

Table G-1: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Ongoing

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Interaction with Intervenor (as of 28- Nov-23)
ECCC	ECCC-TRC-01	Meliadine Lake Water Balance	Meliadine Lake water levels and water volume could be impacted by mine water withdrawals and discharges. Potential changes to lake water volumes should be predicted as they might have an impact on the lake's assimilation capacity and on water quality. Section 2.2.4 (Consumptive Freshwater Uses) of the Water Balance and Water Quality Model (WBWQM) states: Consumptive freshwater uses (e.g., paste plant, potable water, mill makeup, dust control, etc.) are supplied by withdrawal from Meliadine Lake, and are not included as direct inputs to the water balance model, as this additional water is already incorporated in various components of the mine water balance, such as seepage from placed tailings and paste backfill bleed water reporting to underground workings. Meliadine Lake appears as a component in Figure 2-3 (Water Management Flow Diagram - 2043), but it is not clear if lake volumes are being estimated in the WBWQM.	ECCC recommends that the Proponent confirm if Meliadine Lake levels are modelled in the WBWQM. If so, the Proponent should explain how lake levels were modelled without incorporating the effects of water withdrawals by the mine. If not, the Proponent should clarify where mine impacts on the lake levels have been considered	Meliadine Lake levels were modelled in the 2014 FEIS. The annual withdrawal volume from Meliadine Lake for pit filling as set in the 2014 FEIS was 17,060,000 m3/year and this volume constitutes 1.4% of the total Meliadine Lake volume. For the Meliadine Extension the water withdrawal rates are 1,116,112 m3/year (see Table 2.3-2 from the Main Application Document), which is below the upper bound. Therefore, mine impacts on lake levels have been considered and assessed. The previously presented impact assessment remains relevant with respect to potential impacts to Meliadine Lake water levels.	Not applicable.	Unresolved	Agnico Eagle directly emailed the Water Balance Section of the 2014 FEIS to ECCC on October 12, 2023. It is acknowledged this information has been publicly available since 2014 and was reviewed by ECCC previously as part of the NIRB Meliadine Application process, which resulted in approval and issuance of a Project Certificate). ECCC reviewed the information provided. Additional questions were raised by ECCC. Agnico Eagle commits to meet with ECCC Hydrology and identify a path forward prior to the Public Hearing.	Ongoing
ECCC	ECCC-TRC-03	Water Balance and Water Quality Model results	Results from the WBWQM include parameter concentrations for water in the different mine components, which can be used to inform water management strategies. The WBWQM and its updates report that certain water quality parameters will exceed water quality guidelines for certain pits and lakes during post-closure. For example, Section 4.3 (Post Closure) of the Update predicts post-closure concentrations above applicable guidelines in for certain mine related parameters of potential concern (POPCs). These include: arsenic at SP6, copper and selenium at CP7, ammonia at PUMP01, copper at WES04 and selenium at TIRI pit lake. Further updates to the WBWQM are planned during closure once more data is available from mine operations to confirm if the modelled exceedances still seem likely to occur. However, the proposed timeline for these updates to the model would not allow for management actions to be implemented to avoid exceedances should they still be predicted to occur.	ECCC recommends that the Proponent: • discuss possible management actions for POPCs that the WBWQM and updates have predicted to exceed guidelines; and • propose timelines for further updates to the WBWQM that would allow sufficient time for those management actions to be put in place.	Responses bullet 1) and 2) The reviewer was noting the post-closure period, Agnico Eagle will be operating for another 20 years which provides operational data to validate assumptions and will be used to update water quality predictions for final closure. The Meliadine Mine water balance and water quality forecast is calibrated annually to ultimately inform ongoing operations and eventual closure. This annual update is required per Water Licence condition Part E, Item 13. There is sufficient time prior to closure to allow for management actions to be implemented to avoid exceedances should they be predicted to occur. Further, Water Licence condition Part E, Item 11 also requires an update of the Water Management Plan and water balance and water quality forecast prior to closure, which would also address management actions to be implemented, should they be required.	Response provided October 18, 2023: Agnico Eagle regularly collects monitoring data across the Meliadine Mine site and analyzes those data to determine if mitigation or other actions are required. This should address ECCC's concern about current practices to monitor and address issues as they arise. The current water licence requires the following: With respect to site-wide TDS instigations, Schedule B, Item 8 of the Licence (page 36) requires the annual report include the following: 8. Discussion on the behavior of the Total Dissolved Solids (TDS) concentrations in surface Contact Water reporting to CP1 during the reported year, and, if any TDS concentration peaks are observed, identification of potential sources that might have contributed to higher loads of TDS. This was satisfied in section 3.1.8 of the 2022 Annual Report. With respect to identifying chemical parameters of concern Part E, Item 13 (page 14) requires the following: 13. The licensee shall, at a minimum of once every year following commencement of Operations, submit to the Board for review an updated Water Balance and Water Quality Forecast. This update shall include all monitoring parameters and shall identify which Mean Annual Concentrations are within 10% of the respective maximum authorized Monthly Mean Concentrations for regulated parameters. Additionally, the Mean Annual Concentrations for all monitoring parameters in the current reporting year shall be compared to those reported in the previous year, and if the respective concentrations are increased by more than 20%, a detailed technical assessment identifying specific sources of loadings and the proposed parameter forecasts shall be provided to the Board for review. This was satisfied in section 3.2.4.3 of the 2022 Annual Report.	Partially Resolved	Agnico Eagle directly emailed the Adaptive Management Plan, Ammonia Management Plan, and the Interim Closure and Reclamation Plan to ECCC on October 13, 2023. It is acknowledged this information was provided to the NWB in January 2023 as part of the Meliadine Extension Amendment Application. Agnico Eagle has provided the requested information to Environment and Climate Change Canada on October 18, 2023, and discussed the Technical Review Comment at a meeting on October 30, 2023. Agnico Eagle and ECCC commit to work together to resolve this Technical Comment prior to the Public Hearing.	Ongoing
ECCC	ECCC-TRC-04	Water Balance and Water Quality Model uncertainty	As described in ECCC comment 2 (above), the accuracy of WBWQM estimates of water volumes and water quality are critical for planning mine management. Typically, model uncertainty can be evaluated using validation (i.e., withholding some of the measured data from calibration to see how well it can be modelled) or sensitivity analysis (varying model inputs within reasonable ranges to understand which inputs affect results the most). Neither of these methods are presented in the WBWQM, nor is there a discussion of the uncertainty associated with the model. WBWQM uncertainty should be evaluated, particularly given the offsets on some of the water volume estimates presented in Section 3.7.2 (Calibration to Collection Pond Water Balances) and the overestimates of parameter concentrations presented in Section 4.4.1 (Source Term Calibration). Quantifying the uncertainty inherent in the model will help identify the range of different conditions under which the proposed water management plan may be effective.	ECCC recommends that the Proponent evaluate the uncertainty of the WBWQM to provide an understanding of the range of possible results and how this may impact the planned mine water management.	The approved Adaptive Management Plan provides flexibility for the operation to mitigate issues that are outside of the normal operating conditions. As outlined in response to ECCC-TRC-03, Agnico Eagle is required under the Water Licence to update the water balance and water quality forecast on an annual basis, which enables operations to adjust if thresholds are triggered. In addition, the annual updates minimize conservatism in the water balance and water quality forecast to help identify the range of different conditions under which the proposed water management plan may be effective.	Response provided October 25, 2023: It is Agnico Eagle's position that a standard calibration/validation split exercise would not be particularly useful in this context. This exercise would involve calibrating to a subset of the measured data (2-3 years in this case), and then validating the model against the remainder of the measured data. This is an appropriate approach for a system where the primary inputs remain static; however, a mine site is constantly evolving as mining progresses, and water management adapts to the current conditions. Under these conditions, the calibration/validation approach is less useful, as multiple model assumptions related to catchment areas and water management require continuous updating to reflect mine operations. With respect to the suggestion that model inputs be varied within a set range to better understand the variability in potential outcomes, Agnico Eagle's position is that the main drivers of uncertainty are already well understood for the Meliadine Mine. Uncertainty in the WBWQM and resultant outputs could result from variability or errors in the following inputs and assumptions: •Climate inputs; •Derived source terms; •Model calibration (i.e., equifinality); •Sub-catchment area delineation; and •Assumptions regarding mine water management (pond operating rules and volume-elevation-area curves, pump rates). Multiple steps have been taken to reduce potential model uncertainty in the Meliadine WBWQM predictions, including extensive geochemical test work, model calibration to measured pond volumes, effluent discharge rates and collection pond chemistry, and use of a variable climate input series, among others. These were presented in: •The Meliadine Extension FEIS Addendum NIRB submission (Lorax 2022): Appendix H-07, Water Balance Water Quality Model. •The Meliadine Extension Type A Water Licence Amendment submission (Lorax 2023): Appendix F21 (sub-appendix E – Water Balance and Water Quality Forecast). Steps taken to reduce uncertainty are summarized below. Climate Inputs The primary driver of the site water balance is precipitation, which translates into higher contact water volumes requiring management, and potentially higher parameters of potential concern (POPC) loadings in the collection ponds. The impact of varying precipitation inputs can be noted in the model results; this was presented in Section 3 of Appendix F21 of the Water Licence Amendment Application (sub-appendix E – Water Balance and Water Quality Forecast). Therefore, future efforts to reduce uncertainty in the water balance predictions will focus on refinement of the model calibration for mine infrastructure contact water generation and updating the input climate series as necessary to reflect the changing climate in the region. Source Terms The relative contribution of the various POPC sources was quantified to highlight the mine components with the highest impact on predicted concentrations in the two primary collections ponds: SP6 for saline water reporting from the underground mining operations, and CP1 for surface contact water. Loads (kg/year) are presented below because this integrates both the discharge and concentration components for each mine feature. All loading sources from all upstream collection sumps and ponds, open pits, and dewatered lakes are included in this analysis, therefore the values presented below represent the total POPC loadings generated by the Meliadine Extension. This was done for the three key POPCs requiring management during the Operations phase. To simplify the analysis, total loads for arsenic, ammonia and TDS were aggregated for each pond on an annual basis, and the averages for the mid-Extension period of 2032-2038 are presented below. This period was selected as it represents the maximum mine disturbance area, high predicted rates of groundwater inflow to the underground mines, and the highest predicted effluent discharges to both Itivia Harbour and Meliadine Lake. The majority of POPC loads in SP6 are of underground provenance, with 77% of all arsenic, 73% of ammonia and 88% of TDS derived from the groundwater inflows to the underground mines (Figure 1). The secondary source of arsenic is the TSF (14%), and the WRSFs contributed the second highest loads of ammonia (13%) and TDS (4%), with an additional 8% of ammonia loads reporting from the TSF, and 3% of TDS reporting from non-contact (Background) and disturbed areas (1% Facilities) reporting to the saline water collection system. In CP1, arsenic load contributions are approximately equal between Background (20%), Facilities (21%), WRSFs (23%) and the TSF (29%; Figure 2). For ammonia, the split is similar between Background (20%), Facilities (20%), WRSFs (34%) and the TSF (20%). The majority of TDS loads in CP1 are derived from runoff and interflow from the WRSFs (37%) and Facilities (26%), with smaller contributions from Background (17%), and the TSF (10%). Finally, Pit