



August 2, 2024

Cory Barker
Nunavut Impact Review Board
29 Mitik Street, PO Box 1360
Cambridge Bay, Nu
X0B 0C0

Re: Agnico Eagle's Response to Comments on the 2023 Annual Reports for the Hope Bay Project, Project Certificate No. 003 and Project Certificate No. 009

Dear Mr. Barker

Agnico Eagle thanks the Kitikmeot Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada, Environment and Climate Change Canada, Fisheries and Oceans Canada, Health Canada, Transport Canada, and the Government of Nunavut for their comments and review on the 2023 Annual Report for the Hope Bay Project. Our comments are provided in the enclosed.

Should you have any questions or require further information, please contact the undersigned at your convenience.

Regards,

Colleen Prather
Colleen.prather@agnicoeagle.com
Permitting & Regulatory Affairs Superintendent

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KITIKMEOT INUIT ASSOCIATION (KitIA)

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-01
Re:	Water levels in tailings impoundment area (TIA), warming thermistors in North Dam, updated trigger action response plan (TARP) in TIA Operations, Maintenance and Surveillance (OMS) Manual		

Request Made by Interested Party:

- *Provide rationale for the adjusted alert levels included within the updated OMS manual related to water levels in the TIA reclaim pond.*
- *Are the adjusted alert levels included in the OMS manual update supported by thermal modelling results for the North Dam demonstrating the ability to achieve allowable ground temperatures within the core and foundation materials at these elevated water levels?*
- *Provide comment on whether the geothermal response to the elevated TIA reclaim pond water levels observed in the warming temperatures within the core of the North Dam support the adjusted alert levels.*
- *What is the current water level within the TIA and what are the projected water levels in 2024 given the care and maintenance (C&M) status of the mine?*

Agnico Eagle's Response to Request:

Response bullet 1)

Agnico Eagle would like to clarify that the alert levels referenced in KIA-NWB-01 are specifically water elevation alert levels (OMS Manual, Appendix G, Table 3). These alert levels are in place to manage risk associated with overtopping of structures, and are supported by hydrologic studies on potential inflow events, site specific data, and water management practices. These alert levels are not intended to capture risks associated with the thermal performance of the structures at the TIA, and do not "allow" a specific water levels independent of other key performance indicators for the structures (i.e., thermal performance). For example, the North Dam may be at a GREEN alert level with respect to water level, but at a yellow alert level based on another criteria. In this case, the highest alert level would govern the overall status of the structure, and the resulting action may be to lower the pond elevation, even if it is already below the NOWL.

The Hope Bay team is currently working with the Engineer of Record, the Design Engineer, and the Independent Review Board to assess options to update the design of the Dam to such that it is able to perform thermally as required under elevated water levels (up to 34.0 masl) that may occur over the life of the structure.

Response bullet 2)

In addition to the water elevation alert Levels, Agnico Eagle has developed thermal monitoring alert levels (OMS Manual, Appendix G, Tables 1 and 2) to manage and respond to changes in thermal conditions within the structure. In 2023, the thermal alert levels were updated to include specific trigger

temperatures for each thermistor sensor. The thermal alert levels were set based on monitoring data collected from the thermistors installed at the North Dam and are supported by thermal modelling analysis completed during the design phase of the structures. The sensor-specific thermal monitoring TARPs were included in the March 2023 OMS Manual (Appendix G); however, were mistakenly omitted when compiling the March 2024 version of the OMS Manual. These missing pages have been included in Appendix A of this response package, and will be included in the next submission of the OMS Manual.

It should also be noted that an update to the thermal model for the North Dam is underway in 2024, with the objective of improving the understanding of the warming trend observed in 2023. The thermal monitoring TARPs will be updated in accordance with updated modelling results when they become available.

Response bullet 3)

When considering the complete set of alert levels from the OMS Manual (both water elevation and thermal) the North Dam is currently considered to be in an ORANGE condition, governed by the thermal alert levels which are monitored via thermistors installed in the frozen core of the North Dam, see below (OMS Manual, Appendix G, Table 2).

Critical Zone - Core Temperature	GTC	Temperatures colder than -3°C	Temperature exceeding -3°C, for multiple beads showing a credible warming trend. Check list of excluded beads.	Temperature exceeding -2°C for multiple beads with a rapid warming trend, (suggesting flowing water in contact with the sensors)	temperatures exceeding 0°C within the critical zones, multiple sensors, acceptance and observations that s
Critical Zone - Foundation Temperature		Temperatures colder than -4°C	Temperature exceeding design criteria of -4°C, for multiple beads with a credible trend. Check list of excluded beads.	Temperature exceeding -2°C for multiple beads with a rapid warming trend, (suggesting flowing water in contact with the sensors)	
Non-Critical Zone - Foundation Temperature		Below typical maximum of past 24 months	Warming trend that persists for more than 3 months, that exceeds typical seasonal trends of the past 2 years and exceeds temperatures predicted by thermal modelling. Check list of excluded beads.	Temperature exceeding -2°C for multiple beads with a rapid warming trend that persists for more than 3 months, with potential to impact critical zone temperatures.	
Excluded Beads (excluded from the rest of the trigger levels and are monitored independently.)			Warming trend that persists for more than 3 months, that exceeds typical seasonal trends of the past 2 years and exceeds temperatures predicted by thermal modelling.	Temperature exceeding -2°C for multiple beads with a rapid warming trend that persists for more than 3 months, with potential to impact critical zone temperatures.	

Although the temperatures in the frozen core critical zone are currently below the ORANGE alert threshold of 0°C (shown above), the structure was elevated to an ORANGE condition based on the fact that mitigation measures are required to manage the observed thermal conditions. The requirement to implement mitigation measures defines the Orange TARP conditions, see below (OMS Manual, Appendix G, Cover Page).

