented during Construction and on the basis of actual site conditions and monitoring results over the life of the Project.

7.6. The Licensee shall implement P~~p~~rogressive R~~r~~eclamation, including progressive covering of the tailings and if practicable re-vegetation.

SCHEDULES

Schedule A: Scope, Definitions, and Enforcement

In this Licence: **2AM-MEA1525**

"**Abandonment**" means the permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures;

"**Act**" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

"**Acid Rock Drainage (ARD)**" means the production of acidic leachate, seepage or drainage from underground workings, open pits, ore piles, waste rock, construction rock that can lead to the release of metals to groundwater or surface water during the life of the Project and after closure;

"**Acutely Lethal Effluent**" means effluent as defined in the *Metal and Diamond Mining Effluent Regulations* ~~SOR/2002-222 dated June 6, 2002 and amended on March 2, 2012~~;

Commented [Katz14]: This term is not used in the licence. Suggest that it be deleted.

"**Adaptive Management ~~Plan~~**" means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework ~~for mitigation measures to be implemented and actions~~to identify specific thresholds and associated management actions to be taken when specified thresholds are exceeded. Mitigation measures may include special studies, operational changes, revised or new water and waste management systems, structures and or facilities, or implementing mitigation activities to prevent, stabilize or reverse a change in environmental conditions or to otherwise protect the R~~r~~eceiving E~~e~~nvironme~~n~~t;~~:~~

Commented [KG15]: There is some uncertainty with this language. Is it not intended that Adaptive management will also apply when thresholds are threatened to be exceeded?

"**Addendum**" means the supplemental text that is added to a full plan or report, usually included at the end of the document and is not intended to require a full resubmission of the revised report. It may also be considered as an appendix or supplement;

"**All Weather ~~Private Private~~ Access Road**" means the ~~115 km.~~ all weather access road and associated water crossings between the Hamlet of Baker Lake and the Meadowbank Gold Project site as described in the ~~application dated, October 26, 2006 and as indicated in the document entitled~~ "*Tehek Access Road Construction, Meadowbank Gold Project*" ~~dated May 5, 2008, Nuna M&T Services and illustrated in the attached AS-Built Engineered Drawings~~;

"**Amendment**" ; means a change to any terms and conditions of this Licence through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence not considered as a M~~m~~odification ~~and for greater clarity, proceeding with Adaptive Management and or a New Adaptive Management Action shall not require an Amendment;;~~

"**Analyst**" means an Analyst designated by the Minister under section 85 (1) of the *Act*;

"**Annually**" means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;

"**Aquatic Effects ~~Management~~ Monitoring Program (AEMP)**" means an overarching "umbrella" program that conceptually provides an opportunity to integrate results of individual, but related, monitoring programs in accordance with the Licence;

"**Baker Lake Marshalling Facility**" means the facilities associated with the Meadowbank Project, located within the Hamlet of Baker Lake, that includes the barge unloading facilities, a lay-down, storage and marshalling area, a fuel tank farm, ammonium nitrate and explosive storage areas, and associated access roads~~, described in the Application filed with the NWB in August 2007 and Amendment Application for expansion of the fuel tank farm filed with the NWB on February 5, 2010;~~

"**Batch Concrete Plant**" means the plant used to mix cement, aggregate, and water to produce concrete for footings, foundations and floors during construction as described in the ~~March 2013 Water Licence Application document entitled~~ "*Pre-Development Batch Concrete Plant Description Agnico-Eagle Meadowbank Project*" ~~dated January 9, 2008~~;

Commented [Katz16]: This term is not used in the licence. Suggest that it be deleted.

"**Bay-Goose Dike**" means the structure designed to isolate a portion of Third Portage lake, referred to as "Goose Island Basin", to permit dewatering and mining of the Goose Island Pit and southern portion of Portage Pit as indicated in the document entitled "*Bay-Goose Dike Construction As-Built Report Meadowbank Gold Mine, Nunavut*", dated April 2013, and illustrated in the attached As-Built DWGs 4200-01 to 4200-06, , 4200-10, 42000-11A, 4200-11B, 4200-12 to 4200-23, 4200-30 to 4200-35, 4300-00 to 4300-32, 4300-43 to 4300-52, Golder Associates Project Number 09-1428-5007;

Commented [Katz17]: This term is not used in the licence. Suggest that it be deleted.

"**Biannual**" means, in the context of monitoring frequency, one sampling event occurring every six months with a minimum of one hundred eighty days between sampling events;

"**Board**" means the Nunavut Water Board established under Article 13 of the *Nunavut Land Claims Agreement* and under section 14 of the Act;

"**Canadian Council of the Minister of Environment (CCME)**" means the organizations of Canadian Ministers of Environment that sets guidelines for environmental protection across Canada such as the Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life;

"**Care and Maintenance**" in respect of a mine, means the status of the facility when the Licensee ceases production or C~~c~~ommercial O~~o~~peration temporarily for an undefined period of time;

"**Central Dike**" means the structure, designed to isolate the south cell portion of the Meadowbank Tailings Storage Facility for the purpose of retaining tailings as described in the approved plans and reviewed by the Independent Geotechnical Expert Review Panel.

~~**"Central Dike"** means the structure, designed to isolate the Tailings Storage Facility from Second Portage Lake for the purpose of retaining tailings as described in the Water Licence Application documents entitled "*Final Report – Detailed Design of Central Dike Meadowbank Gold Project*" dated March 16, 2007, Volumes 1,2 and 3 and as illustrated in DWGs 4000-7 and 4000-17, dated January 10, 2007, Golder Associates Project Number 06-1413-089;~~

"~~**Chief Administrative Officer**" means the Executive Director of the Nunavut Water Board;~~

"~~**Chief Executive Officer**" means the Chair or Chairperson of the Nunavut Water Board;~~

"**Closure**" means when an Operator ceases operations at a facility without the intent to resume

mining activities in the future;

"**Commercial Operation**" in respect of a mine, means an average rate of production that is equal to or greater than 25% of the design capacity of the mine over a period of ninety consecutive days;

"**Construction**" means any activities undertaken to construct or build any component of, or associated with, the development of the Meadowbank Gold Project, as described in the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted to the Board throughout the regulatory process;

"**Contact Water**" means any water that ~~may be physically or chemically affected by mining activities~~has interacted with mine facilities or mining activities, including all runoff and seepage from WRSF and o~~O~~re s~~S~~tockpiles~~;~~;

"**Contact Water Collection System**" means the system of trenches, sumps and attenuation ponds designed to manage water that may ~~be affected physically or chemically~~interact with any mine development activities including but not limited to ~~by mine~~ pre- development activities as described in the Water Licence Application document entitled "*2013 Water Management Report and Plan"* dated March 2014;

"**Core Receiving Environmental Monitoring Program or CREMP**" means a monitoring program designed to determine the short and long-term effects in the aquatic environment resulting from the Project, to evaluate the accuracy of impact predictions, to assess the effectiveness of planned impact mitigation measures and to identify additional impact mitigation measures to avert or reduce environmental effects ~~or Adaptive Management and which may be consolidated and streamlined with other plans in accordance with the Licence;~~

"**Dam Safety Guidelines**" means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG),* (2007) or subsequent approved editions;

"**Deleterious Substances**" means a substance as defined in section 34(1) of the *Fisheries Act;*

Commented [Katz18]: This term is not used in the licence. Suggest that it be deleted.

"**Deposit**" means the placement of waste rock, tailings or other solids materials on land or in water;

"**Discharge**" means the release of any water or waste to the R~~r~~eceiving E~~e~~nvironment;

"**Dissolved Metals**" means the suite of metals referred to in Group 2 of Table 1 – Monitoring Groups located in Schedule J of this Licence. Dissolved metals shall be analyzed on a filtered sample;

"**Domestic Waste**" means all solid waste generated form the accommodations, kitchen facilities and all other site facilities, excluding those hazardous wastes associated with the Meadowbank Gold Mine Project;

Commented [Katz19]: This term is not used in the licence. Suggest that it be deleted.