walls contribute a relatively minor proportion of total arsenic (6%), ammonia (5%) and TDS (9%) loads to CP1. The model results presented above highlight the key sources of POPC loads and provide context within which to evaluate future model updates. Refinement of source terms, water balance estimates and mine water management assumptions within the model will continue throughout the life of mine, with the objective of continuously improving the accuracy of model predictions and reducing uncertainty in those predictions. Annual updates of the WBWQM will be presented in the annual report, providing the opportunity to review and refine the model as required on an ongoing basis. Model Calibration Model uncertainty can be reduced significantly by calibrating to measured conditions. In this case, the water balance model was calibrated to a natural catchment streamflow record from a regional Water Survey of Canada hydrometric station (Lorax 2022; Section 3.7.1), measured pond volumes and pump rates from pit sumps and collection ponds (Lorax 2022; Section 3.7.2). The water quality model, and the associated mine infrastructure source terms were calibrated to data for key collection ponds (Lorax 2022; Section 4.4.1). See also Agnico's response to ECCC-TRC-02. The model calibrations for both the water balance and water quality components will be reviewed on an annual basis, as compared with the most recent monitoring data. If warranted, the model calibration will be updated and documented, with these updates propagated through to the future predictions. Sub-Catchment Area Delineations Potential error in sub-catchment delineations was reduced by relying on 1 m LiDAR data for the mine site to identify natural catchment boundaries (Lorax 2022; Section 3.2). This surface was integrated in ArcGIS with the mine infrastructure to generate seamless mine layouts for key years of the mine plan (Lorax 2022; Section 2.1). Major lake areas (e.g., B4, A6) were derived from bathymetric surveys, and are allowed to vary in the model as a result of modelled lake volume, with the surrounding catchment areas adjusted accordingly in every time-step (Lorax 2022; Section 2.2.6). Overall, more than 100 sub-catchments were delineated, with the sum of all areas matching the total mine area to within 0.2%. This data demonstrates the model's accuracy in the 0.1 ha scale. It is expected that the model would be updated with the	Partially Resolved	Agnico Eagle to provide additional information (summary of main uncertainty & certainty drivers). Environment and Climate Change Canada will review the information and meet with Agnico Eagle in efforts to resolve. Environment and Climate Change Canada was provided with the requested information on October 25, 2023. Agnico Eagle and ECCC commit to work together to resolve this Technical Comment prior to the Public Hearing.	Ongoing
ECCC	ECCC-TRC-06	Integration of Meliadine Extension project in Aquatic Effects Monitoring Program Design Plan	The Aquatic Effects Monitoring Program (AEMP) monitors whether the aquatic environment is changing and whether such changes can be ascribed to potential mine related effects. The Design Plan describes the AEMP and is tailored to the aquatic environments where potential effects are possible, as well as including reference sites that are not expected to be impacted by the mine. The AEMP Program Design has been updated for the Meliadine Extension project; however, the extension project has generally not been integrated into the Design Plan. Some examples of these oversights include: • Section 2.1 Site Description: Though the extension project has operations lasting until 2043, the site description states, "the Mine will be operational through 2027, followed by 10 years of closure activities to 2037 (Agnico Eagle, 2020)." • Section 2.2 Waste Rock and Tailings Management: Though rocks at the future Discovery pit location have predominantly tested as potentially acid generating (PAG) or metal leaching (ML) or uncertain with respect to PAG/ML, the text states, "waste rock is not expected to contribute to low pit conditions or elevated metals concentrations in surface contact water that is eventually collected, treated and discharged to Meliadine Lake." • In most places where the FEIS is referenced, there is no mention of the FEIS addendum. • New monitoring locations for the Peninsula Lakes will be necessary as two of the three sampled Peninsula Lakes will be dewatered. This is acknowledged in Section 4.3.1 (Background), but no alternative monitoring station locations have been proposed. • Water modelling for the FEIS addendum in the WBWQM and its update did not present predicted water quality for any of the AEMP monitoring stations so it would not be possible to compare measured concentrations against predictions, as recommended in Sections 4 (AEMP Study Design), 6.1.1 (Objectives), 6.1.4 (Data Analysis and Interpretation) and Table 8-1 (Examples of Action Levels and Responses). • Section 6.2 Biological Monitoring in the Peninsula Lakes concludes, "Biological studies will be included in future monitoring cycles; if results of the water quality program indicate that the small lakes on the peninsula may be affected by mining activities." This does not account for a conclusion of the AEMP 2022 Annual Report Plain Language Summary "Water quality in Lake B7 and Lake A8 has changed significantly for some parameters during operations. Sulfate and arsenic are the two parameters where the timing and magnitude of the change point to the mine as the underlying cause."	ECCC recommends the Proponent integrate the Meliadine Extension project into the AEMP including referencing the FEIS addendum, its findings and results.	Agnico Eagle agrees with ECCC that the AEMP will need to be updated, however, we are of the opinion that the AEMP should be updated in future iterations, following the Water Licence Amendment approval. Given the dynamics of mining, the sequencing of activities may change. Therefore, when a Meliadine Extension mining activity is triggered, the AEMP will be updated accordingly based on the site activities at that time. This can be updated through the Water Licence Annual Reporting process.	Not applicable.	Resolved by commitment	Agnico Eagle to integrate updates into a revised AEMP Design Plan which will be submitted within 60 days of Water Licence Amendment issuance, for example: •including details of the Meliadine Extension •including references to the Meliadine Extension FEIS Addendum	Complete

Table G-1: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Ongoing

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Interaction with Intervenor (as of 28- Nov-23)
ECCC	ECCC- TRC-08	Aquatic Effects Monitoring Program reference areas	Reference areas monitored through the AEMP help identify local changes to the aquatic environment due to weather and other factors that are not related to the mine. For example, if changes to water quality were measured at near field sites but similar changes were noted in the reference areas, it might be possible to establish that the near field changes were not mine related. It is therefore critical to have reference areas beyond the geographical reach of the mine's influence. Typically reference areas are located in different watersheds or upstream of the near field and mid field sites. In the AEMP Design Plan, the three reference areas used are all in Meliadine Lake. Two are downstream, located at the lake outflow. The third is in a bay that is not likely in a flow path potentially affected by discharges to Meliadine Lake. Section 4.2.2 (Study Areas) explains the choice of reference areas, "Nearby reference lake(s) with similar morphology, fish assemblage, and accessibility that meets health and safety needs, were not identified during the baseline period when data was collected to support FEIS." Total dissolved solids (TDS) loading to Meliadine Lake will continue for longer than predicted initially and the principal components of TDS are conservative and will accumulate in the lake to an extent. Although Meliadine Lake is very large (surface area 107 km2), its chemistry could change over time due to mining, as has been the case at Lac de Gras in the Northwest Territories (surface area 569 km2). This could be important to consider when reviewing reference area locations. The AEMP 2022 Annual Report references data from Inugugayualik Lake and Pipedream Lake, more than 250km away, to try to demonstrate regional trends. There are several confounding factors affecting the comparison including different ecoregions, geology and relative distance from Hudson's Bay. A closer reference site that is not downstream from the mine would provide more confidence in comparison results. Since no nearby lakes were identified that were suitable for all components of the AEMP, consideration should be given to using different lakes for water chemistry and biological studies. This has already been initiated as Section 4.2.2 states, "External reference area lakes may be added to the Lake Trout health assessment under the AEMP depending on findings of the Cycle 2 EEM (Azimuth, in prep)."	ECCC recommends that the Proponent demonstrate how the selected reference sites within Meliadine Lake will remain suitable reference areas over a prolonged period with the mine Extension. Consideration should be given to alternate reference areas and/or modifications to the study design.	The AEMP design plan for Meliadine Mine was developed through recommendations, conditions, and commitments outlined in the NIRB decision report (NIRB 2014) which are summarized in Table 1-1 from the Version 1 plan (Golder 2016). In addition, the plan was designed through input from regulators (ECCC and CIRNAC) and the HTO. The Version 1 study plan (Golder 2016) and the Version 2 study plan submitted with the water licence amendment application (Appendix F03) provided the rationale for in-lake reference areas. For context distances between the diffuser and the three reference areas are as follows: •Reference Area 1 – 16 km •Reference Area 2 – 19 km •Reference Area 3 – 21 km Due to the seasonal discharge to Meliadine Lake, the conservatism in the site water balance and water quality discharge model, the size of Meliadine Lake (107 km2 in surface area), the distance between the diffuser and Reference Areas, and the natural mixing processes in Meliadine Lake, in-lake reference areas are still suitable for the AEMP. References Golder (Golder Associates Ltd.) 2016. Meliadine Gold Project, Nunavut. Aquatic Effects Monitoring Program (AEMP) Design Plan 6513-REP-03 Version 1. Submitted to Agnico Eagle Mines Limited Rouyn-Noranda, QC. NIRB (Nunavut Impact Review Board). 2014. Final Hearing Report. Meliadine Gold Project. Agnico Eagle Mines Limited. NIRB File No. 11MN034. October 2014.	Response provided October 23, 2023. The topic of external reference lakes for the Meliadine Lake AEMP was discussed during a technical meeting between Agnico Eagle (and Golder) and representatives from ECCC, CIRNAC (formerly AANDC), and the Rankin Inlet HTO in a meeting on November 6, 2014. External reference lakes were not incorporated into the AEMP Design for following reasons and are summarized below: 1) Differences in the small-bodied fish community in Meliadine Lake compared to suitable reference lakes. 2) Seasonal discharge of surface contact water and the yearly volume compared to the total volume of Meliadine Lake. 3) Logistics and health and safety. In addition, as noted in the Response Framework of the AEMP Design Plan (Golder 2016; Table 8-1), if a low action level is reached, responses would include (for example) confirming the level, examining the ecological relevance, and establishing new stations. For these reasons external reference areas are not required. Differences in the Small-bodied Fish Community between Meliadine Lake and Candidate Reference Lakes When the AEMP was in the initial design phase, one of the goals was to establish reference areas where all monitoring components could be assessed/sampled rather than having one set of reference areas for fish and another set of reference areas for lower trophic levels, ignoring the logistical and health and safety considerations below. It is relatively straightforward to identify suitable reference lakes/areas for monitoring water quality, sediment quality, and lower trophic level communities. Finding suitable external reference lakes to monitor the health of the fish population was more complicated because of differences in the assemblage of the small-bodied fish community in Meliadine Lake compared to other lakes in the region. Threespine Stickleback are the most abundant small-bodied fish in Meliadine Lake but are not well represented in the small-bodied fish community in other lakes. This finding was confirmed during a fisheries study conducted in August 2013 by Azimuth. Fyke nets were set in Meliadine Lake and two candidate reference lakes: Parallel and Atulik. Threespine Stickleback were captured in reasonably high numbers in Meliadine Lake but were absent in the nets set at Parallel Lake and Atulik Lake. With no other small-bodied species to choose from, the options for assessing the health of the fish population in Meliadine Lake came down to using Threespine Stickleback as one of the sentinel species with reference areas in Meliadine Lake or to rely solely on large-bodied species, such as lake trout. Small-bodied fish are typically preferred over large-bodied fish for assessing effluent-related effects to fish because they tend to have limited movement (therefore potential exposure around a discharge area is greater) and because their reproductive cycles are generally short (therefore potential effects can be detected in short time frames). Essentially, the decision came down to using Threespine Stickleback and acknowledging that internal reference areas are not ideal, or rely on large-bodied fish and accept that migratory species have a less predictable exposure to effluent due to their migratory behavior. Modelling Results for the East Basin Modelling results presented in the Meliadine Extension FEIS Addendum indicate water quality will meet aquatic life and human health drinking water standards at the edge of the mixing zone. The three reference areas are located approximately 16 km (MEL-03), 19 km (MEL-04), and 21 km (MEL-05) from the diffuser. Lake-wide changes in water quality due to effluent are not expected given the distance between the diffuser and the reference areas and the volume of water discharged during the open water period (average of 1.3 Mm3 per year for the Meliadine Extension; Lorax 2023) compared to the volume of the lake and annual lake discharge (84.7 Mm3; Agnico Eagle 2014). The estimated volume in the East Basin is 98.8 Mm3 and 48.4 Mm3 in the South Basin (Golder 2016). These two areas represent approximately 32% of the surface area of Meliadine Lake. Assuming the depth profile is similar in the other 68% of the lake, the estimated volume of Meliadine Lake is in the range of 440 to 450 Mm3.	Unresolved	Agnico Eagle to provide more information on current reference areas in Meliadine Lake. It is acknowledged that all of this information is in the AEMP available on the NWB public registry. Environment and Climate Change Canada was provided with the requested information on October 23, 2023. Agnico Eagle and ECCC commit to work together to resolve this Technical Comment prior to the Public Hearing.	Ongoing
