



October 21st, 2020

Sergey Kuflevskiy
Technical Advisor
Nunavut Water Board
P.O. Box 119, Gjoa Haven
Nunavut, X0B 1J0

RE: NWB Technical Review of the 2019 Annual Report for the Meliadine Project; Water Licences Nos: 2AM-MEL1631 and 2BB-MEL1424

Dear Mr. Kuflevskiy

Agnico Eagle Mines Limited thanks the Nunavut Water Board, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), Environment and Climate Change Canada (ECCC) and Kivalliq Inuit Association (KivIA) for the opportunity to address comments received for Agnico Eagle's Meliadine Gold Mine 2019 Annual Report.

As requested, please find attached Agnico Eagle's responses.

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

With my best regards,

A handwritten signature in blue ink, appearing to read "Sara J.", with a stylized flourish at the end.

Sara Savoie
sara.savoie@agnicoeagle.com
819-759-3555 x 4608143
Compliance Counselor



Kivalliq Inuit Association (KIA)

KIA-1 Total Dissolved Solids (TDS) and Drawdown of Collection Pond 1 (CP1)

Recommendation

Elaborate on why the TDS discharge criterion at MEL-14 was not met resulting in the failure to complete drawdown of CP1 in 2019;

Take steps to address the identified problem to ensure future adherence to the 1,400 mg/L discharge criterion outlined in the Water Licence while still drawing down CP1 by the fall of each calendar year.

Agnico Eagle Answer

Agnico Eagle is currently evaluating TDS loading mechanisms to CP1 and is updating the water quality model to develop a sustainable water management strategy for CP1. Agnico Eagle refers KIA to the Water Licence Amendment Project currently under review by the Nunavut Water Board for additional details on these points.

KIA-2 Water Quality and Water Balance Model

Recommendation

Update Water Quality and Water Balance Model to include sensitivity analysis accounting for higher concentrations of key parameters including TDS in contact water, greater inflows of saline groundwater within the underground, and wet year scenarios that exceed the 95 percentile as calculated from measurements collected at the ECCC Rankin A weather station (should be calculated based on a period of record that includes measurements collected after the last iteration of the water balance model);

Develop specific adaptive management strategies within the scope of the existing Water Licence and Project Certificate that can be used to mitigate potential impacts to the environment and circumvent the need for future project certificate and water licence amendments

Also, see comment #3 from the NWB.

Agnico Eagle Answer

The Water Quality and Water Balance Model was updated as part of the Water Licence Amendment. Agnico Eagle will include an adaptive management strategy as part of the review Water Quality Management and Optimization Plan to be issued as part of the Water Licence Amendment Process.



KIA-3 Nutrient Enrichment in Meliadine Lake

Recommendation

Provide appropriate mine staff with additional guidance to help minimize nitrogenous blasting residues and subsequent loading to Meliadine Lake;

Include additional considerations into blasting practices to limit nitrogen loading to the receiving environment from blasting residue (keep blasting materials dry prior to ignition).

Agnico Eagle Answer

Even though only minor enrichment has occurred in the near field area relative to the rest of Meliadine Lake, Agnico Eagle will continue its efforts in the training of the mine staff regarding blasting practices and emulsion management.

KIA-4 Nutrient Concentrations vs. Phytoplankton Biomass

Recommendation

Include soluble reactive phosphorus or orthophosphate in the list of parameters assessed at both MEL-13 and MEL-14, and use those concentrations in addition to TP to evaluate the relationship between nutrient concentrations and phytoplankton biomass.

Agnico Eagle Answer

Orthophosphate (O-PO₄) is included in the list of analytes (parameters) for the AEMP water samples analyzed by ALS and the MDMER/WL samples for MEL-14 and MEL-13 that are analyzed by Maxxam (BV lab).

Based on the evidence of minor enrichment in the near field area and no evidence that nutrient enrichment is increasing year-over-year, Agnico Eagle does not believe a more detailed investigation of TP bioavailability is warranted for the 2020 program. If future monitoring cycles notice a clear increase in phytoplankton biomass, conducting the TP bioavailability study would be reevaluated in the context of the Aquatic Effects Monitoring Program (AEMP).

KIA-5 Discrepancies in TSF and Waste Rock Volumes

Recommendation

Clarify the total volume of tailings and waste rock placed in the Tailings Storage Facility (TSF) in 2019 (there are discrepancies in values reported for total volume of tailings placed in the TSF,



and waste rock placed as progressive cover material, between the text and tables in the Annual Report).

Agnico Eagle Answer

The values for each month and the summary values in the text are correct: a total of 507,538 m³ of tailings material and 75,082 m³ of waste rock was placed in the TSF during 2019.

The corrected Table 11 is below:

	Tailings Placed (m³)	Waste Rock Placed (m³)
February 2019	33,383	13,826
March 2019	51,760	8,715
April 2019	51,138	10,094
May 2019	50,557	10,333
June 2019	27,860	7,550
July 2019	53,752	2,316
August 2019	51,378	5,149
September 2019	41,193	8,773
October 2019	48,269	2,624
November 2019	37,858	--
December 2019	60,390	5,702
Total 2019	507,538	75,082
Design Total	6,423,604	1,275,125
Remaining Capacity	5,916,066	1,200,043

KIA-6 Non-reportable Spills

Recommendation

Provide the missing information on (i) how the number of non-reportable spills compares to previous years, (ii) what ultimate action was taken to manage the April 16 fuel spill, and (iii) what hazardous material was spilled on May 19 in Cell 6 TSF.