"**East Dewatering Dike (Second Portage Dewatering Dike)**" means the structure designed to isolate the a portion of the northwest arm of Second Portage Lake, for the purpose of dewatering

and development of the North Portage Open Pit, as indicated in the document "*East Dike Construction As-Built Report Meadowbank Gold Mine, Nunavut*" December 15, 2009, and

illustrated in the attached As-Built DWGs 2100-00 to 2100-6, 2100-10 to 2100-12, 2100-14 to 2100-17, 2100-24 to 2100-30, Golder Associates Project Numbers 07-1413-0074 and 09-1428-5007;

"**East Dike Seepage Discharge Diffuser**" means the facility designed to discharge and enhance mixing of East Dike seepage to the Second Portage Lake, as indicated in the document "*East Dike Seepage As-Built Report*" dated October 7, 2014, and illustrated in the attached As-Built DWGs EDS-01 and WD, Golder Associates Project Number 12-1221-0010-3100;

"**Effluent**" means treated or untreated liquid waste material that is discharged into the Rec~~i~~eiving E~~e~~nvironment from all site water management facilities;

"**Emulsion Plant (Explosives Mixing Facility)**" means the facility designed for storage of Ammonium Nitrate, detonators, and explosives; and designed for the mixing and storage of Ammonium Nitrate Fuel Oil (ANFO), as illustrated in the document entitled "*2AM-MEA Meadowbank Gold Water Licence Application Supplementary Information on Explosive Storage Facilities* " dated November 26, 2007, DWG 600-C-0130 Plant-site Infrastructure Emulsion Plant Location and Finish Grading – Plan, dated March 2007, Hatch Project Number 325174;

"**Engineer**" means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

~~"**Engineering Geologist**" means a professional geologist registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the investigation and interpretation of geological conditions for civil engineering purposes;~~]

"**Engineered Structure**" means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

"**Environmental Assessment**" means, for the purpose of this licence, the totality of the Nunavut Impact Review Board (NIRB) Public Registry as established under the authority of Article 12 of the NLCA, this includes everything that was submitted by the Licensee to the NIRB, the scope of which is consistent with the Water Licence Application;

"**Final Discharge Point**" in respect of an effluent, means ~~an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent (Metal Mining Effluent Regulations, SOR/2002-222, June, 6, 2002 and amended on March 2 2012);~~as defined in the *Metal and Diamond Mining Effluent Regulations;*

"**Fresh Water Intake Barge**" means the pre-packaged floating water pump barge fabricated and supplied by Chamco Industries Ltd. of Vancouver, for the purpose of supplying freshwater to the Meadowbank Project as illustrated in Appendix A of the Water Licence Application document entitled "*Meadowbank Gold Project Type A Water Licence Application*" dated August 2007,

DWG Numbers C1011158-21, C1011158-22, and C1011158-23, dated 27.06.05, Chamco Job No. 1011160ABS;

"**Geotechnical Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

"**Grab Sample**" means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

"**Greywater**" means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), excluding sewage;

"**Ground Water**" means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

"**Hazardous Waste**" means materials or contaminant which are categorized as dangerous goods under the *Transportation of Dangerous Good Act* (1992) and/or that is no longer used for their original purpose and is intended for recycling, treatment, disposal or storage;

"**High Water Mark**" means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. *Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities*);

"**ICP Metals Scan**" means for the purpose of the Licence elements detected using Inductively Coupled Plasma (ICP) mass spectrometer. Metal parameters should be consistent with baseline data previously collected and include any other metals of concern or interest;

Commented [Katz20]: This term is not used in the licence. Suggest that it be deleted.

"**Incinerator**" means the dual chamber, high temperature facility designed with the capacity to service the camp as described in the Water Licence Application document entitled "*Incineration Waste Management Plan, Meadowbank Gold Project*" dated July 2014 and the Hatch Specification dated April, 2008 Inquiry MDB-S-M-268, REV.OB;

"**Independent Geotechnical Expert Review Panel**" means the panel of geotechnical specialists established by AEM to review the designs and performance of the dikes and dams;

"Inspector" means an Inspector designated by the Minister under section 85 (1) of the Act;

"**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 ~~and which may be consolidated and streamlined with other plans in accordance with the Licence~~;

"**Landfill (Construction and Operations Landfill)**" means the facility to be constructed and operated until the end of the mine life and designed to contain non-salvageable, non-organic, nonhazardous, solid wastes from mining activities that cannot be incinerated, as described in the in the Water Licence Application document entitled "*Landfill Design and Management Plan*" March 2013;

"**Landfill #2 (Demolition Landfill)**" means the facility to be developed on top of the Portage Waste Rock Storage Facility later in mine life as described in the Water Licence Application document entitled "*Landfill Design and Management Plan*" March 2013, and containing DWG 3, Golder Associate's Project Number 06-1413-089;

"**Landfarm**" means the lined, engineered facility designed to treat petroleum hydrocarbon contaminated snow and soil that may be generated during mining activities using bioremediation as described in the Water Licence Application document entitled "*Landfarm Design and Management Plan Meadowbank Gold Project*" February 2013, and containing DWGs 3-1 an 3-2;

"**Licence**" means this Type "A" Water Licence 2AM-MEA1525, issued by the Nunavut Water Board in accordance with the *Act*, to Agnico-Eagle Mines Ltd. (AEM) for the Meadowbank Gold Mine Project;

"**Licensee**" means to whom the Licence 2AM-MEA1525 is issued to or assigned;

"**Marshalling Area Bulk Fuel Storage Facility**" means the facility consisting of six (6) 10 million L diesel fuel storage tanks and twenty (20) 100,000L fuel storage tank for Jet-A, for a total fuel capacity of sixty two (62) million litres and all associated infrastructure, as described in the Water Licence Application document entitled "*Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan*" dated June 2014, indicated in the documents entitled "*Baker Lake Fuel Storage Installations Final Report Phase 2-B*" December 7, 2009 and illustrated in the As-Built DWGs VD2259-BKL-001 to VD2259-BKL-002, , Stavibel Engineering Project Number VD2259-2, and "*Baker Lake Fuel Storage Installations Final Report Phase 3*" January 2011, and illustrated in the attached As-Built DWGs 740-C-0123, 740-C-0124 and 740-C-0125, Stavibel Engineering Project Number MEAD-1-400;

"**Maximum Average Concentration**" means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

"**Maximum Monthly Mean**" means the average concentration of all samples collected over a thirty day period from the identical sampling location;

"**Meadowbank Mine Site Bulk Fuel Storage Facility**" means the facility consisting of one (1) above ground 5.6 million litre diesel fuel storage tank and all associated infrastructure as described in the Water Licence Application document entitled "*Meadowbank Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan*" dated June 2014, as indicated in the

document entitled "*Meadowbank Fuel Storage Installations Final Report*" April 2009, and illustrated in the attached As-Built DWGs VDB2259-MDB-001, VDB2259-MDB-002, VDB2259-MDB-003, Stavibel Engineering Project Number VD2259-1;

"**Metal Leaching**" means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

"**Mine Water**" means any water, including groundwater, that is pumped or flows out of any underground workings or open pit;

"Minister" means the Minister of Crown-Indigenous Relations and Northern Affairs (CIRNA, formerly the Minister of Indigenous and Northern Affairs Canada);~~"**Minister**" means the Minister of Aboriginal Affairs and Northern Development Canada (AANDC);~~

"**Modification**" means an alteration to a physical work that introduces a new structure or revises or eliminates an existing structure and does not alter the purpose or function of the work~~, but does not include Adaptive Management or a New Adaptive Management Action;~~

"**Monitoring Program**" means the program to collect data on surface water and Ground Water quality to assess impacts to the environment of an appurtenant undertaking;

"**Monthly**" means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty one (21) days between sampling events;

"**New Adaptive Management Action**" means an Adaptive Management action that is not included in an approved plan but is recommended by the Licensee or others to prevent, stabilize, or reverse a change in environmental conditions or to otherwise protect the R~~r~~eceiving E~~e~~nvironment;

"**Non-Contact Water**" means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas;

"**Nunavut ~~Land Claims~~ Agreement**" ~~(~~NLCA~~)~~ means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*," including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"**Operations**" means the set of activities associated with mining, ore processing and recovery of gold; excluding ~~c~~Construction, Care and Maintenance, and decommissioning and ~~permanent~~ Closure activities;

"**Operator**" means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

"**Portage Attenuation Pond**" means the facility located in the basin at the northwest end of the northwest arm of Second Portage Lake where mine site contact water will be discharged, and where water in the pond will be reclaimed to satisfy mill process water make up requirements with any excess water being treated if required and discharged to Third Portage Lake as

Commented [Katz21]: This term is not used in the licence. Suggest that it be deleted.

Commented [Katz22]: This term is not used in the licence. Suggest that it be deleted.