ECCC	ECCC- TRC-09	Closure of saline pond SP6 (Lake 87)	The Extension Project proposes to use Lake 87 as a saline water storage pond for approximately 18 years. The mine plan described in Section 2.3.7 (Lakes and Ponds Dewatering, Fishout, and Refilling) of the Main Application document includes obtaining MODER Schedule 2 testing for Lake 87, so it can be fished out and dewatered. Following this, the Pre-feasibility describes in Section 6.2 (Design of Water Collection Ponds), "SP6 will be established within the drained Lake 87 together with the two perimeter dikes (Dike D-SP6North and D-SP6West)." The Technical Report describes plans for operation and closure in section 5.1.2.2 (SP 87), stating "The saline Pond 87 is the primary saline contact water storage pond for the majority of the Operations phase once it is dewatered in 2025. All saline contact water collected in SP 87 is routed to the Waterline for discharge to Itivla Harbour up to end-2043. After this point, any remaining saline contact water will be routed to the remaining underground voids (Section 3.8), before SP 87 is allowed to fill with runoff from the surrounding catchments, including the small volumes of contact water from the TSF and WRSF1." Ultimately, "SP 87 will drain into the Tiri Pit Lake" (Section 3.9 (Post-closure flow paths) of the Technical Report). Sediment at the bottom of SP6 will become enriched in salts from the contact with saline water over a prolonged period. If they are left in place uncovered at closure, the sediments will then become a source of salts and metals for the overlying water via diffusion. This enrichment would eventually reach Meliadine Lake through the connections with filled pits, lakes and streams. It is not clear if this source term is considered in the WBWQM. Proposed guidelines against which to assess predicted lake water quality at closure are different for SP6 than for all other lakes. Section 4.2 (Parameter List and Screening Criteria) of the Technical Report specifies, "For waterbodies included in the Schedule II application as part of the Meliadine Extension Project (e.g., BA, 87), model predictions were compared to generic water quality guidelines for the protection of terrestrial life, as the listed waterbodies will not support aquatic life." Fish re-populate waters through migration or transportation by birds, so after closure SP6 may eventually become fish bearing. Guidelines for the protection of aquatic life are therefore the more appropriate guideline to assess potential effects following closure.	ECCC recommends that: • the Proponent clarify if the WBWQM incorporates diffusion fluxes of salts and metals from saline sediment at the bottom of SP6. If it does not, the magnitude of this source should be described in relation to other fluxes so its impact can be evaluated; and • guidelines for the protection of aquatic life are used for SP6 to assess post-closure water quality.	Response bullet 1) During operations SP6 is a contact water pond and will be managed; water pumped from SP6 is managed, treated as required, and then discharged to Itivla Harbour. Diffusive flux loadings from SP6 are minimal for trace metals, accounting for less than 1% of the total metal loading. Loadings for ammonia and chloride are higher as predicted; however, even with this increased load, loadings of ammonia and chloride are predicted to remain below relevant guidelines. Response bullet 2) The reader is referred to response to KWA-TRC-05.	Response provided October 23, 2023. Assessment of Health and Safety Considerations Response provided October 23, 2023: The reviewer was noting the closure period, Agnico Eagle will be operating for another 20 years which includes water quality monitoring of SP6 during operations and time to update predictions for closure. In addition, Agnico Eagle will assess different closure and mitigation alternatives for SP6 as part of the Final Closure and Reclamation Plan based on monitoring data and with the objective of meeting water quality objectives. The attached memorandum provides information on the diffusive loading analysis, as well as compares post-closure water quality of SP6 to aquatic guidelines. Attachment A: Information on Diffusive Loading Analysis, and Post-closure Water Quality of SP6 Compared to Aquatic Guidelines	Part A: Partially Resolved Part B: Resolved by commitment	Part A: Agnico Eagle to provide information on the diffusive loading analysis. Environment and Climate Change Canada was provided with the requested information on October 25, 2023. Agnico Eagle and ECCC commit to work together to resolve this Technical Comment prior to the Public Hearing. Part B: Agnico Eagle provided a comparison of results to the guidelines for the protection of aquatic life to Environment and Climate Change Canada on October 25, 2023. In future updates, Agnico Eagle will provide this comparison in the Water Balance and Water Quality model report and the ICRP.	Part A: Ongoing Part B: Complete
ECCC	ECCC- TRC-11	Uncertainty in thermal modelling for Discovery WRSFs	Most of the waste rock at the Meliadine mine is classified as non-potentially acid generating and non-metal leaching (NPAG/NML). Waste rock associated with the Discovery Pit is different in that the majority has been classified as potentially acid generating or metal leaching (PAG/ML) or uncertain with respect to acid generation and metal leaching. Discovery Pit waste rock must therefore be stored in a manner to prevent development of acid drainage or metal leaching which would negatively impact water quality. A thermal cover made of NPAG/NML waste rock is proposed for the Discovery waste rock storage facilities (WRSFs) to maintain waste rock within permafrost and prevent development of acid drainage and metal leaching. The WRSF will have an active layer at surface, where ground will thaw back each summer due to warmer air temperatures, therefore the thermal cover over the WRSF must be thicker than the active layer to ensure PAG/ML waste rock remains frozen. Thickness of the thermal cover was decided based on thermal modelling. "The active layer is anticipated to be approximately 5 to 6 m and thus will be contained within the 6 m NPAG/NML cover system." (Section 5 (Conclusions)). Uncertainty in the thermal model is not discussed. As currently described, the proposed cover thickness of 6 m is the same depth as the approximate minimum active layer. A sensitivity analysis (varying model inputs within reasonable ranges to understand which inputs affect results the most) to present possible ranges of active layer thickness could help evaluate under which conditions the proposed cover thickness would be sufficiently protective. No data are available to compare with model predictions since these WRSFs are yet to be constructed. If possible, comparing the model's performance without heating from exothermic reactions to freeze back data from WRSF currently on site would help increase confidence in the model results. For a measure to prevent a possible problem as complex as generation of acid drainage and metal leaching, it might be relevant to include a safety factor in the design of the thermal cover thickness.	ECCC recommends that the Proponent discuss the uncertainty in the Thermal Modelling of Meliadine Discovery WRSFs, through a sensitivity analysis or comparison to measured data at other WRSF. Additionally, the Proponent might consider including a safety factor in the design of the thermal cover thickness.	ECCC has recommended that Agnico Eagle discuss uncertainty in thermal modelling of the Discovery WRSF. Uncertainties that can be constrained by modelling include: • Physical and thermal properties of materials modelled; • Proportion, or distribution, of PAG/ML or NPAG/NML waste rock; • PAG/ML exothermic heating potential (intrinsic oxidation rate); • WRSF geometry; • Permafrost conditions underlying the WRSF; and • Climate. The latter three uncertainties from the list above have been constrained by mine planning, monitoring records, and existing project approvals, respectively. Uncertainty in thermal material properties, distribution of PAG/ML vs. NPAG/NML waste rock and the heating potential of the PAG/ML waste rock can be evaluated within the thermal modelling program. These three uncertainties have been accounted for by assuming conservatism in modelling inputs used relative to active layer development. That is to say that within the range of possible values for each of these model inputs, the modelling program has assumed the worst-case condition for thaw of the WRSF. ECCC has also recommended comparison to measured data at other WRSFs. The Portage WRSF at Agnico Eagle's Meadowbank Mine is a fully constructed WRSF containing PAG/ML waste with a 4 metre NPAG/NML thermal cover system whose closure performance is actively being monitored through temperature monitoring at thermistors which have been drilled into the WRSF. The Portage WRSF thermistors show the continued gradual shallowing of the active layer through repeated years of monitoring. This indicates that the WRSF is continuing to freeze back but has not yet reached a state of equilibrium. Based on thermistor data, the depth of the active layer is approximately 3 metres. The thermal modelling of the Discovery WRSFs has considered uncertainty in the model by assuming conservatism where uncertainty exists, thereby integrating a certain factor of safety into the model results for design thickness of the thermal cover system. Additional analysis of uncertainty would yield decreased active layer depths.	Response provided October 23, 2023. Agnico Eagle designed the Discovery WRSF with thermal cover and based the design on experience gained from Meadowbank (Portage WRSF) and Whale Tail (Whale Tail WRSF). Agnico Eagle already has approval from the Regulatory bodies for the Portage WRSF and Whale Tail WRSF; the methods and approaches the same. As referenced in Part D, Item 4 of the Amended Whale Tail Water Licence No. 2AM-WTP1830, "the Board has accepted the Whale Tail WRSF Expansion and IVR WRSF Design Report and Drawings (December 2019) and the accompanying For-Construction drawings with the issuance of this Licence. The Licensee shall provide For-Construction drawings for instrumentation placement at the Waste Rock Storage Facilities in accordance with Part D, Item 1". ECCC requested additional information on: 1. Geochemical characterization of Discovery Waste Rock 2. Meliadine mine - Waste deposition options; Geochemical characterization of Portage Waste Rock 3. Portage WRSF update Agnico Eagle notes that these documents (except direct information on the Portage WRSF) has been provided in the application. Through this response, Agnico Eagle is highlighting where to find the relevant information, plus providing the Portage related documents. 1. Geochemical Characterization of Discovery Waste Rock The geochemical characterization of the Meliadine Mine site, including the Discovery waste rock can be found in: • Appendix G-06 of Meliadine Extension Application - Geochemical Characterization and Source Term Report (Lorax 2022) • Section 4.1 Geochemical Characterization Results for Waste Rock • Section 5.4 Distribution of Acid Generating Potential at Meliadine • Section 7 Results Summary • SDG-3 of 2014 FEIS – Geochemical Characterization of Mine Waste at Meliadine Gold Project (Agnico Eagle 2014) • Section 3.2 Acid Generation Potential Waste Rock and Ore • Section 6.1 Summary of Environmental Characteristics of Waste rock and Ore • Meliadine Extension Water Balance and Water Quality Model Update (Lorax 2023) • Appendix C.2 Kinetic testing program final results References: Agnico Eagle (Agnico Eagle Mines Limited). 2014. Geochemical Characterization of Mine Wastes at Meliadine Gold Project – 2014 FEIS SDG-3. Prepared by Golder Associates for Agnico Eagle Mines Ltd. Lorax (Lorax Environmental Services). 2022. Appendix G-06 of Meliadine Extension Application - Geochemical Characterization and Source Term Report. Prepared for Agnico Eagle Mines Ltd., by Lorax Environmental Services, April 2022. Lorax. 2023. Meliadine Extension Water Balance and Water Quality Model – Technical Memorandum. Prepared for Agnico Eagle Mines Ltd., by Lorax Environmental Services, January 2023. 2 Meliadine Mine – Waste Deposition Options The waste deposition options for the Meliadine Mine are discussed in Appendix-F12 of the NWB Water License Application, the Meliadine Interim Closure and Reclamation Plan.	Resolved with Information Provided	Information to be provided by Agnico Eagle and further discussions to occur. • Geochemical characterization of Discovery WR and Portage WR • Where find description of PAG in the application • Where to find description of waste deposition options It is acknowledged that this information (except the Portage report) is already included in the Application package provided to the NWB in January 2023. The Portage report will be provided.	Complete