This information should be provided in all future Annual Reports.

Agnico Eagle Answer

(i) 25 reportable spills occurred in 2019, 22 reportable spills occurred in 2018 and 14 reportable spills occurred in 2017. 63 non-reportable spills occurred in 2019, 77 non-reportable spills occurred in 2018 and 147 non-reportable spills occurred in 2017. The information on how the number of non-reportable spills compares to previous years will be provided in a table in the 2020 Annual Report.



(ii) To manage the April 16th 2020 spill, approximately 20 absorbent diapers were used as well as absorbent sand was used to clean up the spill.

(iii) Material spilled on May 19th 2020 was hydraulic oil.

KIA-7 Reportable Spills and Follow-up Reports

Recommendation

Ensure consistency in reporting for all reportable spills, by providing government spill report forms for all spills, reporting numbers for all spills, and organizing spill reports in chronological order (e.g., April reports appear in April and December).

Agnico Eagle Answer

Agnico Eagle thanks KIA for comment 7 and will account for it in the 2020 Annual Report.

KIA-8 Report # 19-171 – Spill into Lake B7

Recommendation

Explain what steps will be taken to prevent lengthy delays in responding to and reporting on spills in the future;

Discuss how effective the delayed clean-up efforts were at removing oil from lake B7. Given that clean-up efforts did not start until eight days after the spill, how does Agnico Eagle know that the absorbent pads removed all the oil from Lake B7?

Agnico Eagle Answer

Agnico Eagle conducted a follow-up investigation after this incident and determined more thorough pre-op inspections must be completed in order to identify equipment failures and avoid delays in noticing such spills.

A new procedure was developed, and operator or drillers now have to fill in a maintenance form for cutting decantation bash and cutting recovery tub. Once maintenance is completed, this form is provided to the supervisor and then collected by health and safety representative.

As per the spill follow-up report : #19-171, absorbent sheets and booms were changed and removed from drill site to finish cleaning of the site and drill 3 was removed once the final inspection was completed and showed no oil or sheen remained within the drill site.



KIA-9 Report # 19-169 – Spill into Lake B7

Recommendation

Explain what steps are being taken to avoid heat from drills melting ice on waterbodies where work is being conducted. Has Agnico Eagle considered only operating drills on ice below a certain temperature to minimize this risk?

Describe how spill reporting requirements are communicated to contractors to avoid delays in reporting to regulatory authorities, and what follow-up is in place to ensure compliance.

Agnico Eagle Answer

Following the investigation mentioned in answer to KIA-8, various corrective measures were put in place, including reviewing toolbox meetings on importance of immediately cleaning up and reporting all spills, ensuring a more thorough pre-op inspection with a focus on avoiding potential spills; spill reports are available at all of the drills and the inspection protocol for the geology's surface diamond drill inspection was modified to include environmental measures and daily inspections of cutting bash and sludge pump to prevent overflow and spills.

KIA-10 Report # 19-346 – Discharge to Sea Exceedance

Recommendation

Provide more details on the in-house analysis conducted to determine that discharge could resume on September 24, including results of the in-house acute lethality tests;

Also, see comment #5 from the NWB.

Agnico Eagle Answer

As stated in the follow-up report No 2019-346, Agnico Eagle implemented various mitigation measures following the Exceedance. These measures included increasing the height on the intake pipe so as not to remobilize any settled sediment and adding Volatile Suspended Solids (VSS) to the effluent characterization to assess if the measured TSS included an organic component, which is approximated by VSS. The effluent characterization showed that the contributing factor to the elevated TSS was likely to be algae (suggested through VSS analysis), in which algaecide was used to mitigate this issue.

The excess chlorine noticed in SP3 during the same period as the elevated TSS was, in fact, the result of filter issues in the treatment plant. Chlorine dosing is used in the Saline Effluent Treatment Plant (SETP) to treat underground water for ammonia, after which the residual chlorine is removed by Granular Activated Carbon (GAC) filters. Once elevated chlorine levels were observed, an investigation into the cause showed that these filters were compromised, reducing effectiveness of chlorine removal.



After reception of the first failed toxicity test, the SETP was shut-down for the inspection of the carbon filters, as chlorine was a suspected contributor. Daily back-flushing of the carbon filters was implemented to improve effectiveness of chlorine removal.

In parallel, increased monitoring and reporting within the SETP and at Saline Pond 3 (SP3) was initiated for chlorine. Following the second failed toxicity test, discharge to sea ceased immediately and the investigation into the cause for toxicity continued. Improved chlorine control measures were implemented and included: emptying of SP3 back into the SETP feed source (i.e. Saline Pond 1 (SP1)), testing new reagents (sodium metabisulphite) for chlorine removal, testing the effect of SP3 residence time on chlorine degradation, and procurement of new filter media.