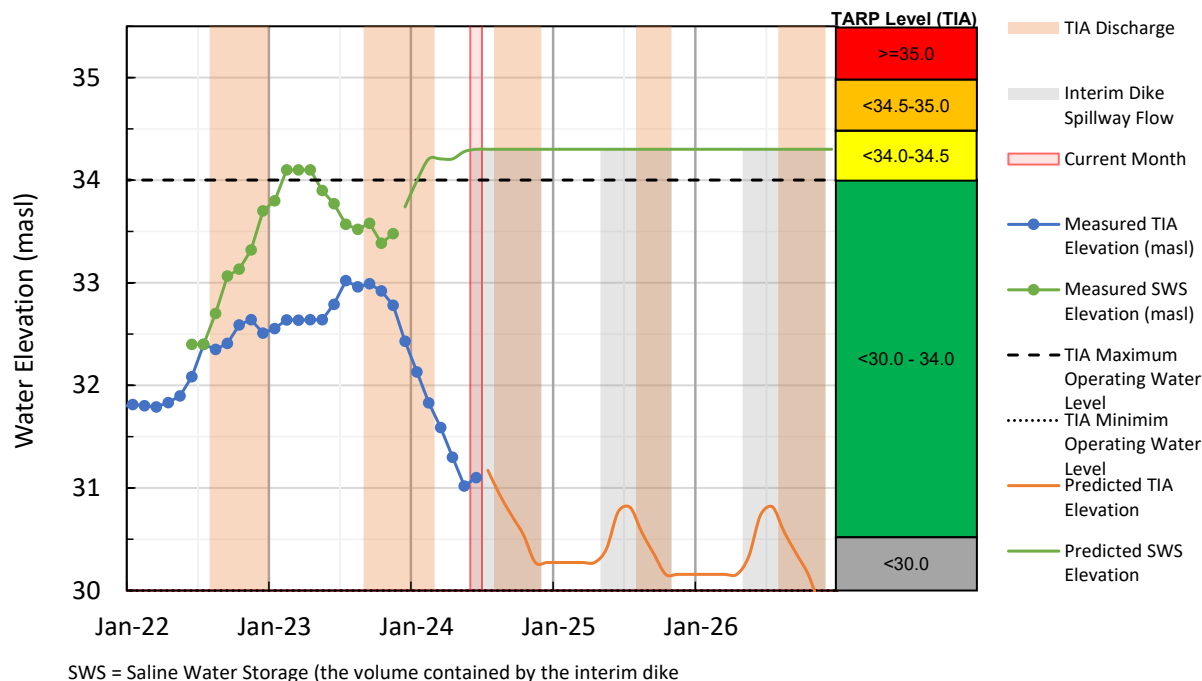
Trigger Level	Condition	Definition
Green	Normal Operating Condition	Maintain normal operating procedures.
Yellow - Level 1	Early Warning Condition	Areas of concern identified - Requires further investigation to determine requirements for increased monitoring
Orange - Level 2	Corrective Action Condition	High Risk Situation - Requires mitigation actions or operational controls to prevent an emergency situation from developing. Implement Level 2 Actions.
Red - Level 3	Critical Condition	Emergency Situation - Immediate threat to health and safety or environment that is uncontrollable through operational controls or mitigation actions. Implement the site wide Emergency Response Plan and/or Dam Emergency Plan

The North Dam was elevated from the GREEN to the YELLOW condition in October 2023, in response to the first observation of the warming trend in the thermal monitoring data. The North Dam was then elevated from YELLOW to ORANGE in April 2024. Mitigation measures currently being implemented, following the definition of the ORANGE alert level. Mitigation measures will take the form of an active cooling system that will retrofit the existing passive thermosyphons, to be installed in summer 2024. This mitigation was developed in collaboration with the independent review board. The active cooling system is expected to stabilize the warming trend in the core of the dam.

Following the implementation of the active cooling system, the focus of the Hope Bay team will shift towards establishing updated operating criteria for the North Dam, and assessing the best way to update the design of the North Dam to ensure continued performance.

Response bullet 4)

As a result of sustained dewatering efforts during first half of 2024, the current water level in the TIA is 31.22 masl, and is expected to decrease further following the freshet season of 2024. The water level is expected to remain below 31.0 masl in 2024, while the site remains in Care and Maintenance. A projection of the TIA water level based on current operating conditions and average hydrologic conditions is shown in the plot below.



Agnico Eagle is confident that the water elevation alert level adjustments made in 2023 were warranted, given the hydrologic conditions and operational status of the TIA. These updated water elevation alert levels remain appropriate to manage the risk associated with inflows to the TIA. The updated water elevation alert levels were reviewed by the Engineer of Record and the Independent Review Board prior to being published in the OMS Manual. Agnico Eagle reviews these alert levels on an annual basis, and updates them as required.

Interested Party:	KitlA	Rec No.:	KitlA-NIRB-02
Re:	Outstanding sample results from Quarry 2		

Request Made by Interested Party:

- *Provide the results of the additional test work and if further actions are required based on these findings.*

Agnico Eagle's Response to Request:

Results of the additional tests (acid-base accounting, elemental analysis, and shake flask extraction) are provided in Appendix B of this response package, and indicate that sampled rock from Quarry 2 have a low risk of metal leaching (ML) and acid rock drainage (ARD).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-03
Re:	Further support for proposed evapoconcentration mechanism		

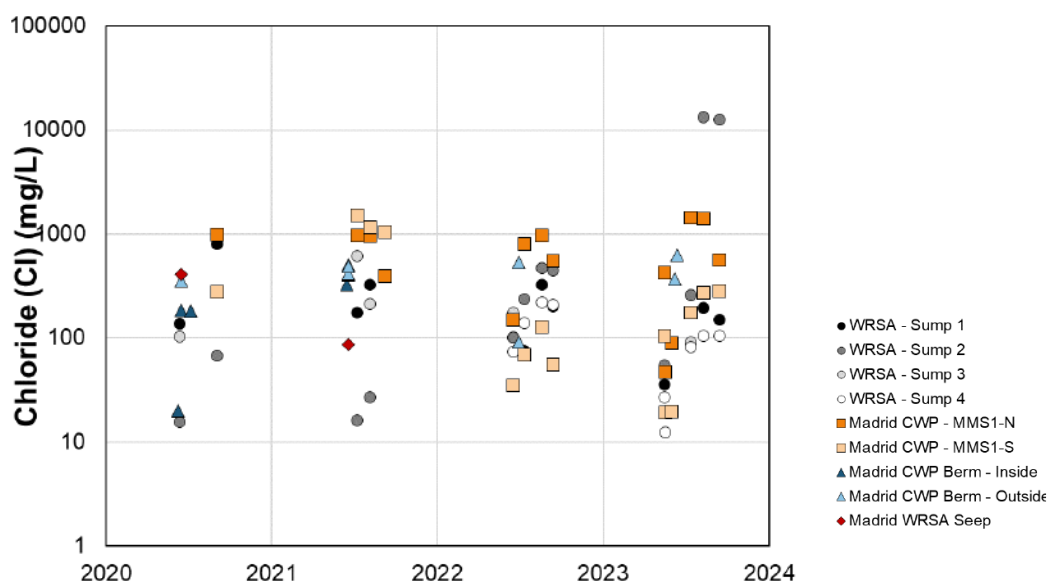
Request Made by Interested Party:

Provide additional support regarding the likelihood that evapoconcentration is occurring at the CWP and not the nearby sumps.