Commented [KG23]: Not used in the document.

described in the Water Licence Application document entitled "*2013 Water Management Report and Plan*" dated March 2014;

"**Portage Waste Rock Storage Facility**" means the facility designed to store waste rock from the Portage open pit as described in the Water Licence Application document entitled "*Updated Mine Waste Rock and Tailings Management Plan*" dated March 2014, and illustrated in the DWGs 2-1, 3-1 to 3-7, 6-1, 9-1 and 9-2;

"**Pre-development**" means the phase of the Project that occurs before the start of construction to allow for the development of a stockpile of broken rock-fill material that will be required to construct the outer shells of the East Dewatering Dike;

"**Progressive Reclamation**" means actions that can be taken during ~~mining~~ Oo~~o~~perations before permanent closure, to take advantage of cost and operating efficiencies by using the resources available from mine operations to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the reclamation objectives and goals;

"**Project**" means the Meadowbank Gold Project (Meadowbank Gold Mine) as outlined in the Final Environmental Impact Statement and supplemental information submitted by Cumberland Resources Limited to the Nunavut Impact Review Board (NIRB) as well as the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by Agnico-Eagle Mines Ltd. to the Nunavut Water Board throughout the regulatory process. It comprises an open pit mine, an all-weather private access road from Baker Lake to the mine site, and a marshalling facility in the Hamlet of Baker Lake;

"**Quarry or Quarries**" means the areas of surface excavation for extracting rock material for use as construction materials along the All Weather Private Access Road, as identified in the document entitled "*Meadowbank Gold Project 2007 Annual Report All-Weather Private Access Road*";

"**Quality Assurance / Quality Control (QA/QC)**" Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

"**Quarterly**" means, in the context of monitoring frequency, one sampling event occurring every three months with a minimum of ninety days between sampling events;

"**Reclamation**" means ~~the process of returning the mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities~~ activities which facilitate the return of areas affected by the Project to a state as described in the Interim Closure and Reclamation Plan or Final Closure Plan;

"**Receiving Environment**" means both the aquatic and terrestrial environments that receive any deposit or discharge ~~resulting from the~~ of ~~w~~Waste including Effluent, seepage or Contact Water from the Project;

"Reclaim Pond" means the facility located within the Tailings Storage Facility, designed to contain process (tailings related) water, and where water in the pond will be used to satisfy mill process water make up requirements as described in the Water Licence Application document entitled "*2013 Water Management Report and Plan*" dated March 2014;

~~"**Reclamation**" means the process of returning the mine site and affected areas to viable and,~~

~~wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment~~

~~and with human activities~~;

~~"**Recognized Closed Mine**" means a recognized closed mine as defined by section (1) of the *Metal Mining Effluent Regulations* SOR/2002-222 dated June 6, 2002 and amended on March 2, 2012;~~

"**Regulations**" means the *Nunavut Waters Regulations sor 2013/669 18th April, 2013*;

"**Rock Storage Facility – Interim Till Plug**" means the structure designed and constructed as a zoned earth fill structure intended to block seepage from the Waste Rock Storage Facility to go into NP2 Lake and facilitate seepage collection on the upstream side, as described in the Water Licence Application document entitled "*Appendix E – AANDC Inspectors Direction and AEM's Response*" dated November 20, 2013, as indicated in the "*Construction Summary Report Rock Storage Facility – Interim Till Plug*" dated October 30, 2013, and as illustrated in As-Built DWGs 1, 2 Waste Dump Temporary Till Plug As-Built;

"**Saddle Dam**" means the structures located around the Tailings Storage Facility including the North Saddle Dam and the South Saddle Dam where the South Saddle Dam is designed as a permanent tailings retaining structure and the North Saddle Dam is to act as a berm, as indicated in the document "*Construction Report Tailings Storage Facility Meadowbank Gold Project Nunavut*" Agnico-Eagle Mines Ltd. with collaboration of Golder Associates Ltd. June 15, 2013, and illustrated in the attached documents Saddle Dam 1 – As Built Drawings and Saddle Dam 2 – As Built Drawings, DWGs 1/1, 1/2 and 2/2 As-Built 2010;

"**Seepage**" means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged through open pits, runoff from waste rock storage facilities, ore stockpile areas, Qquarries, landfill or landfarm areas;

"**Sewage**" means all toilet wastes and greywater;

"**Sewage Treatment Plant**" means the rotary biological contactor sewage treatment plant described in the Water Licence Application document entitled "*Operation & Maintenance Manual Sewage Treatment, Meadowbank Gold Project*" April 2013, and the NORDIKeau Inc. Technical Support Section 2 N/Ref.: 50255, dated June 30, 2010;

"**Short Term Maximum**" means the maximum concentration of all samples collected over a 24 hour period or less taken from the identical sampling location;

~~"**Soil Quality Remediation Objectives (SQROs)**" means the numerical concentration established as target value for soil quality remediation for contaminated sites as determined with guidance provided by the *Canadian Council of Ministers of the Environment (CCME)*.~~**Site Specific Water Quality Objective (SSWQO) means a numerical concentration or narrative statement which has been established for specified waters;**

"**South Camp Dike**" means the dike that encloses the Goose Island area along with the Bay Zone Dewatering Dike, Goose Island Dewatering Dike, and nearby land, such that it can be isolated from Third Portage Lake as indicated in the document entitled "*South Camp Dike*

Construction Summary Report Meadowbank Gold Project, Nunavut" March 2012, and illustrated

in the attached As-Built DWGs 4300-01, 4300-02 and Figures 1-4, Golder Associate's Project Number 00-1425-0828/9800;

"**Stormwater Dike**" means the structure designed to isolate the Portage Attenuation Pond from tailings as indicated in the document entitled "*Construction Report Tailings Storage Facility Meadowbank Gold Project Nunavut*" dated June 15, 2013, Agnico-Eagle Mines Ltd. with collaboration of Golder Associates Ltd., and illustrated in the attached document Stormwater Dike – As-Built Drawings 2010;

"**Stormwater Management Pond**" means the facility that incorporates the existing Tear Drop Lake designed with impervious walls to contain treated sewage and contact water as described in the Water Licence Application document entitled "*2013 Water Management Report and Plan*" dated March 2014;

"**Sump**" means a structure or depression that collects, ~~controls, and filters liquid waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid waste~~ retains or transfers water or liquid waste before it is released to the Receiving Environment or Project infrastructure;

"**Tailings Storage Facility**" means the facility designed to permanently contain the solid fraction of the mill tailings as described in the approved Mine Waste Rock and Tailings Management Plan. The Facility includes structures and future facilities reviewed by the Independent Geotechnical Expert Review Panel and described in the approved Mine Waste Rock and Tailings Management Plan.~~"**Tailings Storage Facility**" means the facility designed to permanently contain the solid fraction of the mill tailings, located in the northwest arm of the partially dewatered Second Portage Lake as described in the Water Licence Application document entitled "*Updated Mine Waste Rock and Tailings Management Plan*" dated March 2014, as indicated in the document entitled "*Construction Report Tailings Storage Facility Meadowbank Gold Project Nunavut*" dated June 15, 2013, and illustrated in the attached As-Built Engineering Drawings, Golder Associates Project Number 09-1428-5007 (2000). The Facility includes the Reclaim Pond, the Central Dike, Saddle Dams, and the Stormwater Dike;~~

"**Third Portage Lake Outfall Diffuser**" means the effluent pipe located in low value fish habitat within Third Portage Lake, designed to discharge and enhance mixing of effluent from the Portage Attenuation Pond in the R~~r~~eceiving E~~e~~nvironment as illustrated in As-Built Drawing, DWG 1/1, dated June 26, 2013;

~~"**Traditional Knowledge**" means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;~~

"**Total Metals**" means the suite of metals referred to in Group 2 of Table 1 – Monitoring Groups located in Schedule I of this Licence. Total metals shall be analyzed on an un-filtered sample;

"**Use**" means use as defined in section 4 of the Act;

"**Vault Attenuation Pond**" means the facility located in the Vault mining area where contact

water including pit water will be discharged and treated, if required, prior to final discharge to Wally Lake as described in the Water Licence Application document entitled "*2013 Water Management Report and Plan*" dated March 2014;

"**Vault Dewatering Dike**" means the structure designed to isolate Vault Lake from Wally Lake, for the purpose of dewatering and development of the Vault Open Pit and allow for storage of effluent in the Vault Attenuation Pond as indicated in the document entitled "*Vault Dike Construction Summary Report Meadowbank Gold Project*" dated July 29, 2013, and illustrated in the attached document Vault Dike As-Built Drawings, DWG 4GDD-0002-00, October 22, 2012, SNC Lavalin Project Number 610548;

"**Vault Haul Road Crossing**" means the crossing located at the outlet of Turn Lake to Drill Tail Lake along the road that connects the Portage mining area to the Vault mining area, as described in the document entitled: "*Haul Road from Meadowbank to the Vault Deposit*" dated December 4, 2009, and illustrated in As-Built DWG's VD2415-01-C103 and VD2415-01-C104, November 27, 2009, Stavibel Engineering's Project Number VD2415-001;