Furthermore, total effluent chlorine concentration limits were set to trigger discharge stoppages. The recirculation of water from SP3 to SP1 resulted in a decreased ammonia concentration of the water feeding the SETP. Based on the previously mentioned mitigation measures, the implementation of more explicit effluent targets, and improved quality of SETP feed water source, a decision was made to bypass the inoperative chlorination process and resume discharge. Total chlorine concentrations were confirmed to be below the aforementioned trigger limits before discharge was resumed on September 24, 2019. No further acute toxicity issues were observed in the subsequent tests of October 1, 2019 and October 7, 2019.

KIA-11 Total Suspended Solids (TSS) Measurements in Pooled Water and Snowmelt

Recommendation

Discuss whether TSS measured in pooled water and snowmelt runoff triggers a management response. If so, please explain what level of TSS triggers action, what action is taken, and what mitigation measures are used to prevent recurrence of the problem.

Agnico Eagle Answer

When monitoring the transport of TSS into a water body, Agnico Eagle references the Maximum Average and Maximum Grab sample concentration limits for TSS (50 mg/L and 100 mg/L, respectively) indicated in Part D, Section 18 of the Type A Water License (2AM-MEL1631) as appropriate triggers for action.

Management responses include the installation of silt reduction barriers such as straw and wood chip wattles, and an attempt to manage the source of the water inflow and TSS (e.g. additional snow removal in the affected area). If an area is frequently or heavily affected by the transport of TSS flowing into a water body, a more engineered approach such as the installation of culverts or check dams may be employed.



KIA-14 Saline Water Treatment Plant (SWTP) Performance

Recommendation

Explain why the SWTP did not meet its design capacity for treating groundwater in 2019;

Discuss what steps are being taken to improve the SWTP performance in the future.

Also, see comment #5 from the NWB.

Agnico Eagle Answer

An internal audit was conducted in May 2019 to understand the root cause of the SWTP underperformance and showed the following:

- The technology isn't as efficient as expected in Arctic climates;
- In winter time, safety issues were brought forward due to the heat and generation of vapor;
- The field TSS concentration negatively affects the system and increases the downtime period;
- The sole filtration system mesh wasn't appropriate to contain salt efficiently;
- The crusting phenomena inside the packing of the SWTP was higher than expected and led to increased downtime period and intensive cleaning efforts.

As short-term solutions, a microfilter was added to the bag filtration system, the packing was changed to Teflon, but the plant still experienced a major derating, which is approximately half than what was expected.

Agnico Eagle considers the Waterline being the longer terms solution to manage saline water on site. This strategy is presented in the 2020 Groundwater Management Plan.

KIA-15 Water Balance Model

Recommendation

Clarify what is considered a significant difference between predicted and observed groundwater inflow rates, which would warrant the review and update of the Water Balance Model (Section 3.4.2.4 of the Groundwater Management Plan states that if significant deviations from the model are found, then "the assumptions/inputs behind the model will be reviewed and the model updated, if required");

Update the groundwater inflow rates in the forthcoming iteration of the Water Balance Model.

Also, see comment #3 from the NWB.



Agnico Eagle Answer

Agnico Eagle has appended the Site Water Balance and Water Quality Model submitted in the context of the Water Licence Amendment and the updated predictions of groundwater inflows to Tiriganiaq underground mine and refers KIA to the Saline Effluent Discharge to the Melvin Bay Project currently under review by NIRB for additional information to this effect.

KIA-16 Ponds Covered by the Waste Rock Storage Facilities (WRSF) 1 and 2

Recommendation

Explain how the development of WRSFs 1 and 2 will comply with the 2019 Fisheries Act prohibition against the harmful alteration, disruption or destruction of fish habitat.

Agnico Eagle Answer

Agnico Eagle refers KIA to its Fisheries Screening Assessment and Offsetting Plan submitted to Fisheries and Ocean Canada for further information on this topic.

KIA-28 Dust Suppression on All-Weather Access Road (AWAR) and the Bypass Road

Recommendation

Clearly detail dust suppression activities conducted on Meliadine roads in 2019 (details on suppressants used and efficacy of the treatments). If these activities are not reported in the Annual Report and the Air Quality Monitoring Report, then clarify where these data are annually presented.

Agnico Eagle Answer

Agnico recognizes the KIA 's request and will include details on dust suppressant application (dates, locations, quantities, types) within subsequent annual Air Quality Monitoring Reports. A summary of available data for 2019 is provided here.

In 2019, Agnico applied dust suppressant (water and calcium chloride) to service roads, haul roads, and the all-weather access road based on results of daily visual inspections during the snow-free season, in accordance with the accepted Dust Management Plan (in 2020, quantitative monitoring thresholds are being added to this management plan). Agnico applied calcium chloride flakes on site and along the AWAR and Bypass Road in July 2019. The rate of application was estimated at 0.31 kg/m² which is within manufacturers' recommendations. Second applications were conducted in several locations along the AWAR as required, based on visual inspections. In addition to calcium chloride, water was used as a supplemental dust suppressant for area roads, with a total volume of 1,233 m³ applied in June, July and August.