Agnico Eagle's Response to Request:

Agnico Eagle agrees with the reviewer that in 2023, "a separate possibility could be that high chloride concentrations at CWP are associated with the contribution of contact water from Sump 2 to the CWP and/or seepage from flow pathways that interact with underground waste rock present at the Madrid North WRSA". In previous years, higher concentrations of chlorides have been observed at the CWP, relative to Sump 2, and the understanding was that this was due to evapoconcentration.

Figure 1 – Time series plot of chloride (Figure 9-12; Agnico Eagle 2024)



Reference:

Agnico Eagle. 2024. 2023 Hope Bay Annual Report App. H – Doris and Madrid Waste Rock, Quarry and Tailings Monitoring Report. March 2024.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-04
Re:	Elevated total suspended solids (TSS) concentrations at the TIA pond		

Request Made by Interested Party:

Agnico Eagle to provide clarification if the EWTP actively treated water from the TIA in 2023.

- If the EWTP was operational and treated TIA pond water, the water quality of the treated effluent should be provided in accordance with its Water Management Plan (Appendix L4; Section 3.2.7).*
- If water from the TIA, as represented by the water quality measured at TL-1, was discharged to Roberts Bay without treatment, Agnico Eagle is requested to provide further information regarding elevated TSS concentrations.*

Agnico Eagle's Response to Request:

Agnico Eagle clarifies that the EWTP was not operational in 2023 and no active treatment of water from the TIA was required. Monitoring station TL-1 (TIA Reclaim) is not the final discharge water quality that is discharged to Roberts Bay; as stated in Section 3.2.5 of the Water Management Plan (Appendix G-9 on the NIRB 2023 Annual Report submission),

"Based on inflow volumes, the TIA effluent may comeingle with groundwater discharge from the mine and both mine and excess TIA water will be co-disposed in Roberts Bay in compliance with the effluent quality limits outlined in License 2AM-DOH1335, Part I, Item 14, and the MDMER limits."

The final discharge point is RBD-1 (registered with Environment and Climate Change Canada [ECCC]), is the combination of mine water and excess TIA water, and not part of the water licence. Reporting requirements under the Metal and Diamond Mining Effluent Regulations (MDMER) have been submitted directly to ECCC and was included as Appendix C of the NIRB 2023 Annual Report submission.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-05
Re:	Lowering of Roberts Bay Jetty		

Request Made by Interested Party:

It is KIA's understanding that the jetty is used for commercial and fuel deliveries. Please clarify how the material from the excavation was reused at the Site, considering that the excavated material has the potential to be contaminated.

Agnico Eagle's Response to Request:

The material was utilized for future quarry access and then reposed again for the rigid fuel line road. The material did not show any signs of contamination. Any previous spills, if any, would have been cleaned-up and material placed in the landfarm for remediation.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-06
Re:	Doris Lake		

Request Made by Interested Party:

Agnico should identify the activities that have the potential to increase the turbidity values and take corrective mitigation measures to prevent exceedance of the benchmark level.

Agnico Eagle's Response to Request:

The higher turbidity value in Doris Lake is likely attributed to natural variability. Specifically, Doris Lake open-water sample was taken in August 2023, the month where most rainfall was observed (Table 4.1-1, Appendix B of Appendix D5 of the 2023 NIRB Annual Report); increased stormwater runoff can likely stir up sediments and increase turbidity. As stated in Appendix D5 (Aquatic Effects Monitoring Plan Annual Report) of the 2023 NIRB Annual Report, the 2023 turbidity values are within pre-mining baseline range (2009).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-07
Re:	Monitoring the TIA		

Request Made by Interested Party:

When mentioning the TIA, the section of the TIA which Agnico is referring to (i.e., saline or contact water) should always be included.

Agnico Eagle's Response to Request:

Agnico Eagle has updated the Section 2.7.1 of the Care and Maintenance Plan, which is included as Appendix C of the response package.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-08
Re:	Monitoring the TIA		

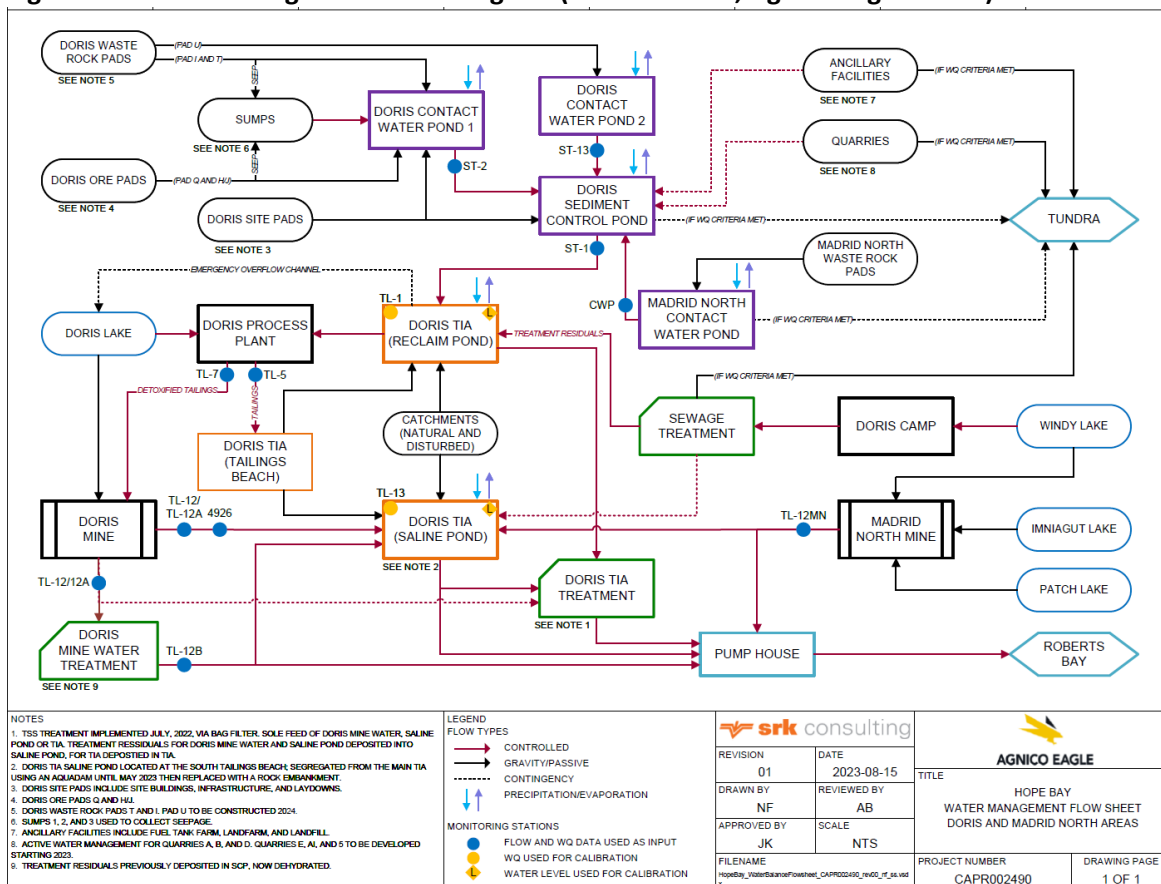
Request Made by Interested Party:

Water levels and water quality within the TIA should be assessed for both the non-saline section (between dike and North Dam) and the saline section (between dike and South Dam) of the TIA.

Agnico Eagle's Response to Request:

Agnico Eagle would like to clarify that the water levels and water quality within the TIA are currently assessed for both the non-saline section (between dike and North Dam) and the saline section (between dike and South Dam) of the TIA. Water levels for both non-saline and saline sections are monitored under the Operations, Maintenance and Surveillance Manual (Agnico Eagle 2024a). TL-1 (TIA at the Reclaim Pipeline) monitors water quality in the non-saline section of the TIA and TL-12 (Doris Mine Water Discharge Point) monitors water quality in the saline section. See Figure 1 (below), which will be included in the next update of the Water Management Plan.

Figure 1 – Water Management Flow Diagram (Attachment 1, Agnico Eagle 2024b)



Reference:

Agnico Eagle. 2024a. *2023 Annual Report NWB, Appendix G: Operations, Maintenance and Surveillance Manual*. March 2024.

Agnico Eagle. 2024b. *2023 Annual Report NWB, Appendix E: Doris Mine Annual Water and Load Balance – 2023 Calendar Year*. March 2024.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-09
Re:	Mine Water		

Request Made by Interested Party:

The saline water should be discharged into the saline section of the TIA.

Agnico Eagle's Response to Request:

Agnico Eagle clarifies that compliant saline water will be discharged to Roberts Bay, which will be in accordance to the Metal and Diamond Mining Effluent Regulations (MDMER); chlorides is not considered a deleterious substance under these regulations.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-10
Re:	Contact Water		

Request Made by Interested Party:

Please confirm if tailings will be deposited in the contact water section only.

Agnico Eagle's Response to Request:

Agnico Eagle clarifies that Hope Bay has been in care and maintenance and has not produced tailings since mid-October 2021; therefore, no tailings have been deposited in the TIA. The use of the interim dike to segregate saline and non-saline water was planned to be used primarily during the care and maintenance. If/when the site goes back into operation and tailings deposition resumes, Agnico Eagle will update the Water Management Plan to reflect exactly where tailings would be deposited.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-11
Re:	Appendix G: Updated Monitoring and Management Plans		

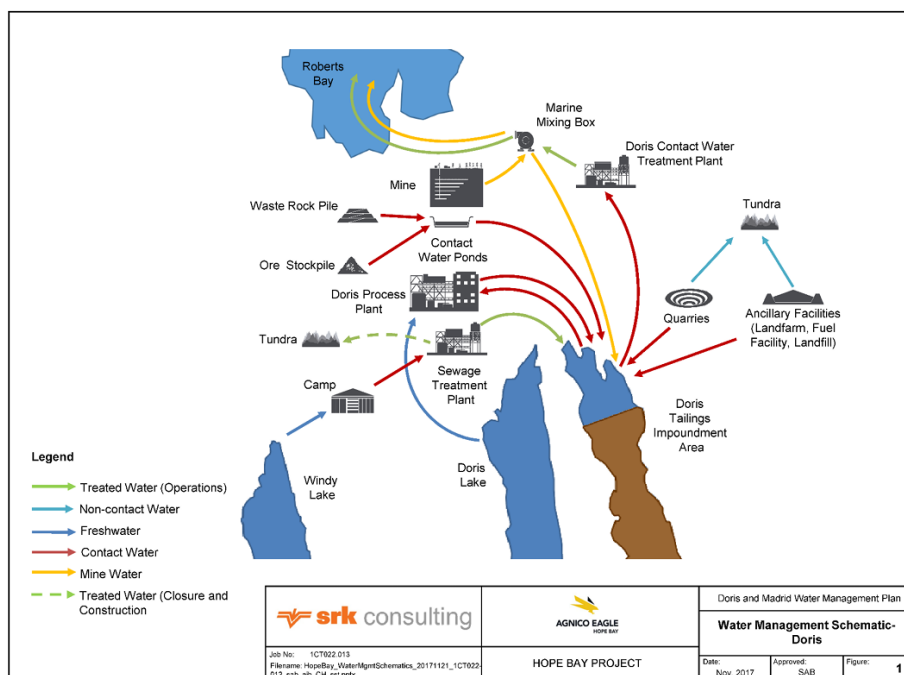
Request Made by Interested Party:

Please include the missing monitoring and management plan figures.

Agnico Eagle's Response to Request:

Agnico Eagle confirms that in the version of the 2023 NIRB Annual Report, Appendix G-9 contains all the requested figures as shown below.