CIRNAC	CIRNAC- R-05	Marine Discharges to Melvin Bay	The Meliadine Extension Application states that Saline and Surface Contact water will be discharged to the marine environment beginning in 2025 (Appendix E Table 2-1). This is consistent with the 2022 Annual Report in which the water balance model setup stated that "currently, saline water from the underground mine is stored in Tiriganiaq Open Pit 2 (Tiri 02) and as such no actual discharge quantities were applied in the 2022 model year update. Previous discharges applied to the WBWQM [Water Balance Water Quality Model] include using trucks to discharge saline water from SP4 to Itivla Harbour. The proposed Waterline (i.e., the installation of an effluent waterline discharging to Itivla Harbour) will deliver treated effluent to Itivla Harbour via a diffuser. This model assumes the waterline will be operational beginning in 2025 with a seasonal discharge from June 20th to September 29th at 20,000 m3/day." It is understood that the waterline is currently under construction and is expected to be commissioned in 2025. Once in operation, the waterline will be used in combination with the Saline Effluent Treatment Plant – Water Treatment Complex (SETP-WTFC) to discharge treated saline water to Itivla Harbour. It is also understood from the extension application that the SETP-WTFC will receive saline water from SP6, a new large saline storage pond. The SETP-WTFC will discharge treated saline water to SP3 (which can contain both treated saline water and non-treated surface contact water) for pumping to Itivla for release to the marine environment through a new permanent discharge and diffuser system. While there is capacity for temporary storage of saline water in TIRI02 to manage saline water in the short-term, the application documents state that in 2022, about 500,000 m3 would be stored in the pit before discharge begins in the summer of 2025. However, the 2022 Annual Report in Section 3.2.4.4 TIRI02 Water Volume Figure 14 (shown below) shows the results of the modelled and observed volumes of saline and indicates that by 2024, saline water stored temporarily in the pit could be in the order of 800,000 m3 and by the start of 2025 water discharge, volume in the pit could be close 1.1 million m3 or approximately 100% of the usable TIRI02 storage capacity. Furthermore, Section 3.3.2.1 of the Water Balance and Water Quality Model (Appendix E of Appendix F21) notes that the maximum predicted pond volume of 1.5 Mm3 may be reached in June 2025 (Figure 3-9 below). Once Lake 87 is dewatered during the freshet of 2025, it will become the primary saline pond (SP6), and the saline contact water stored in TIRI02 will be discharged via the waterline to Itivla Harbour to allow mining of the TIRI02 pit to progress during the winter of 2025/26. Therefore, discharge to the marine environment via the pipeline to Itivla Harbour commencing in 2025 is critical to the ongoing operation and effective management of saline water. CIRNAC notes no details on the construction and commissioning schedule for the 16-inch waterlines, the new marine discharge pipe and diffuser, or the yet-to-be-approved SP6 saline pond have been provided. In addition, no discussion has been provided on potential consequences if schedules slip and discharge to the marine environment can not begin in 2025, as discussed in the various application and reporting documents.	CIRNAC recommends that AEM provide: a) Detailed discussion and schedule for actual and planned activities related to the construction of all components of the saline water collection and marine discharge system, complete with scheduled risks, risk mitigation and management; b) Potential project impacts and adaptive management measures that would be required if discharge to the marine environment via the pipeline(s) can not commence in 2025 as planned in the Meliadine Extension Application; and c) An update on long-term saline water management if issues related to ECCC toxicity criteria remain unresolved and prevent the discharge of saline water beyond 2025.	Responses a) and b) We were delayed for almost 2 years with the construction of the waterline due to unforeseen circumstances. However, we are maintaining the schedule to have the waterline commissioned by 2025. As already outlined in the approved Adaptive Management Plan we would evaluate utilizing other pits and/or underground for additional water storage for the "at risk" adaptive management level. Response c) Agnico Eagle is continuing discussions with the appropriate regulatory authorities and continues to do additional test work and identify a water treatment facility. We are confident that we will establish a reasonable solution.	Response provided October 18, 2023. Response a) The status of the waterline construction (as of October 2023): • 2023 season: o Recirculation loop on the mine site completed. o Mechanical installation (pumps at the plant, high pressure, and low point containers along the ANAR). o Piping, optic fiber, and earthworks from KM30 (mine site) to KM17 completed (aim to complete to KM15 by the end of the year). o Material (aggregates) generation from Esker B10. • 2024 season: o Piping, optic fiber, and earthworks from KM15 to discharge location at Itivla (remaining work). o Remaining mechanical installation. o Directional drilling and diffuser installation at Itivla. o Start of the commissioning. • 2025 season: o Complete the commissioning. Please note that schedules are subject to change due to unforeseen circumstances. Response b) An analysis of the interactions between stored water and the groundwater regime is provided in Attachment A (Meliadine Mine Crown Pillar Thermal Modelling Study Summary). Note this was posted to the NIRB registry as Commitment 19 and is reposted to the NWB registry for completeness. Response c) Agnico Eagle confirms that saline water from Tiriganiaq Pit 2 will not be discharged to Meliadine Lake. Attachment A: Meliadine Mine Crown Pillar Thermal Modelling Study Summary	Partially Resolved	Agnico Eagle to provide a schedule of construction going forward and include updated details on progress and schedule in the 2023 Annual Report. Agnico Eagle confirms that saline water from Tiriganiaq Pit 2 or any other saline water storage would never be discharged into Meliadine Lake. Agnico Eagle provided an analysis of the interactions between stored water and the groundwater regime to CIRNAC on October 18, 2023. Agnico Eagle will follow the Adaptive Management Plan should there be a need for storage of saline or surface contact water in a pit or pits other than TIRI02 during operations. Per the Water Licence, Agnico Eagle would communicate this operational update to the NWB prior to the commencement of the works, update the corresponding management plans as part of the Annual Report, conduct continuous monitoring of the activity (i.e., water volume, water elevation, water quality, etc.), and provide updates to the NWB in the Annual Report. Agnico Eagle and CIRNAC commit to work together to resolve this Technical Comment prior to the Public Hearing	Ongoing

Table G-1: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Ongoing

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Interaction with Intervenor (as of 28- Nov-23)
CIRNAC	CIRNAC-R-06	Operational Saline Water Storage in Tiriganiaq Open Pit 2	The Meliadine Extension Application states that Saline and Surface Contact water will be discharged to the marine environment beginning in 2025 (Appendix E of Appendix F21, Table 2-1). This is consistent with the 2022 Annual Report. The Extension Applications (e.g., Groundwater Management Plan) also states that once Lake B7 is dewatered during the freshet of 2025, it will become the primary saline storage pond (SP6), and the saline contact water stored in TIR02 will be discharged via the waterline to Itivia Harbour to allow mining of TIR02 pit to progress during the winter of 2025/26. This seems to be in contrast with the comments provided in the 2022 Annual Report predictive modelling, which stated that "The model assumes the waterline discharge will be sourced as 60% saline water from Tiri 02 and 40% surface contact water from CP1 until the volume of saline water in Tiri 02 is drawn below 25,000 m3. After this, the waterline discharge will be sourced as 100% surface contact water from CP1 to minimize discharge to Meliadine Lake. During this period, saline water from the underground mine will continue to fill Tiriganiaq Open Pit 2 (Tiri 02). If the volume in Tiri 02 reaches 50,000 m3, the source water will revert to 60% saline water and 40% surface contact water until the Tiri 02 drawdown target is met again." Given the above, it is apparent that AEM plans to continue storing saline groundwater in the TIR02 pit until 2025, when the waterline becomes operational, and water is discharged from the TIR02 pit. It is unclear if AEM will continue using TIR02 as saline water storage after completing the mining of the pit or if all sources of saline water formerly collected in TIR02 will now go directly to SP6. Approval was granted to AEM for the temporary storage of saline water in TIR02. Therefore, the practice of using TIR02 for the longer term or the use of any other pit at the Meliadine Mine for saline water storage cannot continue until this practice is appropriately assessed and approved through the provision of supporting information and relevant studies.	CIRNAC recommends that AEM: a) Confirm that no saline water will be stored in TIR02 once it has been dewatered through pipeline discharge to the marine environment in 2025; and b) Obtain the necessary approvals through supporting information and relevant studies to use TIR02 beyond 2025 or any other open pit at the Meliadine Mine for saline water storage.	Responses a) and b) Agnico Eagle has approval to store water in Tiriganiaq. In addition, all of our pits are part of our approved Adaptive Management Plan. It could receive saline water or contact water during the operational window for adaptive management and flexibility of the site. Further, the pit will be flooded at closure as part of the ICRP.	Not applicable.	Partially Resolved	Agnico Eagle confirms our priority is to discharge Tiri 02 water to Itivia Harbour in 2025. As per update to CIRNAC-R-05. Agnico Eagle and CIRNAC commit to work together to resolve this Technical Comment prior to the Public Hearing.	Ongoing
CIRNAC	CIRNAC-R-07	Saline Water Storage in Lake B7	The main application document and its appendices note proposed changes to saline water at the Meliadine site, including proposed Saline Water Storage in Lake B7 after dewatered in 2025 and became SP6. By 2025, approximately 1 million m3 of saline water will be stored in TIR02, which will be pumped to Lake B7 after the lake has been dewatered and SP6 has been created. Saline water from SP6 will be pumped to the Saline effluent Treatment Plant (SETP) complex for treatment and discharge to SP3, from which it will be pumped through the water line(s) to Itivia Harbour for marine discharge. The application documents note that SP6 will then be the primary Saline Water storage facility operating as currently planned from 2025 to 2043, with a normal operating capacity of ~1.1 million m3 and possible higher volumes in the order of 1.3 to 1.7 million m3. CIRNAC's review of Appendix E3 (2022 Thermal Assessment Report) noted that Lake B7 has an open talk connecting to the groundwater regime. A review of Appendix E4 (Updated Hydrogeology Modelling, Section 4.6) noted that "a specified concentration boundary of 55,000 mg/L was applied to Lake B7 starting in the Year 2025 to represent that it will be dewatered and then filled with saline water". CIRNAC could find no reference to, or discussion of, assessment of long-term saline water storage. "1 million m3/year for almost 20 years in Lake B7 (SP6), on groundwater existing and future groundwater quality and potential flows and impacts on adjacent surface water receptors (especially Meliadine Lake).	CIRNAC recommends that AEM: a) Clarify whether the potential impacts on Groundwater and receptor surface waters from saline water storage in Lake B7 (SP6) from 2025 to 2043 have been explicitly modelled and assessed; and b) Provide appropriate modelling information, assessment results and supporting documentation prior to approving Lake B7 as SP6 for a long-term primary Saline Water storage facility.	Response a) Agnico Eagle confirms the hydrogeological model has already been completed and assessed. The assessment was submitted to the NIRB and the hydrogeological models were submitted to the NIRB and the NWB. Response b) The requested information has already been provided to the NIRB as part of the environment assessment process.	Response provided October 23, 2023: Agnico Eagle has provided the current water quality in Lake B7, which is consolidation of information provided previously in Annual Reports in Attachment A. The predicted water quality in SP6 is provided in Attachment B. It is noted that this information was included in the Appendix F-21 of the Water Licence Application package provided to the NWB in January 2023, specifically Appendix D of the water balance and water quality model report. Attachment A: Lake B7 Water Quality (1997 to 2022) Attachment B: Predicted Water Quality SP6 (Extracted from Appendix F-21, Appendix E of the Water Licence Amendment Application)	Partially Resolved	Agnico Eagle to provide lake monitoring data and predictions for the potential impacts on groundwater, receptor water quality and permafrost of surface soils surrounding Lake B7 during the water licence amendment process. Agnico Eagle will provide this information to CIRNAC prior to the Final Written Submissions.	Ongoing