Results of dust monitoring along the AWAR in 2019 indicate that dust suppression and other best management practices in place to reduce rates of dust generation are effective, with rates of dustfall declining below regulatory guidelines for recreational areas between 25 m and 100 m from the road.

KIA-29 Discrepancy in Total tonnage to be Extracted in 2020

Recommendation

Confirm that the tonnages to be extracted and milled in 2020 are those described in Appendix I-11 (rectify the 4,492,000 t discrepancy in the total tonnage presented in Section 2.2 of the Annual report vs. Table 4.2 of the Mine Plan).

Agnico Eagle Answer

Agnico Eagle confirms numbers in tables 4.1, 4.2 and 4.3 of the 2020 Mine Plan (Appendix I-11) are correct. Wording from section 4 doesn't include open pit rock, which Agnico Eagle acknowledges could cause some confusion. In order to clarify matters, the second paragraph of section 4 could be worded as follows:

A total of 2 260 000 tons of rock will be extracted from underground and 4 500 000 tons for open pit over the year. The mine plan consists of hauling 528 000 tons of waste rock, 70 000 tons of marginal and 1 322 000 tons of ore to surface. Furthermore, 445 000 tons of tailings will be returned underground, and 343 000 tons of waste will remain underground as rockfill.

KIA-30 Risk Assessments and Workshops

Recommendation

Provide complete documentation of all the risk assessments and workshops related to the High Risk operational status of D-CP-1.

Agnico Eagle Answer

Information related D-CP1 has been reviewed with Parties during the Emergency Amendment Application Process and the Nunavut Water Board (NWB) has granted Agnico Eagle an Emergency Amendment for the 2020 Discharge Season.

The Water Licence Amendment Application currently under review by NWB address the long-term management strategies for CP1. Agnico Eagle has included information on different alternatives to avoid emergency situation related to D-CP-1 in the application package.



KIA-31 Discrepancies in the NP-Ca and Total S% Data

Recommendation

Confirm the correct values for the NP-Ca and Total S% Data related to the filtered tailings.

Agnico Eagle Answer

Table 1 provides the summary results for waste rock, whereas Table 3 provides the summary for filtered tailings.

KIA-32 Updated Closure and Reclamation Cost Estimates

Recommendation

Confirm the discussion schedule for the updated 2019 closure and reclamation cost estimate (\$59,514,717).

Agnico Eagle Answer

Agnico Eagle will liaise with KIA directly on this matter.



Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

CIRNAC-1 High Water Levels in CP1, CP3 and CP4 and Potential Risk to Stability of D-CP1

Recommendation

Provide a summary of the measures taken in 2019 to address the issues related to the high water levels of CP-1, CP3 and CP4 and the potential stability risk of D-CP1.

Agnico Eagle Answer

Information related D-CP1 has been reviewed with Parties during the Emergency Amendment Application Process and the Nunavut Water Board (NWB) has granted Agnico Eagle an Emergency Amendment for the 2020 Discharge Season.

The Water Licence Amendment Application currently under review by NWB address the long-term management strategies for CP1 and Agnico Eagle has included information on different alternatives to avoid emergency situation related to D-CP-1 in the application package.

CIRNAC-2 Higher-Than-Expected TDS in CP1

Recommendation

Provide a summary of the measures taken in 2019 to identify the sources and to reduce the TDS loads to CP1.

Agnico Eagle Answer

Please refer to answer to KIA comment 1.

CIRNAC-3 Reclaiming Water in CP1 for Ore Processing

Recommendation

Evaluate the options of reclaiming contact water from CP1 for ore processing and other purposes in order to better manage mine site water and minimize freshwater usage from Meliadine Lake.

Agnico Eagle Answer

To reduce freshwater consumption from Meliadine Lake at the Process Plant and generate additional drawdown of CP1 water level not driven by discharge to Meliadine Lake, Agnico Eagle started reclaiming water from CP1 to the Process Plant for ore processing in July of 2020. Since then, the system has been re-optimized several times, including modifications to enable feed of CP1 to other components of the Process Plant (including paste production), further reducing the



quantity of water being drawn from Meliadine Lake for the Process Plant and generating CP1 drawdown not driven by discharge to Meliadine Lake.

In July 2020, the total volume of water withdrawn from Meliadine Lake for ore processing was 15,915 m³, a 33 % reduction from the projected required volume of 23,637 m³ before the system was implemented. Through August and September following optimization of the system, the total volume of water withdrawn from Meliadine Lake for the Process Plant was 11,570 m³, an 80% reduction from an initially projected 2-month total volume of 59,035 m³.

CIRNAC-4 Higher-Than-Predicted ARD Potential of Filtered Tailings

Recommendation

Re-evaluate and update the Water Quality Model and all Management Plans associated with the monitoring and management of the filtered tailings and submit them for review, as the current geochemical monitoring and the tailings Management Plans were designed based on the assumption that the filtered tailings were Non-PAG, instead of PAG.

Agnico Eagle Answer

Agnico Eagle doesn't agree with CIRNAC recommendation as the geochemical design assumption of the approved Tailings Storage Facility (TSF) Design Report and Drawings (Agnico Eagle, 2018) is still valid:

Results of the geochemical characterization indicate that both the tailings from the Tiriganiaq deposit and the waste rock is considered non-potentially acid generating (NPAG) and have low potential for metal leaching (ML).