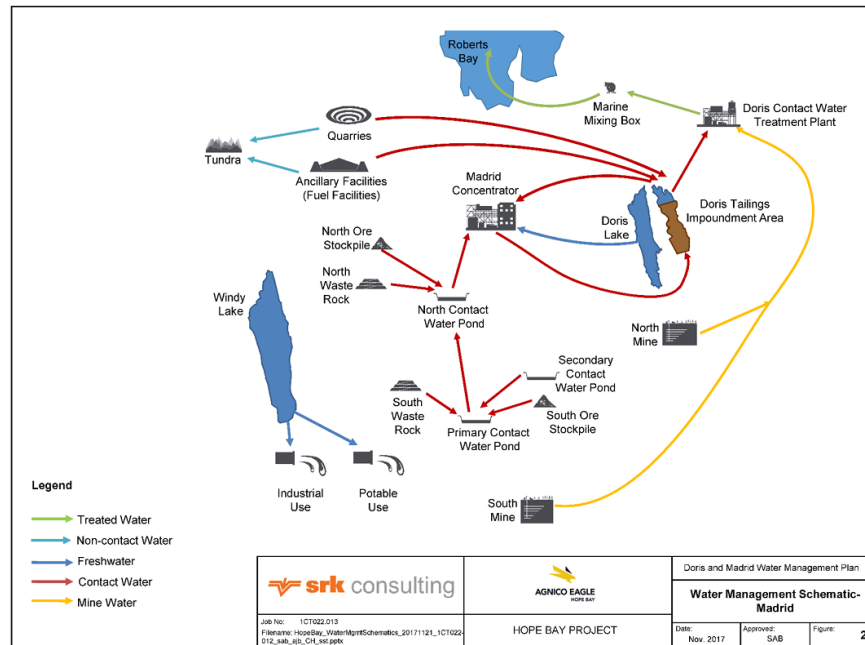
Figure 1 Water Management Schematic-Doris



March 2024

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Figure 2 Water Management Schematic- Madrid



March 2024

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Figure 3a Doris SNP Sample Stations



SNP Stations not shown:

- ST10 (no set location), ST13 (not yet constructed)
- TL3 (inactive), TL4 (inactive), TL10 (inactive)

March 2024

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Figure 3b Doris SNP Sample Stations



March 2024

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Figure 4 Madrid SNP Sample Stations



SNP Stations not shown:

- MMS-2, MMS-3, MMS-4a, MMS-5, MMS-6, MMS-7, MMS-8, MMS-9 and MMS-10 (not yet constructed)

March 2024

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Interested Party:	KitIA	Rec No.:	KitIA-NIRB-12
Re:	Lowering of Roberts Bay Jetty		

Request Made by Interested Party:

Provide a construction plan or summary of construction activities and mitigation measures for the Roberts Bay jetty.

Agnico Eagle's Response to Request:

The KitIA noted in their detailed review comment that it was unknown if any in-water work was required. Agnico Eagle confirms that no in-water work was completed for the lowering of the jetty. Geotextile was installed to mitigate erosion and silt curtains were installed during work on Jetty.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-13
Re:	Water Discharge to Roberts Bay		

Request Made by Interested Party:

Provide water quality variable results for underground and TIA water discharged to Roberts Bay, as well as threshold MDMER levels and threshold levels for fish.

Agnico Eagle's Response to Request:

Water quality results for water that was discharged to Roberts Bay was included in Appendix F of the 2023 NIRB Annual Report. Threshold levels for water quality is found in Schedule 4 of the MDMER; threshold levels for fish, as per MDMER requirements, are confirmed by conducting acute lethality testing.

Reference:

Government of Canada. 2024. [Metal and Diamond Mining Effluent Regulations](#). Last amended June 10, 2024.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-14
Re:	Aquatic Effects Monitoring Plan		

Request Made by Interested Party:

Provide the scientific reasoning for the determination of natural variability that is stated in the AEMP.

Agnico Eagle's Response to Request:

Additional discussion on natural variability of Chlorophyll a concentrations in Doris Lake was included as Appendix D.6 (2023 Aquatic Effects Monitoring Program – Aquatic Response Plan for Phytoplankton Biomass) of the 2023 NIRB Annual Report. It is known that Arctic and sub-Arctic ecosystems are experiencing the effects of climate change at an accelerating rate and changes in temperature and ice-phenology may be influencing phytoplankton dynamics throughout the open-water season in lakes around the Project area, including Doris Lake. The overall increases in phytoplankton biomass throughout the monitoring period (2009 to 2023) that have been observed in the reference lake and throughout the baseline period of another exposure lake suggest that regional factors may be influencing Chlorophyll a concentrations in the Project area (phytoplankton biomass levels are monitored using the concentration of the main photosynthetic pigment, Chlorophyll a, as an indicator).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-15
Re:	Unknown Brine Spill Risk		

Request Made by Interested Party:

"AEM to provide the following information:

- *Distance between spill and the nearest aquatic receiving environment.*
- *What steps have been taken to contain the residual brines spilled onto the tundra to mitigate ongoing impacts to the environment?*
 - *Have the impacted soils been excavated?*
 - *Are erosion and sediment controls in place to prevent further mobilization of impacted soils beyond the 3776 m2 impacted area?"*

Agnico Eagle's Response to Request:

Response bullet 1)

Please find a map of 2023 brine spills surrounding Patch Lake in Appendix D of this response package. The nearest aquatic receiving environment is 74 m away. Water quality sampling was conducted at Patch Lake under the AEMP (Appendix G-5, Table A.3-5) and the results show there were no water quality exceedances; specifically, chlorides in the August 2023 sample was 60.7 mg/L (at 1 m depth) and 60.6 mg/L (at 5.5 m depth), which is well below the AEMP benchmark/CCME Guideline for the Protection of Aquatic Life of 120 mg/L. In addition, water quality sampling was conducted at ST-7 in Doris Lake and the results show there were no water quality exceedances. As per Water Licence requirements, Doris Lake water quality continues to be sampled monthly.

Response bullet 2)

In 2023 brine spills were delineated with pickets, test samples were taken, and regular aerial photography to track extent of damaged tundra.

Thirteen corrective actions were taken to mitigate further impacts to the tundra including: plastic liners under each drill, installation of double walled casing, burn in of casing, pressure testing of casing (to ensure seal), wireline scrapers, monitor water consumption down hole, monitor calcium chloride (CaCl₂) consumption, stopped the washing of rigs, update inspection checklists.