"**Vault Waste Rock Storage Facility**" means the facility designed to store waste rock from the Vault open pit as described in the Water Licence Application document entitled "*Updated Mine Waste Rock and Tailings Management Plan*" dated March 2014, and illustrated in DWGs 2-1, 3-1, 3-3 to 3-7, 9-1 and 9-3;

"**Wally Lake Outfall Diffuser**" means the effluent pipe located in low value fish habitat within Wally Lake, designed to discharge and enhance mixing of effluent from the Vault Attenuation Pond in the R~~r~~eceiving E~~e~~nvironment as illustrated in As-Built Drawing, DWG 1/1, dated June 26, 2013;

"**Waste**" means waste as defined in section 4 of the Act;

"**Waste Rock**" means all ~~unprocessed~~ rock materials that are or were produced as a result of mining operations and have no current economic value;

"**Waste Water**" means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

"**Water**" means water as defined in section 4 of the Act;

"**Water Supply Facilities**" means the facilities designated for the supply of water including the Fresh Water Intake Barge at Third Portage Lake, the Reclaim Barge, the Wally Lake Fresh Water Intake and the Emulsion Plant fresh Water intake."~~**Water Supply Facilities**" means the facilities designated for the supply of water including the Fresh Water Intake Barge at Third Portage Lake, the Reclaim Barge, and the Emulsion Plant fresh Water intake;~~

"**Waste Disposal Facilities**" means all facilities designated for the disposal of waste including: the mine site Sewage Treatment Plant, Landfill, Landfarm, Tailings Storage Facility, Portage Waste Rock Storage Facility, Vault Waste Rock Storage Facility, Portage Attenuation Pond and Vault Attenuation Pond;

"**Water Licence Application**" for the purposes of this Licence includes the totality of the NWB and NIRB Public Registries established as a result of the filing of the application dated August 2014, including Supporting Documents, and Technical Meeting Information Supplement

documents;

"**Weekly**" means, in the context of monitoring frequency, one sampling event occurring every 7 days with a minimum of 5 days between sampling events.

"**West Channel Dike**" means the structure designed to be located in the western outlet channel between Third Portage Lake and Second Portage Lake to allow for dewatering of the northwest arm of Second Portage Lake as indicated in the document entitled "*West Channel Dike Construction As-Built Report - Meadowbank Gold Project, Nunavut*" dated December 16, 2009, and illustrated in the attached As-Built DWGs 2100-22 and 2100-23, Golder Associate's Project Numbers 07-1413-00742 and 09-1428-5007;

"**West Diversion Ditch Interception Sump**" means the structure designed to provide an area of capture, retention and decantation of the freshet water flow expected in the West Diversion Ditch located around the northern area of the North Cell of the Tailings Storage Facility to keep freshet surface drainage from contacting the Waste Rock Storage Facility and the Tailings Storage Facility as described in the Water Licence Application document entitled "*2013 Water Management Report and Plan*" dated March 2014, as indicated in the "*West Diversion Ditch – Interception Sump Phase 1 Construction Summary Report*" dated April 2015, and illustrated in As-Build DWG 1 – Interception Sump Phase 1;

"**Whale Tail Haul Road**" means the 64.1 km. haul road and associated water crossings between the Whale Tail Pit Project site and the Meadowbank Mine site as described in the Type "A" 2AM-WTP---- Water Licence Application document entitled "Whale Tail Pit Haul Road Management Plan" dated June 2016;

"**Whale Tail Pit**" means the satellite deposit located on the Amaruq Exploration property approximately 150 km north of Hamlet of Baker Lake and 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut that the Licensee will mine as an open pit;

Commented [Katz24]: Delete reference to Amaruq Exploration Property

"**Whale Tail Pit Project**" means the Whale Tail Pit Project Proposal as outlined in the Final Environmental Impact Statement and supplemental information submitted by AEM to the Nunavut Impact Review Board (NIRB) as well as the associated Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by AEM to the NWB throughout the 2016-2018 and 2018-2020 regulatory process.

Schedule B: General Conditions

The Annual Report referred to in Part B, Item 2, shall include:

CONSTRUCTION

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

WATER

2.Monthly and annual volume of fresh Water obtained from ~~Third Portage Lake.~~
~~3.~~2. ~~Monthly and annual volume of fresh Water obtained from Wally Lake~~water sources.
~~4.~~3. Results of lake level monitoring conducted under the protocol developed as per Part D Item 5.
~~5.~~4. Summary of reporting results for the Water Balance and Water Quality model and any calibrations as required in Part E Items 7-9..
~~6.~~5. The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility.

WASTE

~~7.6.~~ A summary of the geochemical ~~Geochemical~~ monitoring results including:
   a. Operational acid/base accounting and paste pH test work used for waste rock designation (PAG and NPAG rock);
   b. As-built volumes of waste rock used in construction and sent to the Waste Rock Storage Facilities with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal ~~toxicity~~content;
   c. All monitoring data with respect to geochemical analyses on site and related to roads, Qquarries, and the All Weather Private Access Road;
   d.~~Leaching observations and tests on pit slope and dike exposure;~~
   ~~e.~~d. Any geochemical outcomes or observations that could imply or lead to ~~environmental impact~~greater than predicted impacts to the Receiving Environment;

~~f.~~e. Geochemical data associated with tailings solids, tailings supernatant, cyanide leach residue, and bleed from the cyanide destruction process including an interpretation of the data; and

~~g.~~f. Results related to the road Qquarries and the All Weather Private Access Road.

~~8.~~7. Volumes of waste rock used in construction and placed in the Rock Storage Facilities.

~~9.~~8. An update on the remaining capacity of the Tailings Storage Facility.

~~10.~~9. Summary of quantities and analysis of seepage and runoff monitoring from the Landfills, Waste Rock Storage Facilities and Central Dike.

~~11.~~10. A summary report of all general waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal.

~~12.~~11. Report of Incinerator test results including the materials burned and the efficiency of the Incinerator ~~as they relate to water and the deposit of waste into water~~.

SPILLS

~~13.~~12. A list and description of all unauthorized discharges in excess of the thresholds set out in the Nunavut Spill Planning and Reporting Regulations including volumes, spill report line identification number and summaries of follow-up action taken.

MODIFICATIONS

~~14.~~13. A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities.

MONITORING

~~15.~~14. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.

~~16.~~15. A summary of the~~The~~ results of monitoring related to the Aquatic Effects Monitoring Program (AEMP) including:

a. Core Receiving Environment Monitoring Program (CREMP);
b. Metal and Diamond Mining Effluent Regulation (MMER) Monitoring;
c. Mine site Water Quality and Flow Monitoring (and evaluation of NP-2);
d. Visual AWAR water quality monitoring;
e. Blast Monitoring; and
f. Groundwater Monitoring.

CLOSURE

~~17.~~A summary of any ~~progressive closure and reclamation work~~ Progressive Reclamation undertaken including photographic records of site conditions before and after completion of operations, and an outline of any Progressive Reclamation planned ~~work anticipated~~ for the next year~~, including any changes to implementation and scheduling.~~

~~18. A summary of on-going field trials to determine effective capping thickness for the Tailings Storage Facility and Waste Rock Storage Facilities for the purpose of long term environmental protection.~~

~~19.~~16. An updated estimate of the current restoration liability ~~based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking~~.

Commented [KG25]: What does "restoration" mean in this context?

PLANS/REPORTS/STUDIES

~~20.~~17. A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.

~~21.~~ Where applicable, ~~revisions as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.~~

~~22.~~18. ~~An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence.~~ ~~A a~~ summary of any Plans in English and Inuktitut that were revised over the past year

GENERAL

~~23.~~19. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

OTHER

~~24.~~20. A summary of public consultation and participation with local organizations and the residents of the nearby communities on ~~w~~Water and ~~w~~Waste related matters, including a schedule of upcoming community events and information sessions.

~~25.~~21. Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.

Schedule D: Conditions Applying to Construction

1. The Construction Summary Report referred to in Part D Item 14 shall include:

a All final design and construction drawings shall be stamped and signed by a Professional Engineer.
b A summary of construction activities including photographic records before, during and after construction;
c As-built drawings (or piping and instrumentation diagrams where applicable) for Waste Disposal Facilities and Water Supply Facilities:
d Documentation of field decisions that deviate from original plans and any data used to support these decisions;
e Discussion of mitigation measures implemented during construction and effectiveness;
f Monitoring undertaken in accordance with Part D;
g Blast vibration monitoring for quarrying activities carried out in close proximity to fish bearing waters;
h Monitoring for sediment release from construction areas; and
i Monitoring and reporting on use of water to manage dust emissions from crushing and construction activity.