Moreover, geochemical stability of the tailings will be achieved as:

- the tailings are being stored in a facility that will freeze back (i.e. re-develop permafrost) and inhibit water movement within a few years post-operations;
- placement of the tailings includes compacting by a vibrator packer and sloping to shed water off the facility, which will lower oxygen diffusion into the tailings and limit water contact, both established mechanisms to reduce Acid Rock Drainage (ARD); and,
- there is enough carbonate in the tailings that ARD may never occur as the actual ratio that ARD onset is expected is much closer to 1.0.



CIRNAC-5 2019 Updates to the Water Balance and Water Quality Models and Modelling Results

Recommendation

Update the Water Balance and Water Quality Models and provide modelling results for review, so that the issues and the causes of the issues can be fully understood and appropriate mitigation measures identified.

Note: This issue was previously raised by CIRNA in comment #3 of their 2018 Annual Report review and has never been addressed.

Also, see comment #3 from the NWB.

Agnico Eagle Answer

Please refer to answer to KIA comment 2.

CIRNAC-6 Insufficient Details in the Main Report

Recommendation

Produce the main Annual Report document to adequately address all the annual reporting requirements of NWB Type A Water License 2AM-MEL1631 and Type B Water License 2BB-MEL1424 with sufficient details, analysis, discussions, and summaries in future years, as some of the critical data and information were buried in the various thick-volume appendices.

Agnico Eagle Answer

Agnico Eagle appreciates CIRNAC's comment 6 and remains available to further discuss how to optimize its reporting. The 2019 Annual Report format was developed in light of the various reporting obligations and feedbacks from different interveners. Agnico Eagle is open to discuss CIRNAC suggestions to improve its reporting efficiency.



Environment and Climate Change Canada (ECCC)

ECCC-2 Surface Runoff Quality Samples – Monitoring Locations

Recommendation

Provide clarification as to whether there is any Surface Runoff monitoring at the main mine site, and if so, provide locations and where the runoff reports to. If the proponent is not currently conducting surface water run off monitoring, then the ECCC recommends that it commence.

Note: As part of their 2018 Annual Report review, the ECCC requested to provide a map showing locations of all Surface Runoff sampling sites (Comment #3).

Also, see comment #2 from the NWB.

Agnico Eagle Answer

Agnico Eagle monitors and reports surface runoff as per Nunavut Water Board (NWB) Water Licence 2AM-MEL1631 obligation and approved Water Quality and Flow Monitoring Plan and throughout monthly monitoring reports sent to the NWB.

ECCC-3 Runoff/drainage from explosive storage locations

Recommendation

Expand Section 2.1.1 (Explosive Storage) of the Ammonia Management Plan to clarify where runoff/ drainage from storage locations (i.e., surface storage area, underground storage areas, and emulsion plant storage area) would report to;

Update Table 1 (Water Monitoring Stations) to include monitoring details for runoff/ drainage from all storage locations.

Agnico Eagle Answer

Agnico Eagle will update the Ammonia Management Plan in the 2020 Annual Report to make the requested clarification.

Agnico Eagle also wishes to clarify that ammonia is monitored throughout all of the Water Licence 2AM-MEL1631 monitoring stations presented in Table 1 and the updated Ammonia Management Plan will further clarify this point.



ECCC-4 Preventative Measures

Recommendation

Describe what measures are in place to prevent ammonia-based explosives and raw materials from directly and indirectly entering the aquatic receiving environment within the Ammonia Management Plan.

Agnico Eagle Answer

Chemicals are stored in such a way that they aren't exposed to water and the emulsion is formed inside the plant, which is contained. The Ammonia Management Plan will be updated in the 2020 Annual Report to clarify the underground closed-circuit water management and treatment process to address the underground runoff/drainage from ammonia nitrate based explosives.

ECCC-5 Cyanide Data Error

Recommendation

Verify and correct the Total Cyanide annual average (incorrectly reported as 1121.24 mg/L), and provide the correct value to all parties.

Agnico Eagle Answer

The Total Cyanide Annual Average for monitoring station MEL-14 reported in Appendix H-3 of the annual report is incorrect due to a calculation error. The correct value for this average is 0.0035 mg/L. Agnico Eagle will evaluate means to report the corrected value to all parties.

ECCC-6 Reporting (Groundwater Management Plan)

Recommendation

Include a reporting section into the Groundwater Management Plan, which will describe how the proponent will report management actions and monitoring results;

Outline any additional information requirements, and specify the reporting frequency;

Provide raw and summarized monitoring data, highlight any exceedances, describe management actions and outcomes, and include any updated predictions or other relevant information collected in the reporting year.



Agnico Eagle Answer

The Groundwater Management Plan is intended to summarize the up-to-date understanding of hydrogeology as it pertains to the Mine, and to present the associated groundwater management and monitoring strategies.

Agnico Eagle reports Mine water pumped from the Underground as per Water License 2BB-MEL1424 Part B, Item 6b, this information appears in Section 3.1.3 of the 2019 Annual report.