CIRNAC	CIRNAC-R-09	Interim Closure and Reclamation Plan (ICRP)/Security Estimate	The Interim Closure and Reclamation Plan (ICRP) (Appendix F12) is an SNC document dated January 13, 2023. The plan builds on earlier closure plans, including: • AEM's Preliminary Closure and Reclamation Plan, prepared in support of the Water Licence application for Meliadine Mine, April 2015 • SNC, Meliadine Interim Closure and Reclamation Plan – Update, December 2019 • SNC, Reclamation Work and Costs Submitted in support of the Waterline for Treated Groundwater Effluent Discharge Application, June 2020 • SNC, Meliadine Interim Closure and Reclamation Plan – Update 2020, Submitted to NWB as part of the Meliadine Water Licence Amendment, April 2021 • AEM, Conceptual Closure Plan for Meliadine Extension Submitted to NIRB as part of the Meliadine Extension Final Environmental Impact Statement, July 2022 As seen from the dates above, AEM started ICRP development and estimating associated security costs for the Meliadine Project more than 8 years ago. SNC has been involved in the updates of the ICRP since 2019. Based on this history, CIRNAC would expect that the fundamentals of the ICRP process, goals, approach, and methodology would be well established and that cost estimates could focus on details associated with the site and activities to be undertaken to achieve closure and post-closure objectives and site conditions. Notwithstanding the above, CIRNAC's initial review of SNC's current Meliadine Extension application closure liability estimate, as contained in Appendix J of Appendix F12, noted that the cost estimate provided in the January 2023 SNC liability estimate is based on the same Unit Cost Rates used to develop the earlier SNC cost estimate. Given the number of years since the estimates were first developed, CIRNAC believes the Security estimate needs to be updated using appropriate Unit Rates that reflect 2023 economic conditions. CIRNAC will conduct a more detailed review once updates are provided.	CIRNAC recommends that AEM review and update all Units' Rates, Lump Sum costs, allowance, and other rates established in earlier estimates and used again in the January 2023 Meliadine ICRP cost.	As per our Security Management Agreement and current practice, Agnico Eagle will meet with CIRNAC and the KiVA to discuss security after the Technical Meeting.	Not applicable.	Partially Resolved	As noted in the response by Agnico Eagle in the technical comment submission (dated September 18, 2023). After the Technical Meeting, Agnico Eagle will meet with CIRNAC and the KiVA to discuss security.	Ongoing
CIRNAC	CIRNAC-R-13	Algal Blooms in Meliadine Lake	During the 2021 Annual Report review, CIRNAC noted the observation of algal blooms in Meliadine Lake, a clear indication that something was affecting the phytoplankton community in Meliadine Lake. In light of these observations, CIRNAC recommended that AEM conduct additional studies to determine the root cause of the algal blooms and determine whether the impact is the direct result of effluent discharge to Meliadine Lake. This recommendation was reiterated during the 2022 Annual Report review as AEM did not provide a satisfactory response identifying the root cause of the algal blooms. The proposed Meliadine Extension project will result in increased discharges to Meliadine Lake relative to the volume of water that has been discharged to date. Based on these projected increases and the prior observations of algal blooms, it would be prudent for AEM to conduct the requested studies to assess and minimize any effects on the phytoplankton community.	CIRNAC recommends that AEM: a) Design a study to investigate and identify the root cause of the algal blooms in Maladine Lake and submit it for review with CIRNAC and other interested parties; b) Based on review and feedback, conduct agreed studies to determine the root cause of the algal blooms; and c) Based on the study's findings, develop action plans to prevent algal blooms in Meliadine Lake.	Responses a), b), and c) As these recommendations are also provided the 2022 Annual Report Comments, we refer CIRNAC to Agnico Eagle's September 15, 2023 response to CIRNAC-6. As per the monitoring data Meliadine Lake is still classified as oligotrophic. An oligotrophic lake is defined as: body of water characterized by extremely low nutrient concentrations such as nitrogen and phosphorous and resulting very moderate productivity. Oligotrophic lakes are those low in nutrient materials and consequently poor areas for the development of extensive aquatic floras and faunas	Response provided October 23, 2023: Phosphorus data in sediment samples from Meliadine Lake Total phosphorus was analyzed in sediment samples collected in 2021 but not in sediment samples collected in 2015, 2016, or 2018. The tabulated sediment chemistry data is provided Attachment A and were included in Appendix F1 of the 2021 AEMP report. Interpretation of TP data from MEL-01 within the AEMP Response Framework Temporal plots of total phosphorus (TP) concentrations and summary statistics for the various areas are provided at the end of this write-up to help put TP concentrations measured in 2020-2022 in context. Concentrations of TP in individual samples collected in the East Basin in 2020, 2021, and 2022 are provided in Tables 3 to 5. Shaded cells indicate TP concentrations that were measured above the AEMP Action Level of 0.0075 mg/L. TP was naturally variable among the different basins and temporally during the baseline period (see Figure 1 in this response). TP concentrations were typically in the range of 0.003-0.0075 ug/L in most of the samples collected during the baseline phase. However, prior to the start of construction (i.e., baseline phase), TP occasionally exceeded the AEMP Action Level in the East Basin (MEL-01), near the outlet to Peter Lake (MEL-04), and near the outlet to the Meliadine River (MEL-05). These data demonstrate that the trophic classification for Meliadine Lake occasionally falls outside the range of oligotrophic conditions. In 2020, the average concentration measured during the open water period at MEL-01 was 0.0079 mg/L, slightly above the AEMP Action Level of 0.0075 mg/L. However, the slightly higher TP concentrations in 2020 did not appear to contribute to higher phytoplankton biomass in the East Basin. Phytoplankton biomass in the East Basin was in the range of 175-250 mg/m3 in August 2020. These results were below the range observed from 2015-2019 (300-425 mg/m3), suggesting TP and other nutrients in the effluent were not contributing to higher primary productivity. As outlined in the Response Framework, there are several potential actions that could have been taken in response to the exceedance of the AEMP Action Level in 2020: • Confirm Low Action Level trigger • Compare to FES predictions • Investigate further to identify contributing factors from the Mine • Examine ecological relevance • Identify potential mitigation options • Increase monitoring • Re-evaluate benchmark and revise if necessary Because the phytoplankton community did not show an increase in biomass in 2020, the appropriate response was to confirm the Low Action Level trigger in 2021 and continue to assess the ecological relevance of exceeding the TP AEMP Action Level of 0.0075 mg/L by monitoring the structure and productivity of the phytoplankton community in Meliadine Lake. Water quality monitoring completed in Meliadine Lake at MEL-01 in 2021 verified that TP concentrations were trending lower in the East Basin. The annual mean concentration in 2021 was 0.0073 mg/L, just below the AEMP Action Level. No action was recommended other than continuing to monitor TP concentrations and the phytoplankton community as per the AEMP Design Plan. In 2022, the annual mean concentration of phosphorus at MEL-01 was 0.0068 mg/L, slightly above the normal range of baseline/reference conditions (0.006 mg/L) but below the AEMP Action Level. Only 3 of 18 samples collected in 2022 exceeded the AEMP Action Level. No action was recommended other than continuing to monitor TP	Partially Resolved	Agnico Eagle to provide 2020 to 2022 total phosphorus data (from the AEMP near-field stations), and 2023 data with the annual report, with interpretation to the AEMP action response. An action plan will be presented if anything actionable is identified. Agnico Eagle will also check the historical sediment dataset for phosphorus and provide it to CIRNAC. Agnico Eagle provided this information to CIRNAC on October 23, 2023. Agnico Eagle and CIRNAC commit to work together to resolve this Technical Comment prior to the Public Hearing.	Ongoing
CIRNAC	CIRNAC-R-14	Application Report Content	CIRNAC noticed the following inconsistencies while reviewing the submitted documents: • Main Application Document, Section 3 Table 3.1-1 references ICRP F-12 as Current Plan Version 2020. This is incorrect as F12 is SNC's 1st draft, December 2022, NWB Submitted Version 0, dated 13 January 2023. • Most site layout plans (Mine, Itivia, and roads) do not show the Meliadine Site to Itivia waterlines or the Discovery to Meliadine waterline. This note applies to all other documents where the Waterlines are not explicitly considered. • CIRNAC could not identify the location of the SETP-WTC on some site layouts, such as in Figure 2.1-1 of the Main Application Document.	CIRNAC recommends that AEM address the above-listed issues in future updates of the documents.	Agnico Eagle appreciates CIRNAC's review and comments.	Not applicable.	Resolved with Information Provided	As per the response by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete
DFO	DFO-TRC-01	Baselin information on Fish as Fish Habitat		DFO-FFHPP requests that additional baseline information be provided on fish use and habitat, as well as revised impact assessments based on the increased duration of the project are required to conduct a thorough review of the potential impacts and determine what Harmful Alteration, Disruption, or Destruction of Fish Habitat is likely to occur. DFO-FFHPP understands that additional baseline is being collected by Agnico and that information is required to complete our review.	Agnico Eagle has undertaken field programs to collect additional information requested by DFO. DFO expressed an interest in understanding seasonal habitats and the fish that use these habitats. The field study and locations were determined in consultation with DFO and completed over 8 weeks from June to September. A field summary report outlining the locations, methods, and results will accompany the Fisheries Act Authorization Application. Based on this additional collection of information, we are confident we have the appropriate level of information for DFO to approve the Fisheries Act Authorization. Date of application submission is currently planned for early Q1 2024. The impact assessment has been completed through the NIRB process; therefore, a revised impact assessment is not necessary.	Not applicable.	Resolved by commitment	Agnico Eagle will provide a table that lists works, undertakings, and activities (WUA) related to the Meliadine Extension and that characterizes changes to fish habitats, seasonal use (e.g., spawning, overwintering, rearing, migration), fish habitat sensitivity, mitigation measures, and residual pressures. This table is expected to also satisfy the commitments of TRC02. This table will be provided in the Fisheries Act Authorization Application submission anticipated in January 2024.	Ongoing
DFO	DFO-TRC-02	Impact of flow and water level changes on fish habitat		DFO-FFHPP requires a detailed analysis of the impact from changes in flow in all impacted watersheds on the proposed mine site due to the actions of limiting surface flow from entering the mine footprint and the diversion of contact and wastewater from natural flow paths. While AEM provided information on changes in flow and water levels, they did not provide an analysis on what these changes mean for fish habitat and fish passage. DFO-FFHPP requires an analysis of temporal and spatial habitat changes due to changes in flow from proposed mine associated works, undertakings, and activities over the various operational phases of the mine.	During the operational phase we have provided our analysis that the fish habitat and fish passage will not be functioning, which is the premise for an offsetting plan. There is no need for additional information to define the granular activities during the operations. At closure and post-closure, it has been well documented that we will be reforesting this area and reconnection will be established. Agnico Eagle needs to develop an Offsetting Plan to account for the fish habitat loss during the operations. Agnico Eagle looks forward to further discussion during Technical Meeting and will try to schedule a meeting with DFO in advance of the Technical Meeting.	Not applicable.	Resolved by commitment	Agnico Eagle will provide a table that lists works, undertakings, and activities (WUA) related to the Meliadine Extension and that characterizes changes to fish habitats, seasonal use (e.g., spawning, overwintering, rearing, migration), fish habitat sensitivity, mitigation measures, and residual pressures. This table is expected to also satisfy the commitments of TRC-01. This table will be provided in the Fisheries Act Authorization Application submission anticipated in January 2024.	Ongoing

Table G-1: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Ongoing

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Interaction with Intervenor (as of 28- Nov-23)