Impacted soils have not been excavated. Agnico Eagle hired ABR Inc. in the summer of 2023 to develop a preliminary rehabilitation plan for the impacted sites, which includes monitoring of the sites and vegetation sampling, currently planned for August 2024.

Based on the corrective actions taken additional erosion or sediment controls are not required to be installed.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-16
Re:	TIA Monitoring		

Request Made by Interested Party:

The monitoring plan outlined in Table 5-1 should specify that samples will be collected in each of the sections of the TIA – the fresh and saline contact water ponds. Water quality monitoring for the saline portion of the pond should duplicate requirements for TL-1 that occur in the freshwater portion of the pond, and specifically include water column profiles that include temperature, dissolved oxygen, pH and conductivity.

Toxicity testing is not recommended for the saline pond as acute lethality is expected for undiluted groundwater. Water quality samples collected in the contact water portion of the TIA should be updated to include water quality samples proximal to the interim dam to better evaluate diffusion through that structure.

Agnico Eagle's Response to Request:

Agnico Eagle disagrees with the reviewer that a new sampling point is required for the saline portion of the TIA, with same requirements as TL-1 (freshwater portion of TIA); saline water (mine water) from Doris Mine is already monitored at TL-12 (Doris Mine Water Discharge Point).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-17
Re:	Closure/Post-closure Updates		

Request Made by Interested Party:

Please update this section to provide additional detail regarding management of waters through the TIA at closure with consideration of the saline water stored therein for the remaining life of the project.

Agnico Eagle's Response to Request:

Agnico Eagle would like to clarify that the design of the Interim Dike to manage water at the TIA is planned to be used primarily during the Care and Maintenance phase of the Hope Bay Project (Agnico Eagle 2024). If/when the Project goes back into operation and tailings deposition resumes in the TIA, then the need for the Interim Dike would be re-evaluated. At this stage, what is written in Section 6.1 *"Water quality criteria in the TIA for discharge to the Doris System will be determined in advance of final closure and in consultation with interested parties"* remains accurate. Section 6.1 of the Water Management Plan will be updated as details are available.

Reference:

Agnico Eagle. 2024. *Construction Summary Report – Doris TIA Interim Dike*. February 9, 2024.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-18
Re:	QA/QC Regulations		

Request Made by Interested Party:

- Please correct the title or information contained within Table 1-1.

Agnico Eagle's Response to Request:

Agnico Eagle thanks the KitIA for their recommendation and will adjust Table 1-1 in the QA/QC Plan in the next version to more accurately reflect the regulations and guidelines. Please see below in red for the changes that will be implemented.

*Table 1-1. List of federal and territorial regulations **and guidelines** governing the QAQC*

Regulation / Guideline	Year	Governing Body	Relevance
Quality Assurance and Quality Control Guidelines For Use by Class "A" Licensees	1996	INAC Water Resources Division	Describes information to be included in the development of a QA/QC Plan
Standard Methods for the Examination of Water and Wastewater	1999		Provides procedures and methods of analysis for examination of water quality
Guidance Manual on Sampling, Analysis and Data Management for Contaminated Sites Volume I	1993	CCME	Technical support document which provides approach to sampling, analysis and data management.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-19
Re:	Potential effects on chlorophyll-a and phytoplankton		

Request Made by Interested Party:

The text should be revised to recognize the potential for project activities to affect phytoplankton (and the relationship between chlorophyll-a and phytoplankton biomass) via changes in water clarity.

Agnico Eagle's Response to Request:

Agnico Eagle agrees with the reviewer that it should be recognized that project activities can affect phytoplankton via changes in water clarity. The 2022/2023 Aquatics Effects Monitoring Program (AEMP) revealed no effects on water quality that would suggest changes in water clarity parameters were influencing phytoplankton biomass, so details were not included in the report.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-20
Re:	Errors in hydrology data		

Request Made by Interested Party:

Please provide accurate information in Tables 3-8 and 4.1-1.

Agnico Eagle's Response to Request:

An updated version of the "2023 Hydrology Compliance Monitoring Summary" (Appendix B of the 2023 Aquatic Effects Monitoring Program Report) has been included as Appendix E of this response package. Units for Table 3-8 "Under-Ice Volumes" have been corrected to Mm³ instead of mm³ and the annual precipitation totals in Table 4.1-1 have been removed.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-21
Re:	Trend analysis methodology		

Request Made by Interested Party:

Please use a more conventional, intuitive, and/or transparent approach for trend analysis, or include an improved plain-language description that is comprehensible to non-statisticians.

Agnico Eagle's Response to Request:

The level of description provide is required to accurately convey the methods used in this analysis for individuals with advanced statistical knowledge. It was the intent within Section 2.2.3 (Overview of Effect Assessment Methods) of the main AEMP report (submitted as Appendix D-5 of the NIRB Annual Report) to provide a more high level summary for non-statisticians.

To help alleviate some of the linguistic complexity, additional details provided as follows:

- Section C.2.2.3 (Hypothesis Testing): Once the linear mixed effect model (LME) or Tobit regression models were fit, hypothesis tests were performed by computing the chi-square statistics from the variance-covariance matrix of the relevant modelled contrast values (as detailed in this section) to determine if there was evidence that the mean variable values in the exposure lake (*E*) had changed over time.
- A linear model is considered such because the response is a linear function of its parameters (e.g. coefficients of the variables). As described in Section C.2.2.1, the use cubic regression splines does not contradict the use of LME's since, the regression is composed of year-to-year piecewise linear combinations. As noted by the reviewer, seasonality (Under-Ice & Open-Water) has the potential to introduce non-linearity in the modelled response variable. Agnico Eagle clarifies that this parameter was specified in the model although not explicitly stated in Section C.2.2.1.
- The reviewer's suggestion to use General Additive Mixed Effect Models (GAMMs) is valuable but it should be noted that we expect similar results would be obtained since both GAMMs and LMEs with cubic splines both employ smooths in the model. While normality is not an assumption of GAMMs, concentration data tend to be log-normally distributed and exhibit heteroscedasticity where variability is higher for higher values. As such, it is recommended to use a log transformation which is appropriate for this case. Additionally, interpretation of the results and hypothesis testing would be of similar complexity since an analogous method, considering the chi-square statistics from the variance-covariance matrix of the relevant modelled contrast values, would be used.
- Lastly, it is important to reiterate that the analysis evaluating temporal variation in mean variable response was not strictly restricted to Doris Lake. The reference lake (Reference Lake B) was also modelled and compared to a potential slope of 0 and to the exposure lake (Doris Lake).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-22
Re:	Reporting of censored effluent data		

Request Made by Interested Party:

Non-detects should be presented as less than the MDL and where substitution is necessary replaced with half the MDL.