ECCC-7 Toxicity Testing of the CP1 Effluent

Recommendation

Provide clarification of the rationale for conducting sublethal testing (algal growth, Ceriodaphnia dubia 7 day mortality, and Fathead Minnow 7 day mortality) on untreated rather than treated effluent.

Agnico Eagle Answer

Agnico Eagle wishes to clarify that sublethal testing was conducted on MEL-12 as part of an internal monitoring procedure and not as part of MDMER or Water Licence obligations.

ECCC-12 Total Dissolved Solids Predictions (or 2018 ECCC Comment #1)

Recommendation

Provide clarification on the source of high modeled salinity levels in P-Area and whether saline mine water has been incorporated into the model;

Provide updates to the Water Balance and Quality Forecast Results for review and include a description of the assumptions and inputs used.

Also, see comment #3 from the NWB.

Agnico Eagle Answer

Over 2016 to 2018, the P-Area was applied as a component of saline water management system, specifically as a storage unit for excess saline groundwater. In an effort to begin decommissioning of the P-area, no inputs of saline groundwater occurred in 2019 and have not been occurring in 2020. Currently, inputs to the P-area solely include surface runoff from within the P-Area catchment and direct precipitation. The decommissioning process of the P-Area is planned for completion over 2021, as detailed in the Water Licence Amendment under current review by NWB.



The Water Quality and Water Balance Model was updated as part of the Water Licence Amendment. This model assumed that the P-Area will be decommissioned in 2021.

ECCC-13 TSS-turbidity Correlation (or 2018 ECCC Comment #5)

Recommendation

Review the need for periodic calibration of the TSS/turbidity correlation for CP1 discharges, confirming whether operational data demonstrate the turbidity readings that are consistently representative of TSS.

(Note that this item was partially addressed in the Agnico Eagle's March 2019 letter¹. Please address this item fully).

Agnico Eagle Answer

To ensure TSS approximations produced through the application of the TSS-turbidity rating curve are accurate of TSS concentrations within discharge to Meliadine Lake, the regression analysis used to generate the response variable (TSS) is frequently updated upon the receipt of the weekly water quality characterization samples collected at the final discharge point (MEL-14). These updates occur in an identical manner for the TDS-conductivity rating curve that is applied to approximate TDS within discharge to Meliadine Lake.

Maximum acceptable instantaneous turbidity and conductivity values used to trigger a discharge stoppage are determined using the upper bounds of a 95% prediction interval for the individual regression analysis used in the TSS-turbidity and TDS-conductivity relationships.

ECCC-14 Disposal of Wastewater Treatment Sludges (or 2018 ECCC Comment #6)

Recommendation

Provide a characterization of treatment sludges to identify potential closure concerns with sediment quality in the sludge disposal area.

(Note that this item was partially addressed in the Agnico Eagle's March 2019 letter¹. Please address this item fully).

Agnico Eagle Answer

Sludge exiting the Effluent Water Treatment Plant (EWTP) was sampled to measure conductivity and shown that the conductivity of the sludge is in the same order of magnitude of CP1 water. A sample of treatment sludge from the EWTP is currently undergoing a water quality analysis. The characterized sludge will be used to identify the presence of any potential closure concerns with sediment quality in the sludge disposal area of CP1.



The current strategy to dispose sludge is direct discharge into CP1. Assessment of alternative options is ongoing.



Nunavut Water Board (NWB)

NWB-1 Management Plans Updates

Recommendation

Provide a table listing all Management Plans modified in the reporting year and include the following information:

- *title of the plan;*
- *most recent NWB Approval date (for approved plans);*
- *most current update date;*
- *brief description of the update including sections modified;*
- *classification of the update (significant vs. insignificant as per Licensee);*

(Note that upon review of the plan, the Board will make their own determination of significance independent of the Licensee's suggestion).

Agnico Eagle Answer

Agnico Eagle thanks the NWB for this recommendation and will account for it in the 2020 Annual Report.

NWB-2 Surface Runoff Monitoring

Recommendation

Provide a map (maps) showing location of all sampling sites within the 2020 Annual Report;

Include Surface Runoff information into all future Water Management Plans.

Agnico Eagle Answer

Agnico Eagle thanks the NWB for this recommendation and will account for it in the 2020 Annual Report.

Agnico Eagle acknowledges that previous Water Management Plans have included statement of Licence obligations such as that of Part I Item 11 and have provided results of MEL-SR monitoring stations. However, to encourage concise management plans and reduce redundancy, statements from the Water Licence have been removed from Version 9 of the Water Management Plan. Similarly, MEL-SR monitoring station results are provided in the Annual Report rather than the Water Management Plan as Agnico Eagle does not intend to maintain the Water Management Plan as a data-reporting document. The intention of Agnico Eagle is to provide the Water



Management Plan as a document to detail and update water management practices/strategies/tools, as well as infrastructure as they pertain to the Mine.

NWB-3 Water Balance on Site

Recommendation

Provide the volumes of all inflows/ outflows to/ from the Containment Ponds and Treatment Plants in 2019 and include this information within all future Annual Reports;

Provide the updated Water Balance and Water Quality Models to account for the saline water inflows into the underground mine.