Schedule I: Conditions Applying to General and Aquatic Effects Monitoring

TABLE 1 – MONITORING GROUP

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia nitrogen, total metals (aluminum, arsenic, barium, cadmium, chloride, chromium, copper, fluoride, iron, lead, manganese, mercury, molybdenum, nickel, nitrite, nitrate, selenium, silver, thallium, zinc) sulphate, total dissolved solids (TDS), TSS, total cyanide. If CN total is detect in an analysis result; further analysis of CN Free and CN WAD will be triggered.
2	Total and Dissolved M~~m~~etals: aluminum, antimony, arsenic, boron, barium, beryllium, cadmium, copper, chromium, iron, lithium, manganese, mercury, molybdenum, nickel, lead, selenium, tin, strontium, titanium, thallium, uranium, vanadium and zinc. Nutrients: Ammonia-nitrogen, total kjeldahl nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate, total phosphorous, total organic carbon, total dissolved organic carbon and reactive silica. Conventional Parameters: bicarbonate alkalinity, chloride, carbonate alkalinity, conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, and TSS, turbidity. Total cyanide and free cyanide. If CN total is detected above 0.05 mg/L in an analysis result for monitoring station in R~~r~~eceiving E~~e~~nvironment; further analysis of CN WAD will be
3	MMER parameters (total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH), sulphate, turbidity and total aluminum.
4	Total Arsenic, Total Copper, Total Lead, Total Nickel, TSS, Benzene, Toluene, Ethylbenzene, Xylene, TPH, pH.
MMER	Total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH, effluent volumes and flow rate of discharge, acute toxicity (Rainbow Trout and Daphnia magna) and environmental effects monitoring (EEM).
Full Suite	Group 2, Total Petroleum Hydrocarbons, Turbidity. Acutely Lethality tests (Rainbow Trout and Daphnia magna) for discharge only.

TABLE 2 – MONITORING PROGRAM

Station	Description	Phase	Monitoring Parameters	Frequency
Mine Site				
ST-DC-1 to TBD	Monitoring stations during Dike Construction as defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 5	Construction	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D, Item 5	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 5
ST-DD-1 to TBD	Monitoring Stations during Dike Dewatering as defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D, Item 5	Construction	As defined in Final water Quality Monitoring and management Plan for Dike Construction and Dewatering referred to in Part D, tem 5	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in part D, Item 5
ST-1	Water Intake for camp, mill and re-flooding	Water Intake for camp, mill and re-flooding	Volume (m^3)	Monthly
ST-1W	Water Intake for re-flooding	Water Intake for re-flooding	Volume (m^3)	Monthly
ST-3	Water Intake for Emulsion Plant	Late operations, closure	Volume (m^3)	Monthly
ST-4	Water Reclaimed from Tailings Storage Facility	Late operations, closure	Volume (m^3)	Monthly
ST-5	Portage Area (east) diversion ditch	Late operations, closure	Group 3	Monthly during open water

ST-6	Portage Area (west) diversion ditch	Late operations, closure	Group 3	Monthly during open water
ST-8	East Dike Seepage Discharge	Late operations, closure	Group 3	Monthly
ST-9	Portage Attenuation Pond prior to discharge through Third Portage Lake Outfall Diffuser	Early operations	Full Suite	Prior to discharge and Weekly during discharge
			Volume (m^3)	Daily during periods of discharge
			Acute Lethality	Once prior to discharge and Monthly thereafter
ST-10	Vault Attenuation Pond prior to discharge through Wally Lake Outfall Diffuser	Late operations	Full Suite	Prior to discharge and Weekly during discharge
			Volume (m^3)	Daily during periods of discharge
			Acute Lethality	Once prior to discharge and Monthly thereafter
ST-11	Tailings Storage Facility	Post closure	Group 1	Annually during open water
ST-12	Portage / Goose Pit Lake	Post closure	Full Suite	Annually during open water
ST-13	Vault Pit Lake	Post closure	Full Suite	Annually during open water
ST-14 (THE-11)	Discharge to the TSF from Landfarm sump at mine site	Late operations, closure	Group 4	Prior to discharge
			Volume (m^3)	Daily during periods of discharge
ST-16	Portage Rock Storage Facility	Late operations	Group 1	Monthly during open water
		Closure	Group 1	Bi-annually during open water
ST-17**	North Portage Pit Sump	Operations	Group 1	Monthly during open water
			Volume (m^3)	Daily during periods of discharge

	Portage Pit Lake	Late operations	Group 2	Monthly during open water
		Closure	Group 2	Bi-annually during open water
ST-19**	South Portage Pit Sump	Early operations	Group 1	Monthly during open water
			Volume (m^3)	Daily during periods of discharge
	Portage Pit Lake	Late operations	Group 2	Monthly during open water
ST-20	Goose Island Pit Sump	Early operations	Group 1	Monthly during open water
			Volume (m^3)	Daily during periods of discharge
	Goose Island Pit Lake	Late operations	Group 2	Monthly during open water
		Closure	Group 2	Bi-annually during open water
ST-21	Tailings Reclaim Pond	Late operations	Group 1	Monthly during open water
ST-22	Tailings Storage Facility	Closure (drainage runoff)	Group 2	Bi-annually during open water
ST-23	Vault Pit Sump	Late operations	Group 2	Monthly during open water
			Volume (m^3)	Daily during periods of discharge
ST-24	Vault Rock Storage Facility	Late operations	Group 1	Monthly during open water
		Closure	Group 1	Bi-annually during open water
ST-25	Vault Attenuation Pond	Late operations	Group 1	Monthly during open water
ST-26	Vault Pit Lake	Closure	Group 2	Bi-annually during open water
ST-S-1 to TBD	Seeps (to be determined)	Late operations, Closure	Group 1	Monthly or as found
ST-GW-1 to TBD	Groundwater wells (to be determined) as required under	Early operations, Late operations, Closure	Group 2	Annually

	Groundwater Monitoring Plan referred to in Part I Item 6			
ST-AEMP-1 to TBD	Receiving AEMP and CREMP	Late operations, Closure	Group 2	A minimum of 5 events per year at CREMP stations. Ideally 3 during open water and 2 during winter (through ice). TPL assay, NP2, NP1 and Dogleg ponds to be monitored monthly during open water (July, Aug, and Sept.). Monthly field limnology data collected throughout year at smaller number of locations (through ice).
ST-MMER-1 to TBD	Vault, East Dike and Portage effluent outfall	Late operations	MMER	Weekly during open water
ST-37	Secondary containment sump at the Bulk Fuel Storage Facility at Meadowbank	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent
ST-38	Secondary containment sump at the Bulk fuel Storage Facility in Baker Lake – Jet-A containment	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent
ST-40 (MEA-4)	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent
Monitoring Program Stations never constructed or associated with the Construction Phase of Project with Monitoring not required and no longer conducted at Operations and Closure phase.				

ST-2	*Reclaim Water Intake*	*Construction, Early operations, Late operations, Closure*	*Volume (m^3)*	*Monthly*
ST-7	*Vault Area diversion ditch*	*Early operations, Late operations, Closure*	*Group 5, Aluminum*	*Monthly during open water*
ST-5	*Vault non-contact diversion ditch*	*Early operations, Late operations, Closure*	*Group 5, Aluminum*	*Monthly during open water*
ST-18	*Portage Attenuation Pond*	*Early operations*	*Group 2*	*Monthly during open water*
ST-27 and ST-28 (TEH-1 & TEH-2)	*Water Intake for camp and concrete batch plant purposes*	*Pre-development, Construction*	*Volume for each purpose (m3)*	*Monthly*
ST-29 and ST-30 (TEH-3 & TEH-4)	*Water, if any, accumulated in north and south predevelopment zones*	*Pre-development*	*pH, Turbidity*	*Weekly*
			Weekly Metals using an ICP-Metals 36 element scan, Total Ammonia, Nitrate, Sulphate	*Monthly*
ST-31 and ST-32 (TEH-5 & TEH-6)	*Water pumped from north and south predevelopment zones to Contact Water Collection System*	*Pre-development*	*pH, Turbidity*	*Daily during periods of pumping*
ST-33 and ST-34 (TEH-7 & TEH-8)	*Contact Water Collection System Lakes #1 and #2*	*Pre-development, Construction*	*pH, Turbidity, Metals using an ICP-Metals 36 element scan, Total Ammonia, Nitrate, Sulphate*	*Weekly during periods of pumping from the pre-development pits*
ST-35 (THE-9)	*Discharge from Lake #1 of Contact Water Collection System (Stormwater Management Pond) to Second Portage Lake*	*Pre-development, Construction*	*pH, TSS, T-Al, BOD5, Fecal Coliforms, T-As, T-Cu, T-CN, T Pb, T-Ni, T-Zn, T-Radium$_{226}$*	*Once prior to discharge and Weekly during periods of discharge*
			Acute Lethality	*Once prior to discharge and Monthly thereafter*