Agnico Eagle's Response to Request:

Agnico Eagle thanks the reviewer for their recommendation and will use half the minimum detection limit (MDL) to calculate relative percent difference (RPD) in future reporting.

Interested Party:	KitlA	Rec No.:	KitlA-NIRB-23
Re:	Doris diversion construction schedule		

Request Made by Interested Party:

Please revise Figure 4.1 to include the schedule for the diversion ditch/berm.

Agnico Eagle's Response to Request:

Figure 4.1 has been updated in the Care and Maintenance Plan to show when the activity may take place. The plan is provided in Appendix C of this response package.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-24
Re:	Annual update for Wildlife Mitigation and Monitoring Plan		

Request Made by Interested Party:

The KIA requests the following:

- *Please provide an updated WMMP Plan for the current cycle of annual reporting (i.e., 2024). This updated WMMP Plan should include any commitments made by Agnico Eagle to the KIA and other reviewers (as applicable) during the 2022 Annual Report reviews.*

Agnico Eagle's Response to Request:

Project Certificate No. 009, Condition 19 for the Madrid-Boston expansion allows for a belt-wide Wildlife Mitigation and Monitoring Plan (WMMP) that will replace the WMMP required in Project Certificate No. 003 for the Doris Project. Project Certificate No. 009, Condition 19 allows the proponent to work with interested parties to identify suitable updates for the WMMP, rather than updating it annually.

Before updating the WMMP Plan, Agnico Eagle wanted to meet and discuss the proposed changes with the Inuit Environmental Advisory Committee (IEAC) which held a meeting the first week of July 2024.

Agnico Eagle will update the WMMP Plan for submission to the NIRB as part of the 2024 Annual Report. This updated plan will include revisions discussed with the IEAC and address any commitments made in this and the 2022 comment responses.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-25
Re:	Major revisions needed for OPPP/OPEP		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain why the OPPP/OPEP has not been meaningfully updated since 2020, despite bulk fuel transfers occurring in 2021 and 2022. The lack of updates is non-compliant with Agnico Eagle's OPPP/OPEP document review and annual risk assessment review procedures and may have put both workers and the environment at greater risk.*

Agnico Eagle's Response to Request:

Agnico Eagle engages in specialized fuel transfer companies for their expertise and risk mitigation capabilities. We operate with an evidence-based approach, prioritize safety, and continuously monitor our operations, including bulk fuel transfer operations. There is no evidence of increased risk to workers or the environment despite the lack of formal revisions. Furthermore, there have been no spills related to fuel transfer at Hope Bay.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-26
Re:	Marine mammal monitoring program		

Request Made by Interested Party:

The KIA requests the following:

- *Please clarify how the 30-minute marine mammal monitoring survey is conducted and update the SOP and reporting to reflect the clarifications needed: is one continuous survey or multiple surveys (e.g., 5 or 10 min each) done throughout the day? Are surveys done at both approved locations, simultaneously or in sequence, or only one location per day?*
- *Please add ringed seal to the marine mammal ID guide. Although it is not a common pinniped, it is a species of conservation concern and the representative species for marine mammal VECs for the Hope Bay Project.*
- *Please clarify how the timing of marine mammal monitoring is decided. Did surveys in 2023 capture the times when the vessel was actively arriving and departing, and when barge trips were actively occurring between the vessel and the jetty? Were surveys conducted at approximately the same times of day for the Before, During, and After shipping periods?*
- *Please amend how marine mammal monitoring results are summarized for annual reporting, including the timing and location of surveys even when no animals were observed. The observation of no marine mammals, when observations are occurring, still provides meaningful information over time.*
- *Please ensure that observers follow the Marine Mammal Monitoring SOP with respect to data recording. The summary of results in Appendix U did not include details and descriptions specified in the procedures.*
- *Please revise the Marine Mammal Survey Data Sheet and/or Data Key for consistency to avoid confusion (see Detailed Review Comment).*
- *Please amend the timeline for marine mammal monitoring from “the first two years of monitoring” to include consideration of Project phase (i.e., Care and Maintenance vs. Construction and Operations) before determining appropriate indicators and thresholds.*

Agnico Eagle’s Response to Request:

Response bullet 1)

In the “Hope Bay Marine Mammal Monitoring Plan SOP” it is stated that a single 30-minute survey will be completed from an approved location.

Response bullet 2)

The ringed seal will be updated in the marine mammal ID guide.

Response bullet 3)

The marine mammal monitoring plan is used to assess the overall rate of marine wildlife observations. The surveys are currently at different times of the day and during the analysis we will be able to see if the time-of-day affects the number of observations. The surveys are not expected to be surveyed at the same time daily, this could be difficult to do if the weather is impacting the ability for them to survey the bay and horizon.

Response bullet 4)

The report will have more information in the future on the timing and location during instances of no observations and the proper data reporting will be followed for future observations.

Response bullet 5)

Agnico Eagle will work with the technicians to ensure that all data in the SOP is recorded.

Response bullet 6)

Agnico Eagle will update the data sheet for any inconsistencies identified by the KIA.

Response bullet 7)

The wording in the Shipping Management Plan can be updated to reflect the project phase once the project returns to production.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-27
Re:	Noise monitoring during blasting		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain why important instructions, such as measures to minimize extraneous noise and follow-up procedures based on the results, have been removed from the 2023 version of the Hope Bay Quarry Blast Noise Monitoring SOP.*
- *Please clarify if the 2022 and 2023 Quarry Blast Noise Monitoring SOPs are meant to be used together. If so, please rename the 2023 version to be a work procedure/instruction for the SoundAdvisor 831C.*
- *Please confirm if the noise monitoring field data sheet has been updated with the KIA's requested changes from the 2022 NIRB Annual Report review (KIA-NIRB-07).*
- *Please ensure that noise monitoring during blasting is continued in 2024 and uses appropriate methods to accurately capture blasting noise while minimizing other noises.*
- *Please clarify what Agnico Eagle meant with respect to needing additional work "to obtain results sufficient for resting the sound level at the exact time of the blasts" in Section 2.5 of the 2023 WMMP Compliance Report.*

Agnico Eagle's Response to Request:

Agnico Eagle has been working hard to develop a noise monitoring program for quarry blasting that captures the noise from blasts while managing the influence of windy conditions that are prevalent at Hope Bay. Wind noise frequently obscures the ability to hear and measure blasts and Agnico Eagle is working to develop procedures which address this fact.