Agnico Eagle Answer

AEM will consider these recommendations in the 2020 Annual Report, including data summarizing monthly inputs/outputs from containment ponds (CP1, CP3, CP4, CP5, CP6) and treatment plants on site.

The Saline Water Quality and Water Balance Model was updated as part of the Saline Effluent Discharge to the Melvin Bay Project currently under review by NIRB. Water Balance and Water Quality Models will be submitted with the 2020 Annual Report.

NWB-4 Saline Water Management

Recommendation

List all long-term strategies that were considered in response to the increased groundwater inflow rates;

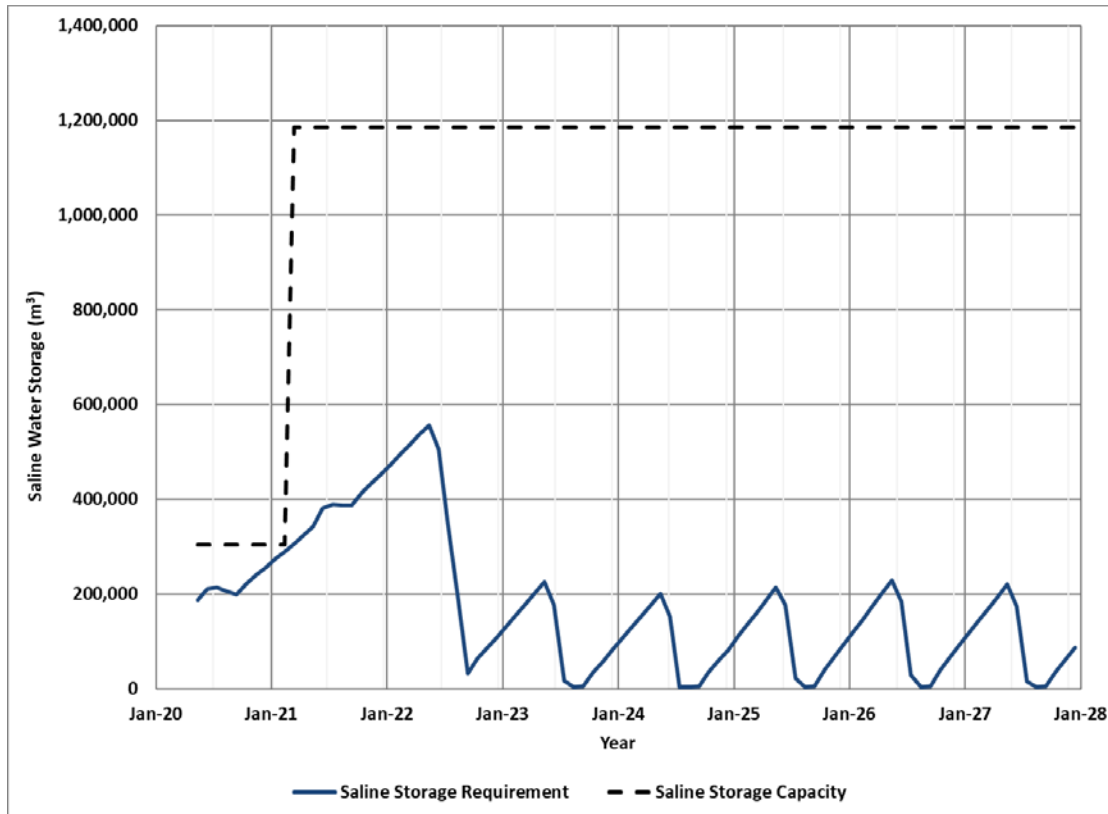
Provide more information regarding the possibility to stop mining at the Tiriganiaq Pit 2 in order to accommodate the excess saline water.

Agnico Eagle Answer

As described in the Groundwater Management Plan, Version 5, the proposed long-term strategy of discharging to Melvin Bay via a waterline will be required to ensure sustainability of saline water storage.

In the medium-term, Tiriganiaq Pit 2 will be applied as temporary storage for saline water. Storage within Tiriganiaq Pit 2 is expected for to be available in Q2 2020. The combined saline water storage capacity available in SP1, SP4, and Tiriganiaq 2 Pit from 2021 to 2027 is 1,184,852 m³.

The figure and the table below shows the available saline storage capacity over the mine life. This is assuming the operation of the Waterline during the summer 2022.



Year	Saline Storage Requirement (m³)	Saline Pond / Open Pit Capacity (m³)				
		SP1	SP2 ¹	SP4 ^{2,3}	Tiri2	Total ⁴
2020	288,769	32,000	-	272,122	-	304,122
2021	453,238	32,000	-	272,122	1,152,852	1,184,852
2022	556,396	32,000	-	272,122	1,152,852	1,184,852
2023	225,414	32,000	-	272,122	1,152,852	1,184,852
2024	200,666	32,000	-	272,122	1,152,852	1,184,852
2025	214,107	32,000	-		1,152,852	1,184,852
2026	228,669	32,000	-		1,152,852	1,184,852
2027	219,771	32,000	-		1,152,852	1,184,852

Notes:

1. SP2 was decommissioned in April 2020 and is not included in storage calculations
2. The capacity of SP4 has been updated based on the as-built capacity (previous design value presented in the 2020 Water Management Plan was 233,133 m³)
3. *Italicized, gray* values are contingency storage only
4. Excludes contingency storage



NWB-5 Meliadine Site Water Quality

Recommendation

Provide a discussion on the efficiency of the SWTP and RO treatment strategies to reduce the TDS components in CP1 water;

Provide further clarification regarding the steps taken to avoid the SETP chlorine overdosing in the future.