DFO	DFO-TRC-03	Watercourse Crossings		DFO-FHPP requires a list of locations and types of proposed watercourse crossings including roads to Discovery, and the proposed windfarms. The information should be presented in a table and include but not limited to: <ul style="list-style-type: none">• locations where road infrastructure interacts with fish-bearing waterbodies and watercourses, including seasonally wet drainages;• type of crossing proposed;• fish species present and life stage;• identification of fish bearing waterbodies downstream and/or• Mitigation measures for crossing impacting fish bearing watercourses Note that the seasonal channels between fish bearing waterbodies may be considered fish habitat. DFO-FHPP considers that this issue should be reviewed as part of the water licence amendment process as we identified road crossing as being a priority issue which may overlap with one or more additional regulator's mandates.	The impacts of road crossings on fish and fish habitat are well understood. Additionally, the fish community composition within the area of the Meliadine Mine site has been extensively studied and is well understood. Additional information has been collected and Agnico Eagle has derived conservative estimates of community composition in extensive collaboration with DFO. This information is contained in the offsetting plan. Watercourse crossings will be designed and constructed to meet current industry standards, including the ability to pass fish. Design information and exact location of crossings will be provided as part of the Request for Review process prior to construction. As stated in response to DFO-TRC-02, the requested information is not necessary for this component of the application; however, a table will be provided to DFO prior to the Technical Meeting.	Not applicable.	Resolved by commitment	Agnico Eagle will provide a "typical" culvert design that includes fish passage specific information (e.g., type of construction, embedment, size of culvert vs stream width, substrate, in-culvert velocity). This will be provided in the Fisheries Act Authorization Application submission anticipated in January 2024.	Ongoing
DFO	DFO-TRC-04	Mitigation for watershed A and B		Mitigation measures to maintain water levels in watershed A and B should be included in the water management plan. Watershed A is a known spawning habitat for Arctic Grayling and forage fish source for Arctic Char. Watershed B is Arctic Char habitat. These measures should aim at maintaining water levels to allow for important biological functions of fish population present in the watershed.	Agnico Eagle does not agree that mitigation measures to maintain water levels in watershed A and B should be included in the Water Management Plan. Arctic Char, Arctic Grayling, and forage fish species are known to occur in both watersheds. Under the current plan and to address past DFO comments, Agnico Eagle has included waterbodies downstream of the proposed operational area (e.g., Lake A13) in the habitat loss calculations to account for these impacts, though no physical works will occur in these locations. Agnico Eagle will evaluate options to maintain flows in Watershed A and Watershed B, even though we are creating offsets for their "loss" and they will return to full function at closure.	Not applicable.	Partially Resolved	Agnico Eagle will provide a conceptual design and supporting information for the proposed B4 bypass which will provide supplementary flows to the lower B watershed. Agnico Eagle anticipates an engineered channel feature with varied substrate composition and instream structure to mimic a natural feature. In addition, supplementary flows to the lower end of the A lake chain will be provided via pumped water from further up the system. For both measures, Agnico Eagle will provide preliminary information of the conceptual design (e.g., location, source of the supplementary flow, description of measures, characteristics, objective of the measure and monitoring) prior to the Water Licence Public Hearing	Ongoing
KivA	KivA-TRC-02	limits on Annual Discharge to Meliadine Lake	See document for lengthy review	1) A Condition to the Water Licence be added to limit the annual discharge to Meliadine Lake to 1.1 million m3 annually. 2) With the reduced discharge, Agnico Eagle must provide details on water management infrastructure, including construction plans, updated management plans, and updated water quality water balance models prior to commencement of the Meliadine Extension, including impacts to levels on Meliadine Lake and downstream waterbodies.	Response 1) There is no evidence that water discharged to Meliadine Lake has a detrimental effect on the health of the lake. As shown in the water balance, between the years 2025 to 2043 the range of our annual discharge goes from 132,000 to 2,464,000 m3/year. Based on the water balance submitted to the NWB for this Application, the life of mine annual average is 1.3 Mm3. Based on our analysis through the NIRB process and existing operational monitoring, there is no effect on the receiving environment. The modelling shown through this process shows an optimization and an overall reduction in the volume discharged to the lake, and concentrations of the majority of parameters in the discharge, and therefore even less of an effect to the receiving environment. Response 2) Agnico Eagle does not agree with the recommendation to the cap of 1.1 Mm3 of discharge.	Not applicable.	Unresolved	Agnico Eagle and KivA will meet to further discuss this topic and determine a path forward to resolution, if possible.	Ongoing
KivA	KivA-TRC-03	Site Specific Water Quality Objectives in Meliadine Lake	Traditionally, Inuit have used the water from Meliadine Lake for drinking while fishing, hunting, or camping in the area. Currently, the water in Meliadine Lake meets Health Canada Drinking Water guidelines for maximum acceptable concentrations of arsenic, fluoride, and iron, however, AEMP benchmarks for these compounds exceed the guidelines. [refer to table in document] While it is unlikely that concentrations of the above would exceed drinking water guidelines in Meliadine Lake, it is important that site specific water quality objectives for Meliadine Lake are below these thresholds to ensure the safety of local Inuit, as well as Agnico Eagle employees who drink water from Meliadine Lake on site.	Site Specific Water Quality Objectives in the Aquatic Effects Monitoring Plan below the Health Canada Drinking Water Guidelines should be adopted in Meliadine Lake for arsenic, fluoride, and iron.	Site specific water quality objectives (SSWQO) were developed through review and approved by toxicology experts from Environment and Climate Change Canada (ECCC). In addition, the development of the SSWQOs followed the methodology defined by ECCC. A Human Health and Ecological Risk Assessment was completed for the Meliadine Extension (Agnico Eagle 2022). The risk assessment included evaluation of predicted water quality changes in Meliadine Lake from the Meliadine Extension and the potential risk to end users. There were no exceedances of water quality parameters that have health-based guidelines and therefore no risk. A summary of the most recent monitoring data from the edge of the mixing zone are provided below in Table KivA-3-1. As concentrations are well below drinking water guidelines and the SSWQOs, there is no justification to revise the SSWQOs. Table KivA-3-1: Monitoring Data from the Edge of the Mixing Zone	Not applicable.	Unresolved	The KivA had a question about drinking water quality. The AEMP Annual Report includes a comparison to the aquatic SSWQOs and the drinking water quality guidelines. Details are already included in the AEMP, refer to Section 3.4 of the AEMP. Discussions between KivA and Agnico Eagle will continue to try to resolve this outstanding issue.	Ongoing
KivA	KivA-TRC-05	Saline Enrichment of Lake 87 Sediment	The KivA reiterates the concerns of Environment and Climate Change Canada on salt enrichment of the sediment of Lake 87 (SP6) during operations and potential impacts to aquatic biota and downstream water bodies, including Meliadine Lake, during post-closure.	Guidelines for the protection of aquatic life are used to assess Lake 87 (SP6) for post-closure water quality.	The above comment is based on an assumption of the quality of the sediment and not predicted evidence. Based on this Application, Agnico Eagle will be operating for another 20 years which provides operational data to validate assumptions and will be used to update water quality predictions for final closure. Therefore, Agnico Eagle has time to validate before the Final Closure Plan.	Not applicable.	Pending	As this comment is aligned with ECCC-TRC-09, KivA will wait to confirm if this technical comment is resolved pending comments from ECCC.	Ongoing

Table G-2: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Complete

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Interaction with Intervenor (as of 28- Nov-23)
ECCC	ECCC-TRC-02	Water Balance and Water Quality Model calibration	The WBWQM provides estimates of water volumes and water quality for the different components including ponds, pits, the underground mine, surface runoff, interflow from waste, tailings and discharge. The accuracy of water volume estimates is important; overestimating the volume of water reporting to ponds will have implications for water management, treatment and discharge, and underestimating the volumes reporting to the ponds may impact any uses intended for that water (e.g. makeup water for the plant) and may result in consuming more freshwater than predicted. The accuracy of water quality estimates is also important as underestimating concentrations of metals and other parameters could lead to an inability to discharge the water or insufficient treatment capacity. Calibration of the WBWQM involves adjusting model inputs to correspond with observed (measured) values. When discussing the calibration for Pond CP3, the Technical Report states in Section 3.7.2 (Calibration to Collection Pond Water Balances), "The natural catchment runoff was also reduced by a factor of 0.5, which resulted in better water balance resolution, as well as reducing the modelled volumes in CP3, which resulted in a better fit to measured water quality [see Section 3.7.3]." No rationale is provided for this adjustment, which makes it difficult to understand if the halving of runoff volume should be applied to other catchments, or why it is specific to CP3. It is also not clear if it was applied to other catchments. Section 3.7.2 presents graphs with measured and modelled pond volumes over time and states, "In general, the calibrated water balance model replicates measured pond volumes well, accurately tracking the increase in volumes due to pumped inputs, freshet and rainfall generated runoff, as well as the effect of pumped withdrawals." Although the increases/decreases of measured and modelled values generally follow, sometimes the actual values are off by as much as 50,000 m3. Providing goodness-of-fit or another appropriate statistical measure would help determine if these discrepancies between modeled and measured values could impact overall mine water management.	ECCC recommends that the Proponent: • provide a rationale as to what might cause natural catchment runoff volume to be halved for CP3, and clarify if/how this rationale was applied to other catchments; and • provide a statistical measure of fit between modelled and measured pond volumes, and discuss how the variance could impact mine water management.	Response bullet 1) Estimated natural catchment runoff for CP3 was reduced by half to provide a better match between modeled and measured water quality in this pond. It was difficult to ascertain the exact natural catchment area contributing to this pond, due to the low relief topography, and the working assumption is that this natural catchment area is smaller in reality than what is assumed in the model. The same issue with catchment boundary definition was not encountered for any of the other ponds, and therefore no adjustments to modelled natural area runoff were necessary to achieve good model calibration at the other collection ponds. With respect to the difference between modelled and measured CP3 volumes (Figure 3-20 of the report), the maximum divergence on a given day is closer to 22,000 m3 in June 2020, as opposed to 50,000 m3 as referenced by the reviewer. Note that the comparison should be made between the CP3_Pond (CP3 0.5) and CP3_Obs_Vol (Normal) data, as the former represents the downsized natural catchment runoff used in the predictive model. If the maximum divergence between peak modelled and measured volumes for June 2020 is considered, understanding the timing of the peaks doesn't match exactly, the difference is closer to 11,000 m3. Response bullet 2) The focus of the model is determining whether a pond volume is likely to exceed an operating water level threshold, and/or result in an uncontrolled overflow. This is a binary (pass/fail) assessment conducted based on predicted peak volumes and does need to consider the exact day upon which this may occur. These peak volume predictions allow design pond volumes to be assessed, as well as the pumping system requirements to maintain the pond within the operating criteria. The second key output of interest with respect to pond water balances is the balance of total inflows and outflows, which relate to the total volumes requiring storage, potential treatment and discharge to the receiving environment. Standard statistical model performance metrics are not designed to assess this component. The model replicates the timing and magnitude of variation in pond inflows, outflows, and aggregated volumes well, providing additional confidence in the predictions used to inform mine water management planning.	Not applicable.	Resolved with Information Provided	Based on information provided by the Proponent at the Technical Meeting in October.	Complete