	In addition, if discharge from Bulk Fuel Storage Facility directed to lake #1		*Volume (m^3)*	*Daily during periods of discharge*
			Benzene, Lead, Toluene, Ethylbenzene, Oil & Grease	*Once prior to discharge and Weekly during periods of discharge*
ST-36 (THE-10)	*Discharge from Lake #2 of Contact Water Collection System to Second Portage Lake*	*Pre-development, Construction*	*pH, TSS, T-As, TCu, T-CN, T-Pb, T-Ni, T-Zn, T-Radium$_{226}$*	*Once prior to discharge and Weekly during periods of discharge*
			Acute Lethality	*Once prior to discharge and Monthly thereafter*
			Volume (m^3)	*Daily during periods of discharge*
Monitoring Program Stations relics of Type "B" Water Licence 8BC-MEA0709 and not applicable, replaced by Monitoring Program Stations ST-37 and ST-38 described below.				
ST-37 (MEA-1)	*Water sample location at Baker Lake in close proximity to the construction facilities*	*Pre-development, Construction, Early operation, Late operation, Closure*	*Group 6*	*Annually*
ST-38 (MEA-2)	*East Contact Water Pond located in the south-east corner of the lay-down area*	*Pre-development, Construction, Early operation, Late operation, Closure*	*Group 6 & 7*	*Prior to discharge or transfer of Effluent*
			Volume (m^3)	*Monthly*
ST-39 (MEA-3)	*West Contact Collection Pond located in the south-west corner of the lay-down area*	*Pre-development, Construction, Early operation, Late operation, Closure*	*Group 6 & 7*	*Prior to discharge or transfer of Effluent*
			Volume (m^3)	*Monthly*

**** ST-17 and ST-19 in Closure will become one sampling point**

Appendix D. Proposed changes to Water Licence NO: 2BB-MEA1828

NTI – P.O. Box 1269, Cambridge Bay, Nunavut, X0B 0C0, Tel; (867) 983-5600, Fax: (867) 983-5624
KIVIA- P.O. Box 340, Rankin Inlet, Nunavut, X0C 0G0, Tel: (867) 645-2800, Fax: (867) 645-3855

NUNAVUT WATER BOARD
RENEWAL WATER LICENCE

WATER LICENCE No. 2BB-MEA1828

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

AGNICO EAGLE MINES LIMITED
(Licensee)
C.P. 87, 765 CH. DE LA MINE GOLDEX, VAL-D'OR QUEBEC J9P 4N9
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence renewal:

Licence Number/Type:	2BB-MEA1828 / TYPE "B"
Water Management Area:	THELON / BAKER LAKE / QUOICH / BACK / WATERSHEDS (5 / 8 / 9 / 31)
Location:	MEADOWBANK ADVANCED EXPLORATION PROJECT - KIVALLIQ REGION, NUNAVUT
Classification:	MINING UNDERTAKING
Purpose:	DIRECT WATER USE AND DEPOSIT OF WASTE
Quantity of Water use not to Exceed:	TWO HUNDRED AND NINETY-NINE (299) CUBIC METRES PER DAY
Date of Licence Issuance / Effective:	MARCH 7, 2018
Expiry of Licence:	MARCH 6, 2028

This Licence renewal, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

Lootie Toomasie,
Nunavut Water Board,
Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water and the deposit of waste for a Mining Undertaking classified as per Schedule I of the Regulations at the Meadowbank Advanced Exploration Project, located approximately 70-125 km north of the Hamlet of Baker Lake within the Kivalliq Region, Nunavut. Activities associated with the project include camp operation, treatment and disposal of Gg~~g~~reywater and Ss~~s~~ewage, fuel storage, environmental baseline data collection, prospecting, geological mapping, geophysical surveys, diamond and reverse circulation drilling, ~~underground development and underground exploration drilling~~, Bb~~b~~ulk Sa~~sa~~mpling, construction of pads~~ and handling and storage of waste rock and ore on pads~~, water crossings' installations, trenching and quarrying.

a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and

b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

"**Act**" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act;*

"**Addendum**" means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report.

"**Amendment**" means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

"**Appurtenant Undertaking"** means an undertaking in relation to which a use of water or a deposit of waste is permitted by a licence issued by the Board;

"Board" means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act;*

"Bulk Sampling" means the activities described in the Application for Amendment 4 and supporting documents dated March 31, 2016.

"Effluent" means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond, landfarm or a water treatment plant;

"Engineer" means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

"Fuel Storage Facility" means the fuel storage facility as described in the Application for Amendment 4 and supporting documents dated March 31, 2016;

"Greywater" means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

"**High Water Mark**" means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

"ICP Scan" means the laboratory method for determining trace metals in water through Emission Spectroscopy using inductively coupled plasma (including from approximately 22 to 32 elements, depending on the laboratory performing the analysis);

Commented [Katz1]: This term is not used in the licence. Suggest that it be deleted.

"Inspector" means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

"Licensee" means the holder of this Licence;

"**Minister**" means the Minister of Indigenous and Northern Affairs Canada (INAC)

"Modification" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

"Nunavut Agreement" means the *"Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*", including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"Regulations" means the *Nunavut Waters Regulations* (SOR/2013/669 18th April, 2013);

"Sewage" means all toilet wastes and Gg~~g~~reywater;

"Spill Contingency Plan" means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

~~**"Storm water Management Pond A-P5"** means a facility designed to temporarily contain runoff from areas impacted by activities, and site infrastructure, specifically the camp services~~

~~and operation pads with waste rock and ore stockpiles and groundwater as described in the Application for Amendment 4, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively;~~

"Sump" means an excavation in impermeable soil for the purpose of catching or storing water or waste;

"Toilet Wastes" means all human excreta and associated products, but does not include Gg~~g~~reywater;

"Trench Water Containment" means the lined sump or sumps, poly tank or other means of containment for water that has collected within the blasted and excavated trench(s) and subsequently removed for disposal upon confirmation of water quality;

"Waste" means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means.

"Wastewater Treatment System (WWTS)" means the wastewater treatment system as described in the Application for Amendment 4, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively;

"Water" or "Waters" means waters as defined in section 4 of the Act.

"**Water Supply Facilities**" means the Fresh Water Intake and associated infrastructure as described in the Amendment Application, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively.

3. Enforcement

a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and

c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The Licensee shall maintain security with the Minister in the form in accordance with the Regulations, or that is satisfactory to the Minister in the amount of ~~three million and eight hundred eighty- three thousand dollars ($3,883,000).~~[TBD - Under consideration].

2. The Licensee shall furnish and maintain such further or other amounts of security as may be required by the Board based on annual estimates of current Meadowbank Advanced Exploration Project restoration liability using the current version of RECLAIM, its equivalent or other similar method approved by the Board, in accordance with principles of INAC's "Mine Site Reclamation Policy for Nunavut" (2002).

3. The Licensee may, submit to the Board for approval, a written request for a reduction to the amount of security. The submission shall include supporting evidence to justify the request.

4. The security deposit shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence.

5. The amount of Water use fees shall be determined and payment of those fees shall be made in accordance with section 12 of the *Regulations.*

6. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported, containing the following information:

   a. The daily, monthly and annual quantities in cubic metres of all freshwater obtained for all purposes;
   b. The daily, monthly and annual quantities in cubic metres of water pumped from the underground;
   ~~c. An estimate of the current volume of waste rock and ore stockpiled on site;~~
   ~~d.~~c. Tabular summary of all data generated under the Monitoring Program, Part J;
   ~~e.~~d. A summary of modification and/or major maintenance work carried out on the Water Supply Facilities, Bulk Fuel Storage and Containment Facilities, and Wastewater Treatment Facility, including all associated structures, and an outline of any work anticipated for the next year;
   ~~f.~~e. A list of unauthorized discharges and a summary of follow-up actions taken;
   ~~g.~~f. Any revisions to the Spill Contingency Plan, Water Management Plan, Waste Management Plan, Quarry Management Plan, Abandonment and Restoration Plan, as required by Part B, Item 12, submitted in the form of an Addendum;
   ~~h.~~g. An updated estimate of the current Meadowbank Advanced Exploration Project restoration and liability, as required under Part B, Item 2, based upon the results of the restoration research, project development monitoring, and any modifications to the site plan;
   ~~i.~~h. A summary of drilling/trenching activities and progressive reclamation of drill/trench sites;
   ~~j.~~i. Report all artesian flow occurrences as required under Part F, Item 7;
   ~~k.~~j. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of

operations;

~~k.~~k. A summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed;

~~l.~~l. A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted; and

~~m.~~m. Any other details on water use or waste disposal requested by the Board by the 1st of November of the year being reported.

7. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.

8. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required under Part J, Item 1.

9. The Licensee shall post signs in the appropriate areas to inform the on-site personnel and public of the location of the Water Supply Facility, Wastewater Treatment System and Monitoring Stations. All signs shall be in English and Inuktitut.

10. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.

11. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.

12. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.

13. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

14. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) Manager of Licensing:
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

(b) Inspector Contact:
Manager of Field Operations, AANDC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

15. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut (and/or Inuinnaqtun).

16. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.

17. This Licence is assignable as provided for in section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all domestic freshwater for the Amaruq Camp from Whale Tail Lake as outlined in the application. Drill/industrial water shall be obtained from local water source(s), proximal to the drilling targets as outlined in the application. The volume of water for the purposes of this Licence shall not exceed two hundred and ninety-nine (299) cubic metres *per day*.

2. The Licensee shall implement the Plan entitled: "Water Management and Water Balance related to Amaruq Exploration Portal/Ramp Program, Quarry and Advanced Underground Exploration and Bulk Sample Amaruq Exploration Site, Nunavut" dated November 15, 2016 and originally approved by the Board.

3. Streams cannot be used as a water source unless authorized and approved by the Board in writing.

4. If the Licensee requires water in sufficient volume that the source water body may be drawn down, the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.

5. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.

6. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless authorized.

7. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

8. Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.

2. The Licensee shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.

3. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.

4. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.

5. The Licensee shall provide to the Board, documented authorization from the community of Baker Lake, prior to the backhauling and disposal of any waste.

6. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation at a licensed waste disposal site.

7. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.

8. The Licensee shall dispose of all Greywater to a Ssump located a distance of at least thirty- one (31) metres above the ordinary High Water Mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing. Upon commissioning of the Wastewater Treatment System "Bionest" (WWTS), the Licensee shall direct all Greywater to the WWTS, unless otherwise approved by Board in writing.

9. The Licensee shall collect and remove all Toilet Wastes to the Meadowbank Mine site for disposal, or contain in latrine pits or treat, using incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment. Upon commissioning of the Wastewater Treatment System "Bionest" (WWTS), the Licensee shall direct all Toilet Wastes to the WWTS, unless otherwise

approved by Board in writing.

10. All Wastewater Eeffluent discharged from the Wastewater Treatment System (WWTS), at Monitoring Station MEA-2 shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample
pH	6.0 to 9.5
Biochemical Oxygen Demand (BOD5)	80 mg/L
Total Suspended Solids (TSS)	100 mg/L
Fecal Coliforms	1000 CFU/100mL
Oil and Grease	5 mg/L & No visible sheen

11. All solid waste (sludge) from WWTS shall be disposed of in latrine pits that shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.

12. The Licensee shall direct all Water accumulated in blasted or excavated trenches to a Trench Water Containment to allow for sampling prior to release. Water collected in hand-dug trenches shall be directed to a natural depression Ssump, as required by Part D, Item 1.

13. All Effluent discharged from Fuel Storage Facility at Monitoring Station MEA-3, shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample (µg/L)
Benzene	370
Ethylbenzene	2
Toluene	90
Lead	1
Oil and Grease	15,000 and no visible sheen

14. All Effluent discharged ~~from Storm-water Management Pond A-P5 at Monitoring Station MEA-4 and~~ from trench-water containments and quarry Ssumps shall be carried out in accordance with Part D, Item 1, directed to a natural depression where direct flow into a water body is not possible and no additional impacts are created. All Effluent discharges shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
Total Ammonia	16	32
Total Arsenic	0.5	1.00
Total Chloride	1000	2000
Total Copper	0.30	0.60

Total Lead	0.20	0.40

Total Nickel	0.50	1.00
Total Zinc	0.50	1.00
Total Suspended Solids (TSS)	25	50
Total Dissolved Solids (TDS)	1400	1400
Oil and Grease	No visible sheen	No visible sheen
pH	6.0-9.5	6.0-9.5

15. All discharges shall be released in such a manner to minimize surface erosion. Upon confirming compliance required of Part D, Item 14, water to be released to the environment may be used for other industrial purposes, including use for dust suppression activities on roads and quarries as well as drilling.

16. In the event that Effluent planned for discharge exceeds the limits provided in Part D, Items 10, 13 and/or 14, the Licensee shall investigate the cause of the noted exceedance and report any findings, along with planned mitigation measures to meet these limits, prior to any discharge.

17. The Licensee shall provide at least ten (10) days' notification to an Inspector, prior to initiating the release of Effluent from any facilities in this Part. The notice shall include water quality results, an estimate of volume and the proposed receiving location.

18. The Licensee shall maintain all constructed facilities, including the Wastewater Treatment Facilities, Bulk Fuel Storage Facility, Portal/Ramp, Services and Operation Pads, Quarry and Containment Pond(s), to the satisfaction of an Inspector.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.

2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.

3. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of water, ice or snow. The Licensee shall minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.

4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed at a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter Water.

5. The Licensee shall not mobilize heavy equipment or vehicles for trenching or other activities unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs.

6. The Licensee shall submit to the Board for review, at least sixty (60) days prior to construction, an Acid Rock Drainage and Metal Leaching (ARD-ML) Characterization Plan for Amaruq site, including underground and operations and quarrying.

7. The Licensee shall implement the Plan entitled: "Amaruq Gold Project Quarrying Management Plan" dated November 2015 and originally approved by the Board.

8. The Licensee shall submit to the Board for review within thirty (30) days prior to construction, issued-for-construction drawings for all engineered project infrastructures (i.e. roads, camp pad construction, water crossings) stamped by a qualified Engineer. A Construction Summary Report including as-built plans and drawings stamped by a qualified Engineer shall be submitted to the Board within ninety (90) days of completing construction undertakings.

9. The Licensee shall maintain a minimum of thirty-one (31) metres large undisturbed buffer zone between the periphery of quarry sites and the high water mark of any water body. The Licensee shall not excavate and/or remove material from the quarry beyond a depth of one (1) meter above the high water mark or above the groundwater table, to prevent the contamination of groundwater. The quarrying shall be in accordance with all applicable legislation and industry standards including the *Northern Land Use Guidelines, Pits and Quarries* (INAC, 2010).

10. Sediment and erosion control measures shall be implemented prior to and maintained during the construction and operation where necessary to prevent entry of sediment into water.

11. The Licensee shall ensure that all containment and runoff control structures are constructed and maintained to prevent escape of wastes to the surface or groundwater systems.

12. The Licensee shall limit any in-stream activity including crossing/fiording to low water period. Machinery fording the watercourse to bring equipment required for construction to the opposite side is limited to a one-time event (over and back) and should occur only if an existing crossing at another location is not available or practical to use. In-stream activity is prohibited during fish migration.

13. The Licensee shall only use rock for construction that is determined to be non-acid generating and non-metal leaching.

14. The Licensee shall, for the purposes of clear span bridge installation, ensure that all activities remain outside of the natural channel width by the placement of abutments, footings or armoring above the ordinary high water mark so that there is no restriction to the natural channel processes.

15. With respect to construction or other earthworks where direct or indirect flow into a water body is possible, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the water.

16. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a water body, shall meet the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids	50.0	100.0

17. The Licensee shall ensure that all construction of engineered structures is supervised and field checked by an appropriately qualified and experienced Engineer in such a manner that the project specification can be enforced and, where required, and the quality control measures can be followed. The Licensee shall maintain and make available at the request of the Board and/or an Inspector, all construction records of all engineered structures.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS AND TRENCHING

1. The Licensee shall not conduct any land-based drilling / trenching within thirty-one (31) metres of the ordinary High Water Mark of any water body, except drilling specified in Part F, Item 2, and unless otherwise approved by the Board in writing.

2. The Licensee is authorized to conduct land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body during winter conditions within the project area, as identified in the Amendment Application and associated documents received on April 8, 2011.

3. The Licensee shall, when conducting drilling within thirty-one (31) metres of the ordinary High Water Mark, carry out activities on stable ground such as frozen tundra or bedrock, to prevent disturbance to the natural ground and limit erosion and sedimentation.

4. The Licensee is authorized to conduct drilling based on barge within two lakes, as described in the Amendment Application and associated documents received in July / August, 2015.

5. The Licensee shall establish water quality conditions of adjacent Waters or Waters immediately downstream of any drilling program within thirty-one (31) metres of the ordinary High Water Mark of any water body:

   a. prior to any such drilling program as per Part J, Item 9;
   b. upon completion of any such drilling program; and
   c. the summer season following any such drilling program.