Agnico Eagle Answer

AEM wishes to clarify that untreated groundwater is not discharged to CP5 (or CP1, CP3, CP4, CP6) at any time. Challenges associated with the SWTP pertained to treatment rates, rather than effluent quality. Over 2019, weekly sampling of SWTP effluent discharged to CP5 produced an average TDS concentration of approximately 550 mg/L. No other waters associated with the saline water management system were discharged to CP5 (or CP1, CP3, CP4, CP6). Thus, consequences of the challenges associated with the SWTP are related to volume of saline water stored in SP1 and SP4, and not water quality in CP5 (or CP1, CP3, CP4, CP6).

Please refer to KIA-14 for further information regarding the challenges associated with the SWTP.

With respect to the Reverse Osmosis (RO), the unit is in place to treat elevated concentrations of TDS in CP5 prior to movement of CP5 water to CP1. Throughout 2019, the RO performed well. Daily monitoring of physico-chemical parameters produced an average specific electrical conductivity value of 928 uS/cm (approximately 560 mg/L TDS) within RO permeate being transferred from CP5 to CP1.

With respect to the SETP, the GAC filters within the SETP are in place to remove chlorine in water remaining from the breakpoint chlorination (ammonia removal) process. Residual chlorine within effluent observed in 2019 was due to saturation of the granular activated carbon (GAC) filters, rather than overdosing of chlorine. To mitigate this risk moving forward, double-the-required number of GAC filters required for the upgraded SETP (Q3 2020) were installed. These were installed as back up under the scenario that a filter(s) becomes saturated. Furthermore, more rigorous chlorine monitoring and logging are now implemented.

NWB-6 MEL-19 - Monitoring Station for CP2

Recommendation

Clarify whether monitoring station MEL-19 should be omitted from the Monitoring Program or it will be used in the future.



Agnico Eagle Answer

Regarding the MEL-19 monitoring station, as mentioned in section 7.3.1.17 of the 2019 Annual Report, it refers to a containment pond identified as CP2 in the 2015 Water Management Plan and in the License. CP2 was not required under the actual construction of the site and resultant runoff pathways and accumulation areas. As it is not in place, MEL-19 should be omitted from the Monitoring Program.

NWB-7 Aquatic Effects Monitoring Program (AEMP) updates

Recommendation

Update the current AEMP Design Plan to reflect the changes in benchmarks and normal ranges.

Agnico Eagle Answer

Agnico Eagle thanks the NWB for this recommendation and will account for it in the 2020 Annual Report.

NWB-8 AEMP Sampling Inconsistency

Recommendation

Provide further clarification on under-ice sampling inconsistency and address the ECCC's 2017 comment.

Agnico Eagle Answer

Agnico Eagle thanks the NWB for this recommendation and will account for it in the 2020 Annual Report.

NWB-9 Updated Design Report for CP6 and CP6 Berm

Recommendation

Provide the updated Design Report to the Board for review.

Agnico Eagle Answer

Agnico Eagle submitted the As-Built report for CP6 and CP6 Berm was submitted September 9th 2020.



NWB-10 CIRNA Inspection, April 10-11, 2019

Recommendation

Provide a discussion on how the Inspector's concerns identified in the aforementioned Inspection Report were addressed.

Agnico Eagle Answer

Agnico Eagle Mines Limited responded to information requested during the April 10th and 11th 2019 CIRNAC site visit in a letter dated April 20th 2019.

NWB-11 CIRNA Inspection, December 2, 2019

Recommendation

Provide the updated Spill Contingency Plan requested by the Inspector to the Board for review.

Agnico Eagle Answer

Agnico Eagle monitors for dust as per its air quality monitoring program, and reports those results through the annual report and related Air Monitoring Report appendix.

As per the Spill Contingency Plan, it is in line with current applicable laws, regulations and guideline. At the moment, there is no compulsory reporting for dust releases nor guidelines to this effect, hence dust releases are not included in the spill contingency plan.

NWB Joint submission of 2AM-MEL1631 and 2BB-MEL1424

Recommendation

The Board recommends Agnico Eagle to submit all future Annual Reports and respective supporting documents for Water Licences 2AM-MEL1631 and 2BB-MEL1424 as separate submissions under each Licence. The NWB does understand that these projects are connected and there may be duplications, however, having all information amalgamated into one package creates certain challenges associated with keeping the records for each Licence, as well as their respective technical review.

Agnico Eagle Answer

Agnico Eagle thanks the NWB for this recommendation and remains available to further discuss how to optimize its reporting and improve its efficiency. Agnico Eagle suggests a conference call with the Board to further discuss the above-mentioned points and agree on a reporting format for the 2020 Annual Report.