ECCC	ECCC-TRC-07	Changes to analysis methods and descriptions in the Aquatic Effects Monitoring Program Design Plan	Certain modifications between versions 1 and 2 of the AEMP Design Plan seem to reduce clarity or provide less analysis of the data. These include: • Data Analysis and Interpretation (Sections 5.1.4 & 6.1.4): Spatial patterns and visual temporal trends are to be analyzed for the In Aquatic Effects Monitoring Program Design Plan • Study Design and Schedule (Section 5.3.2): No schedule is provided in this section. Although the timing of the benthic invertebrate study is included in Table 4-2 (Aquatic Effects Monitoring Program Design Plan for the Meliadine Lake Study), it would be helpful to have it here as well. • Field Methods and Laboratory Analysis (Section 5.6.3): The description of parameters to be tested in fish tissue is "moisture content and metals, including mercury." The previous version of the Design Plan included a table that listed which metals would be analyzed (Table 5-7: Proposed parameters to be Analyzed in Tissue Samples for the Meliadine Aquatic Effects Monitoring Program with Expected Achievable Detection Limits). The list helps clarify that all appropriate metals will be included in the analysis. • Proposed Action Low Action Levels for Toxicological Impairment/Nutrient Enrichment for Meliadine Lake (Tables 8-2 & 8-3): An assessment criterion for benthic invertebrates is presently "Statistically significant difference in Near-field total density or richness compared to Reference", when previously the analysis included density of dominant taxa as well as total density and richness. Density of dominant taxa is relevant to evaluate possible changes in the benthic invertebrate community, particularly since evenness and similarity to reference communities are analyzed but not assessed. A detailed design plan helps ensure that the necessary data is collected and properly analyzed to monitor for any changes to the aquatic environment.	ECCC recommends that the Proponent justify the simplification of analyses and text between versions 1 and 2 of the AEMP Design Plan or re-integrate what was included in the previous version of the AEMP Design Plan.	The AEMP Design Plan Version 2_NWB (December 2022) already incorporated comments from regulators from the Version 2 draft in April 2022. Similar to the response provided in ECCC-TRC-06, the AEMP Design Plan will be updated accordingly through the Water Licence Annual Reporting process, based on when Meliadine Extension site activities are triggered to confirm that the necessary data is collected and properly analyzed to monitor for any changes to the aquatic environment.	Not applicable.	Resolved by commitment	As described in Section 5.1.4 of the current AEMP design, statistical analyses along with visual examination will be used to determine differences in water chemistry between exposure and reference areas. Agnico Eagle agreed to provide examples of statistical analyses that could be used to examine spatial and temporal trends in water chemistry. Agnico Eagle will re-institute the Design Plan from the previous AEMP to evaluate dominant benthic invertebrate community taxa. Agnico Eagle will integrate this update into a revised AEMP Design Plan which will be submitted within 60 days of Water Licence Amendment issuance	Complete
ECCC	ECCC-TRC-10	Saline water disposal during closure	At closure, saline water stored on surface will have to be disposed of. Pond volumes are included in Tables 2-2 (Existing (end of 2020) collection ponds for Meliadine Mine) and 2-3 (Collection ponds for Meliadine Extension) of the Technical Report. Total saline water pond volumes are approximately 1.2 million cubic metres. Section 3.8 (Closure and Post-Closure Assumptions) of the Technical Report states, "All remaining saline contact water is pumped from SP B7 to the underground void spaces from October 2043 onwards. ... It is assumed that once backfilled tailings and waste rock are accounted for, approximately 3 km3 of void space will be available to store saline water." The available underground void space that has been quantified is much greater than the holding capacity of the saline storage ponds, and it would be the preferred storage location as it is where the saline water originated. The section continues by presenting an alternative, "If additional saline contact water is present, it can be routed to an open pit, if necessary, where the higher density water would be expected to stratify." The assumption that high density water would stratify in pit lakes is not considered in the WBWQM where lakes are considered to be fully mixed. Detailed modelling of water quality would be required before in-pit deposition of saline water. ECCC notes that the WBWQM Update provides an alternative for saline water disposal as "Waterline remains available for first two years of Active Closure (2044 and 2045)." (Table 2-1 Meliadine Extension water balance and water quality model updates for Nunavut Water Board submission).	ECCC recommends that the Proponent confirm if they are still considering disposing saline water in pits. If so, a description of what modelling would be done, data necessary for the modelling and proposed timelines should be provided.	At this time Agnico Eagle is not expecting to store saline water in pits at closure. As part of the ICRP for closure saline water will be pumped to the underground with a potential to move water to Itiwa Harbour.	Not applicable.	Resolved with Information Provided	With information provided by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete
CIRNAC	CIRNAC-R-03	Total Dissolved Solids Concentrations in CP1	Higher than expected TDS concentrations in mine contact water at the Meliadine Mine have triggered several significant changes since the project was initially approved. These changes include: a) An amendment to the Water Licence No. 2AM-MEL1631 to increase the TDS effluent quality criterion for discharges to Meliadine Lake from 1,400 mg/L to 3,500 mg/L and b) adding a waterline to discharge mine contact water to Itiwa Harbour. Concentrations of TDS in Collection Pond 1 (CP1) are used as an indicator of TDS management challenges experienced at the site. The following figure, which was extracted from AEM's 2022 Annual Report to the NWB (Figure 13), indicates that maximum TDS concentrations in CP1 will consistently rise above the Maximum Authorized Monthly Mean Concentration discharge criterion of 3,500 mg/L during the winter periods when no discharge is taking place and will remain above 1000 mg/L throughout the year. In contrast, the following figure was extracted from Appendix H-07 (Figure 6-4) of the FEIS Addendum. In this case, concentrations of TDS in CP1 are predicted to remain well below 1,000 mg/L after 2026. This represents a more than 70% reduction compared to the predictions presented in the 2022 Annual Report. The Water Balance and Water Quality Model was updated for the Meliadine Extension submission to the NWB (Appendix E of Appendix F21). In section 4.1, AEM states that changes to the model have resulted in changes to prediction for key mine-related POPs, including TDS, ammonia and arsenic, and specifically with respect to the Effluent Water Treatment Plant (EWTP) notes: "As part of water management optimization, collection ponds previously routed to CP1 (e.g., CP3) are now routed to SP6, resulting in an overall reduction in ammonia concentrations at CP1 and in the discharge to Meliadine Lake (i.e., EWTP). Under both the 2022 FEIS and current model iterations, peak concentrations of TDS and total arsenic at the EWTP are expected to decrease in relation to changes in surface water management during the early operational phase (2025-2031)." Mid Meliadine Extension (2032-2038). "At the EWTP, model predictions for TDS, ammonia, and total arsenic show small interannual variability, with concentrations remaining below MDMER/Water Licence limits and remaining within a similar range under the 2022 FEIS Base Case model and current model iteration." "Model predictions at the Waterline and EWTP are expected to remain below their respective guidelines under both the 2022 FEIS and current model iterations. Most underground mine operations are complete in this time period and groundwater inflows to the Waterline are limited to flows from the TIRI-Wolf UG, resulting in gradual declines in the concentrations of TDS, ammonia, and total arsenic." Therefore, based on AEM's modelling and actual measurements, CIRNAC is of the opinion that AEM can consistently meet lower TDS discharge limits to Meliadine Lake.	CIRNAC recommends amending the CP1 TDS discharge criteria to lower values reflective of the predicted water quality modelling and actual results.	Evidence was put forward in the 2020 Water Licence Amendment application (Golder 2021) that TDS discharge criteria of 3,500 mg/L (maximum average) and 4,500 mg/L (maximum grab) will comply with the end of pipe toxicity criteria (i.e., will not be acutely lethal) and will not result in adverse effects in the receiving environment (Golder 2021; Agnico Eagle 2022). Agnico Eagle will continue to meet the Water Licence and MDMER discharge criteria. There is no rationale to change the discharge limits for the Meliadine Mine. In addition, the operations have to maintain flexibility to ensure the site can adapt to changing conditions. References Agnico Eagle (Agnico Eagle Mines Limited). 2022. Meliadine Mine – Meliadine Extension FEIS Addendum. Submitted to the Nunavut Impact Review Board. July 2022. Golder (Golder Associates Ltd). 2021. Water Quality Management and Optimization Plan Progress Update Rev4b; Phase 3: Meliadine Mine Effluent Discharge Benchmarks for Total Dissolved Solids. Submitted to Agnico Eagle Mines Limited. August 2021. Posted to the NWB Site August 20, 2021.	Not applicable.	Resolved with Information Provided	As noted in the response by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete
CIRNAC	CIRNAC-R-04	Post-Closure Seepage Quality from Reclaimed Areas	Section 2.1 of the Water Balance and Water Quality Model (Appendix E of Appendix F21) states that: "Source terms developed for the 2022 FEIS WBWQM described in the Geochemical Characterization and Source Term Report (Lorax, 2022b) are applied herein with few notable updates. Updates are generally related to changes to the mine site layout, mine facility water balance, thermal modelling profiles, and final kinetic testing results." Table 8-1 of Lorax (2022b) states: "All mine facilities areas, ore pads, and disturbed areas will be reclaimed at the end of operations. These areas will revert to background water quality at closure." Regardless of the effectiveness of environmental controls during operations and reclamation, CIRNAC is not convinced with AEM's position that reclaimed areas of the site will not result in higher chemical loadings than the background. For example, atmospheric dispersion of dust from ore, waste rock and tailings would typically result in some deposition of metals throughout the site at concentrations above the background. Other materials will also serve as a source term for potential metal loading (e.g., roads and pads constructed from waste rock). These sources can potentially leach metals into the receiving environment at concentrations higher than the background.	CIRNAC recommends that AEM provide specific information on the source terms used in the Water Quality Model for reclaimed site areas for the post-closure water quality predictions.	Source terms were provided in Appendix C of Appendix E of Appendix F21 of the submission to the Nunavut Water Board: •Appendix F21: Water Management Plan •Appendix E: Meliadine Extension Water Balance and Water Quality Model Update •Appendix C: Source Term and Geochemical Reports Agnico Eagle will be operating for another 20 years which provides operational data to validate predictions. In addition, on an annual basis Agnico Eagle is required to update the water balance and water quality models. Therefore, Agnico Eagle has time to validate before the Final Closure Plan.	Not applicable.	Resolved by commitment	As noted in the response by Agnico Eagle in the technical comment submission (dated September 18, 2023). •Agnico Eagle will continue to collect operational data for the next 20 years and validate the model predictions. •Agnico Eagle is required to update the water balance and water quality models on an annual basis.	Complete

Table G-2: Record of Technical Comments and Commitments from NWB Meliadine Extension Process Relevant to Application - Complete

Party	ID	Subject	Concern	Technical Comment / Recommendation (31-Aug-23)	Agnico Eagle Responses (18-Sep-23)	Agnico Eagle Additional Responses (date vary as outline below)	Status of Technical Comment (as of 28-Nov-23)	Commitments (as of 28-Nov-23)	Status of Intervention with Intervenor (as of 28- Nov-23)