6. The Licensee shall dispose of all drill waste, including water, chips, muds and salts ($CaCl_2$) in any quantity or concentration, from land-based and on-ice drilling, in a properly constructed Ss~~s~~ump or an appropriate natural depression located at a distance of at least thirty- one (31) metres from the ordinary High Water Mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

7. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.

8. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.

9. For "on-ice" drilling where drill additives are not being used, return water released must be nontoxic, and not result in an increase in total suspended solids in the immediate receiving waters, above the Canadian Council of Ministers for the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).

10. The Licensee shall establish water quality conditions prior to and upon completion of any drilling program through lake ice.

11. The Licensee shall, during trenching activities utilizing blasting, provide mitigation measures to prevent the transport of rock material, explosives residues, sediment and other materials from entering water as required by Part C, Item 8 and Part E, Item 4.

12. The Licensee shall stockpile all overburden/topsoil generated during trenching using proper erosion prevention measures. Upon completion of operation, the Licensee shall backfill, reclaim/re-contour and re-vegetate all disturbed areas.

13. The Licensee shall provide to the Board for review, at least sixty (60) days prior to the beginning of trenching operations, a proposed Trenching Plan which shall include the following:

    a. Size and location of trenches including GPS coordinates;
    b. Approximate dimensions (length, width and depth) of each trench;
    c. Proposed mitigation measures for the prevention of the transport of sediments, blasting residues, fly rock and other materials, from the trench area to nearby water bodies;
    d. Projected volume and quality of water discharged from each trench with potential treatment required; and
    e. Proposed monitoring program to be carried out on trench waste water prior to discharge.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

    a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
    b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
    c. such Modifications are consistent with the NIRB Screening Decision;
    d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
    e. the Board has not rejected the proposed Modifications.

2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.

3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall implement the Plan entitled "*Amaruq Gold Project Spill Contingency Plan Meadowbank Exploration Camp, Drill Sites, Portal/Ramp and Quarry",* updated March 2016 and originally approved by the Board.

2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering Water. All Ssumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis. An exception to this condition is provided for in Part H, Item 4.

3. The Licensee shall provide secondary containment for a limited fuel supply and all external pumps and motorized equipment used in drilling operations as authorized per Part F, Item 2 where drilling occurs within thirty-one (31) metres of the ordinary High Water Mark.

4. The Licensee shall conduct equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.

5. The Licensee shall, subject to Section 16 of the Regulations, report any unauthorized deposits or foreseeable unauthorized deposits of waste and/or discharges of Effluent, and shall:

    a. Employ the approved Spill Contingency Plan;

b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE

1. The Licensee shall implement the Plan entitled "*Conceptual Closure and Reclamation Plan & Reclaim Estimate",* updated March 2016 and originally approved by the Board.

2. The Licensee shall complete all restoration work prior to the expiry of this Licence.

3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.

4. The Licensee shall backfill and restore all Ss~~s~~umps to the pre-existing natural contours of the land.

5. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of this Licence.

6. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.

7. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.

8. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.

9. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

10. The Licensee shall restore all drill holes, trenches and disturbed areas to natural conditions immediately upon completion of the drilling or trenching. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal. Where drill casings cannot be removed the Licensee shall cut off the casings at ground level and identify with signage.

11. The Licensee may leave the casings on site, if it intends to continue drilling in existing casings, but shall add signaling to keep the area safe for the other territory users. The drill casings left cannot stay on the field for more than 2 years after the drilling.

12. The Licensee may store drill cores produced by the Aappurtenant Uundertaking in an appropriate manner and location at least thirty-one (31) metres above the ordinary High Water Mark of any adjacent water body, where any direct flow into a water body is not possible and no additional impacts are created.

13. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp at Monitoring Station MEA-1, and for drilling and other purposes.

2. The Licensee shall, at a minimum, maintain Monitoring Stations at the following locations:

Monitoring Station	Description	Status
MEA-1	Amaruq (IVR) Camp Water Intake and sources for industrial/drilling	Volume
MEA-2	Effluent discharged from the Wastewater Treatment System "Bionest" (WWTS)	Volume and Effluent Quality
MEA-3	Effluent discharged from the Bulk Fuel Storage Facilities	Volume and Effluent Quality
~~MEA-4~~	~~Effluent discharged from Storm-water Management Pond A-P5 and Trench water containment ponds~~	~~Volume and Effluent Quality~~

3. The Licensee shall sample the Eeffluent discharging from the WWTS at Monitoring Station MEA-2 prior to its release into environment in order to provide confirmation of Eeffluent quality as required by Part D, Item 10, for the following parameters:

pH
Biochemical Oxygen Demand (BOD_5)
Total Suspended Solids (TSS)
Fecal Coliforms
Oil and Grease (and visual)

4. The Licensee shall sample the Eeffluent discharging from the Bulk Fuel Storage Facilities at Monitoring Station MEA-3 prior to its release into environment in order to provide confirmation of Eeffluent quality as required by Part D, Item 13.

~~5. The Licensee shall sample the effluent discharging from Storm water Management Pond A-P5 and other containment ponds at Monitoring Station MEA-4 prior to its release into environment in order to provide confirmation of effluent quality as required by Part D, Item 14.~~

~~6~~5. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.

~~7~~6. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations and exploration activities are deposited including S~~s~~ump locations associated with drilling and drill casings left as stuck and cut off and for further drilling in casings.

~~8~~7. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all drill holes located within thirty-one (31) metres of the ordinary High Water Mark, as per Part F, Item 2, and provide these locations on a map of suitable scale for review as part of the annual report.

~~9~~8. The Licensee shall establish background and post drilling water quality for pH, conductivity, temperature and dissolved oxygen at the nearest downstream water body to drill locations. Monitoring is to be done just prior to commencement of drilling and weekly thereafter, concluding one week after drilling has been completed and the site restored.

~~10~~9. The Licensee shall obtain representative samples of the water column below any ice where required under Part F, Items 9 and 10. Monitoring shall include, at a minimum, the following:

Group	Parameters
Physical Parameters	pH, electrical conductivity, total suspended solids.
Major Ions	Calcium, chloride, magnesium, potassium, sodium, sulphate.
Total Metals	Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc.

~~11~~10. The Licensee shall establish baseline water quality conditions prior to drilling within thirty-one (31) metres of the ordinary High Water Mark as per Part F, Items 2 and 3. Monitoring shall include the following:

Group	Parameters
Physical Parameters	pH, electrical conductivity, total suspended solids, turbidity.
Major Ions	Calcium, chloride, magnesium, potassium, sodium, sulphate.
Total Metals	Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc.

~~12.~~11. The Licensee shall, where turbidity is observed in adjacent waters or waters immediately downstream of any drilling program conducted within thirty-one (31) metres of the ordinary High Water Mark of any water body, during summer following any such drilling program as per Part F, Item 5 (c), conduct additional monitoring of the parameters listed in Part J, Item 10 to determine whether any further mitigation is required.

~~13.~~12. The Licensee shall monitor runoff and/or discharge from the quarry sites to receiving environment, during blasting activities, during periods of flow and following significant precipitation events, on a monthly basis, for the following parameters:

Group	Parameters
Physical Parameters	pH (field and laboratory), temperature (field), alkalinity, bicarbonate, carbonate, electrical conductivity, hardness, hydroxide, ion balance, total dissolved solids, total suspended sediments.
Nutrients	Ammonia-nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate.
Major Ions	Calcium, chloride, magnesium, potassium, sodium, sulphate.
Total Metals	Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc.

~~14.~~13. The Licensee shall, during periods of flow and just after a major rainfall event, conduct water quality testing immediately upstream and downstream of the water crossings, any significant water seeps in contact with the road and any flows originating from borrow pits or rock quarries on a monthly basis prior to construction, during the construction and upon completion for the parameters listed under Part J, Item 11.

~~15.~~14. The Licensee shall implement a water crossings visual inspection and maintenance program prior to, during spring freshet and after heavy rainfall events to identify issues related to watercourse crossings structural integrity and hydraulic function.

~~16.~~15. The Licensee shall annually review the approved by accredited laboratory Quality Assurance/Quality Control plan and modify it as necessary. Proposed changes shall be submitted to an accredited laboratory for approval.

~~17.~~16. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board in writing.

~~18.~~17. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

~~19.~~18. The Licensee shall include in the Annual Report required under Part B, Item 2 and in Construction Summary Report required under Part E, Item 8 all data, monitoring results and information required by this Part.

~~20.~~19. Additional monitoring may be requested by the Inspector.