CIRNAC	CIRNAC R-08	Sludge Disposal in Saline Water Storage	The Water Management Plan included as Appendix F21 of the NWB submission for the Meliadine Extension Project (Section 2.11.4) and Appendix 31-10 of the 2022 Annual Report for the Meliadine Gold Mine (Section 3.9.4.3) states that sludge produced as part of the total suspended solids (TSS) removal process at the Water Treatment Complex (WTC) is discharged into saline water storage. It is sampled monthly for metal content, hydrocarbons (C10-C50) and organic carbon to determine any potential impact on the receiving saline ponds. While saline water storage areas for WTC sludge disposal are not specifically identified, Section 2.2 of Appendix F21 indicates that saline contact water during the Meliadine Extension will be managed in various saline ponds on the surface (including SPD1, SP5, Sumps P3 and P4 at Pump, and Sump F2 at F Zone) and then routed to TIR02 (prior to 2025) and SP6 (2025 onwards). In 2022, as section 3.5.1 of the 2022 Annual Report noted, 3,350 m3 of sludge produced from the Effluent Water Treatment Plant-Water Treatment Complex (EWTP-WTC) treatment process was pumped to TIR02 for storage. In Section 3.9.4.3 of Appendix 31-10, AEM states that they may also explore other alternatives for sludge disposition in future years, such as dewatering using geotextile bags (e.g., Geotubes™) or mechanical dewatering, which could include technology such as filter press, centrifuge, or belt filters. The dewatered sludge could then be disposed of as a solid. CIRNAC notes that the current Water Management Plan describes the disposal of sludge waste in saline water storage facilities. It is CIRNAC's understanding that the practice has not undergone a formal review (e.g., a screening) to confirm that the practice will not result in significant environmental impacts.	CIRNAC recommends that AEM provide: a) Additional details of past studies supporting in-pit sludge disposal; b) Clarify what AEM means by "may also explore other alternatives for sludge disposition in future years" and provide clear commitments on studies and timelines; c) Evidence that the practice of disposing of sludge waste in the Tiriganiaq 2 Open Pit (or any other water body) has undergone an environmental screening to confirm whether the practice might result in significant environmental impacts.	Responses a), b), and c) As these recommendations are a copy and paste from the 2022 Annual Report Comments submitted by CIRNAC to the NWB, we refer CIRNAC to Agnico Eagle's September 15, 2023 response to CIRNAC-4.	Not applicable.	Unresolved	Agnico Eagle to provide further information on this topic in the next annual report.	Unresolved
CIRNAC	CIRNAC R-10	Increase in Freshwater Consumption from Meliadine Lake	As noted in Section 2.3.6.1 of the Main Application document and Section 2.8.1 of the Water Management Plan (Appendix F21), AEM states that more freshwater consumption than originally planned will be required for the Meliadine Extension mainly due to increased tonnage through the mill and increased camp capacity. Specifically, AEM anticipates an overall increase in the consumption rate of freshwater from Meliadine Lake from 742,000 m3/year for operations in the current Water Licence to 1,116,112 m3/year, an approximate 50% increase. There is an anticipated 63% increase in water needed for camp use, 49% for the paste plant, 53% for the mill, and 28% for the emulsion plant. Freshwater will also be needed for underground mining and Discovery installation. From CIRNAC's perspective, sufficient details have not been provided in the application documents to support/justify these numbers. A review of freshwater consumption from Meliadine Lake over the last 3 years (2020-2022) with full mining and milling show that consumption has ranged from a low of 296,823 m3, ~40% of the approved amount, to a high of 463,484 m3, 62% of the approved 742,000 m3. These consumption values are generally consistent with the percentage of actual milled tons (as estimated from reported tailings over these years, compared to the approved milling rate of 8,500 tpd). KiVA and local community members have expressed significant concerns about changes to Meliadine Lake and the need to minimize impacts on the lake. Ensuring that water use is optimized so as to reduce water demand from the lake is an essential component of sound water management practices and long-term sustainable operations.	CIRNAC recommends that AEM provide additional details to support the requested increase in freshwater consumption from Meliadine Lake.	Agnico Eagle refers CIRNAC to Table 2.3-2 of the Main Application Document with the details required to support the request. In addition, the requested volume is still less than the 2014 environmental assessment. We always look for opportunities to reduce our consumption; however, an upper limit is required for unforeseen circumstances.	Response provided October 18, 2023: CIRNAC requested further details on the increased water consumption for the mill and the camp. Table 2.3-2 from the Water Licence Amendment Main Application document (Agnico Eagle 2023) presents the freshwater consumption needs of the operation as defined by the 2014 Final Environmental Impact Statement (FEIS), the 2020 Type A Water Licence Amendment (the current Licence), and the amendment application for the Meliadine Extension. Table 2.3-2 of the Main Application document of the Amendment [table provided] Table 1 provides the percent change in operation freshwater consumption needs for the amendment in relation to both the 2014 FEIS and the current Licence for camp use and the mill. Table 1: Percent change in operation freshwater consumption needs from the 2014 FEIS and the current Type A Water Licence [table provided] Camp Use Increase Camp use represents freshwater required for human consumption. The rate of camp use is estimated at 250 liters per person per day, an increase from the 200 liters per person per day specified in the application of the current Licence (Agnico Eagle 2020). This revised value is based on the average historical water consumption measured at the existing Meliadine camp. With an estimated 905 workers expected to occupy the camp for the Meliadine Extension (up from 680 workers), this equates to an annual consumption of 82,580 m3 per year. Mill Use Increase Milling water usage is required to facilitate the gold extraction process. The rate of freshwater consumption used for milling purposes varies as the moisture content of ore feeding the mill can influence the volume of make-up water required. The rate used to estimate the annual mill water requirement is 0.21 m3 per tonne of ore processed, derived from 2019 mill water consumption data. This rate represents the 95th percentile of mill water consumption data from 2019 through 2022, providing flexibility for periods where drier ore feed requires a higher rate of freshwater consumption. As the mill feed rate is proposed to increase from 6,000 tonnes per day to 8,500 tonnes per day in the amendment, the freshwater consumption requirement of the mill has increased to 652,000 m3 per year. References: Agnico Eagle (Agnico Eagle Mines Limited), 2020. Type A Water Licence 2AM-MEL1631 Amendment. Agnico Eagle. 2023. Meliadine Extension Water Licence 2AM-MEL1631 Amendment Main Application Document.	Partially Resolved	Agnico Eagle will provide further detailed information regarding the need for a 20% water consumption contingency to CIRNAC prior to the Final Written Submissions.	Ongoing
CIRNAC	CIRNAC R-11	Itivia Fuel Storage Capacity	Table 1.2-1 of the Main Application Document states under the existing Meliadine Mine –Phase 1 & 2 Rankin Inlet Infrastructure–Fuel Storage column that there is "A fuel tank farm to store up to 80 million litres of diesel fuel in 8 x 10-million litre tanks". Under the Meliadine Extension Water Licence Amendment column, the table states that there will be an "increase of fuel tank farm to store up to 80 million litres of diesel fuel in 8 x 10-million litre tanks". Section 2.3.8 of the Main Application document AEM states, "There are no proposed changes for the Rankin Inlet Infrastructure". In Appendix F11 - Itivia Bulk Fuel Storage Facility EPMP, Section 2.2 states that currently, there are 2 fuel tanks at Itivia - Tank #1 20 ML and Tank #2 13.5 ML. Section 2.2 also includes the following update: "Agnico Eagle plans to add another 20 ML fuel tank within the GN fuel tank property area. This would be done in consultation with the GN and would be designed to meet applicable regulations and guidelines". Together, this would bring the Itivia capacity to 20+13.5+20=53.5 ML. The Spill Contingency Management Plan (Appendix 20) Section 3, Table 3.1 notes that there are three diesel tanks at Itivia Harbour (one 20 ML tank, one 13.5 ML, and one 4 ML tank), which is one more than what is stated elsewhere. Given this contradictory information, it is unclear what actually exists at Itivia Harbour, and whether or not new facilities are being proposed in the Extension requiring additional NWB approval.	CIRNAC recommends that AEM provide clarification on the fuel storage capacity currently existing at Itivia Harbour and what is being proposed and expected to be constructed, operated and licenced.	Agnico Eagle appreciates the comments raised by CIRNAC and has provided clarity in the below table. [table presented in text format to support this document submission] Comment Raised by CIRNAC Table 1.2-1 of the Main Application Document states under the existing Meliadine Mine –Phase 1 & 2 Rankin Inlet Infrastructure–Fuel Storage column that there is "A fuel tank farm to store up to 80 million litres of diesel fuel in 8 x 10-million litre tanks". Under the Meliadine Extension Water Licence Amendment column, the table states that there will be an "Increase of fuel tank farm to store up to 80 million litres of diesel fuel in 8 x 10-million litre tanks". In Appendix F11 - Itivia Bulk Fuel Storage Facility EPMP, Section 2.2 states that currently, there are 2 fuel tanks at Itivia - Tank #1 20 ML and Tank #2 13.5 ML. The Spill Contingency Management Plan (Appendix 20) Section 3, Table 3.1 notes that there are three diesel tanks at Itivia Harbour (one 20 ML tank, one 13.5 ML, and one 4 ML tank), which is one more than what is stated elsewhere. Response by Agnico Eagle In the 2014 Final Environmental Impact Statement, Agnico Eagle assessed and was approved for up to 80 ML of fuel at Itivia Harbour. As part of Meliadine Extension, Agnico Eagle is maintaining the upper limit for operational flexibility and there is no change to the upper limit. However, an additional 20 ML would be added, bringing the total to 53.5 ML. Currently at Itivia, there is a 20 ML tank and a 13.5 ML tank. The 4 ML in the Spill Contingency Plan is an error in the plan. The removal of the 4 ML tank was corrected in the Spill Contingency Plan (V13) which submitted as part the 2022 Annual Report.	Not applicable.	Resolved with Information Provided	As per the response by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete
CIRNAC	CIRNAC R-12	Improvements to the Water Management Strategy	In the Main Application document (Section 2.3.5 and Table 1.2-1), AEM states that there would be no material changes to the overall water management strategy, which is summarized below: Surface contact water and saline water from the underground mines will be separated. Water management at the site will be optimized using the waterline to minimize discharge to Meliadine Lake. Water collected at the Discovery site will be conveyed through a new 21 km, 10-inch waterline from the Discovery site to the SETP at the Meliadine site, where it will be treated and discharged into the receiving environment (Itivia Harbour) using the approved 16-inch waterlines. Additional saline ponds will be established at F Zone, Tiriganiaq-Wolf, Pump and Discovery to collect water originating from underground mine activities. As proposed during Amendment No. 002 to Project Certificate No.006, saline water will eventually be conveyed to the Sewage Effluent Treatment Plant (SETP), where it will be treated and discharged to the receiving environment (Itivia Harbour). The capacity of the Sewage Treatment Plant will be increased to accommodate the increased number of employees. CIRNAC notes that the proposed changes are intended to improve the operation's environmental performance (e.g., through improved saline water management/separation), and CIRNAC commends AEM on these efforts. CIRNAC wants to know whether AEM has considered additional actions to further reduce discharges to Meliadine Lake, such as redirecting runoff/seepage from Ore Storage Pad 2 to the proposed new saline pond SP6 instead of CP1.	CIRNAC recommends that AEM explore a better management approach for the runoff/seepage from Ore Storage Pad 2 (OP2 and OP2 Extension) to help minimize discharges to Meliadine Lake.	With regard to the ore pad the recommendation is not feasible; however, Agnico Eagle does implement continuous improvements through the operations. Recommendations on continuous improvement associated with existing infrastructure should be handled through annual report review.	Not applicable.	Resolved by commitment	Agnico Eagle to provide further information on this topic in the next annual report with specifics of actions (if necessary).	Complete
DFO	DFO-TRC 05	Fish Offsetting Plan		DFO FHPP requests that AEM provide the most up to date fish offsetting plan reflecting the work that was done with DFO and ECCC.	The latest version of the fish offsetting plan is provided in Appendix A. Agnico Eagle has provided a history of the offsetting plan in the table below	Not applicable.	Resolved with Information Provided	As per the response by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete
KiVA	KiVA- TRC-04	Contact Water Management	The construction of a dual waterline from the Meliadine Site to Itivia Harbour has been approved by all regulatory bodies, and is expected to be operational in 2024. The waterline is expected to manage all saline groundwater on site, and be used to minimize or eliminate discharge to Meliadine Lake by diverting surface contact water to Itivia Harbour. The KiVA has requested that a prioritized discharge strategy be used for managing contact water, where water with higher concentrations of contaminants of concern is prioritized for discharge to Itivia Harbour. This would include water from CP3, Sewage water, CP5, and CP4. While the Water Quality Water Balance Models contemplate these changes, they are not reflected in the Water Management Plan or the Adaptive Management Plan.	The Water Management Plan/Adaptive Management Plan should be updated to include a prioritized discharge strategy.	Based on comments from KiVA, water from CP3, CP4, CP5, and the STP can be directed to the saline storage pond under normal operating conditions; outside of normal operating conditions, waters from CP3, CP4, and CP5 would be directed to CP1. Agnico Eagle will update the Water Management Plan and the Adaptive Management Plan with these details.	Not applicable.	Resolved with Information Provided	As per the response by Agnico Eagle in the technical comment submission (dated September 18, 2023).	Complete