The 2022 Quarry Blast Noise Monitoring SOP includes instructions for planning, setting up and managing data from quarry blast noise measurements. The 2023 SOP includes instructions for a new sound meter purchased by Agnico Eagle. The two SOPs are meant to be used together.

Agnico Eagle will update the 2023 Quarry Blast Noise Monitoring SOP to a 2024 SOP that will include our learnings to date in terms of wind noise and logistics on site, the new noise meter and to address the comments provided by the KitIA on the 2022 and 2023 annual reports and to include the noise monitoring equipment on site (the Sound Advisor 831C).

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-28
Re:	Traffic monitoring data missing or not reported		

Request Made by Interested Party:

The KIA requests the following:

- *Please investigate how long vehicle traffic between October and December has been excluded from annual reporting. Please present the complete results, compared to FEIS predictions, in Agnico Eagle's responses to the 2023 NIRB Annual Report review comments.*
- *Please ensure that vehicle traffic for the entire reporting period (e.g., September to September) is included for future annual reporting.*
- *Please clarify when the Doris to Madrid North route (Camera 35) malfunctioned in 2023, as Sections 2.2.2 and 2.2.3 seem to indicate that it collected no data in five out of the nine months analyzed.*
- *Please provide more information on the cause(s) of Camera 35 malfunction and if corrective actions have been taken to prevent camera failures in the future.*

Agnico Eagle's Response to Request:

Response bullet 1)

Agnico Eagle conducts traffic monitoring to track the volume and composition of light-weight vehicles (e.g., pickup trucks) and heavy equipment (e.g., haul trucks and other heavy equipment) on mine roads, summarizing the information seasonally and annually.

Response bullet 2)

In future, Agnico Eagle can report traffic annually September to September.

Response bullet 3) and 4)

During 2023, the camera card on camera 35 monitoring the Doris to Madrid North Road malfunctioned. Malfunctions of this type are not common but grow in frequency with the age of the camera cards. Agnico Eagle has a program of updating its camera cards to manage the potential for malfunctions.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-29
Re:	Wildlife camera effort in 2023		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain what happened to the ‘missing’ Doris-Madrid cameras: 60 were deployed but Table 12 and Sections 3.4.3.2 and 3.6.3.1 indicate there were only 56-58 active cameras in 2023.*
- *Please explain why the September 2023 camera effort was so low. The number of knocked-down cameras and broken tripods does not account for all 45 ‘obscured’ cameras.*
- *Please explain the differences in camera effort between Table 12 and Table 15, especially the ‘loss’ of nine cameras in September 2023 for subsequent data analyses.*
- *Please provide a discussion of cameras with and without side- shields, which Agnico Eagle stated would be included in the 2023 WMMP Report in their response to KIA-NIRB-08 during the 2023 NIRB Annual Report review.*

Agnico Eagle’s Response to Request:

Response bullet 1)

A total of 60 cameras were deployed and none were missing. Two cameras were deployed at the Windy Road culvert crossing to monitor the crossing. Due to their specific purpose, they were not included in the analysis. Additionally, as described in Table 3.1-1 and Section 3.1 several cameras are placed at possible attractants and therefore not included in some species statistical analysis. Therefore, the number of cameras used in statistical analysis is less than 60 and varies between species.

Response bullet 2)

Camera effort is measured as the number of days the cameras are active. Cameras were serviced in early September and therefore had few operational days of effort. In future Agnico Eagle can report for the entire month of September by using data from two sampling periods before and after the check.

Response bullet 3)

The differences between Table 12 and 15 are an artifact of reporting camera effort for a portion of a month, where the camera checks occurred. As stated above, Agnico Eagle can address this by reporting for the entire month by stitching data together from before and after the camera check. This would mean that the reporting period would be September to August, instead of September to September where a portion of September is reported each year.

Response bullet 4)

There is currently not a distinction made between how many cameras do or do not have side shields. On-site staff have noted that the side shields appear to be causing the camera to be obscured by snow longer by blocking the wind. A complete list of camera tripods with side shields can be created during the next servicing event.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-30
Re:	Proposed discontinuance of camera ZOI analyses		

Request Made by Interested Party:

The KIA requests the following:

If the camera ZOI analyses are discontinued in 2024, please include change in Project phase (e.g., coming out of Care and Maintenance) as a trigger to resume these analyses, in addition to changes in camera detection or occupancy patterns.

- *Please provide the model fit statistics and rankings for camera ZOI • analyses for caribou, grizzly bear, and wolverine.*
- *Please consider continuing the camera ZOI analyses for wolverine, at minimum, since a conclusive ZOI has not yet been found and potential avoidance effects should be included as part of a cumulative effects assessment.*
- *Please share the results of the IEAC meeting where the topic of discontinuing the camera ZOI analyses was discussed.*
- *Please clarify if Agnico Eagle will be considering the input of other intervenors for this proposed WMMP Plan change.*

Agnico Eagle's Response to Request:

Agnico Eagle's camera monitoring program is one of the longest-running monitoring programs of its type in the Arctic. The camera program has shown that caribou are not avoiding the mine site, while results are inconclusive for less common species such as wolverine and muskox. The Hope Bay mine is in Care and Maintenance and so Agnico Eagle is planning to continue to operate the camera program and record the data but move to conducting the detailed analysis every three years. This is consistent with reporting being conducted in the Northwest Territories.

Response bullet 1)

Agnico Eagle will report the model fit statistics and rankings in the next analysis period.

Response bullet 2)

The camera information will continue to be collected and the ZOI analyses will continue to be run but every three years as opposed to annually. The low detection rates of wolverine have limited the ability to conduct statistical analysis and it is unlikely to change without additional years of detections. Therefore, we think that completing the analysis every three years will be more than sufficient to detect potential wolverine avoidance effects if it ever does become possible to complete.

Response bullet 3)

Moving the ZOI analysis to every 3 years was discussed in the July 2024 IEAC meeting and there were no objections to the change.

Response bullet 4)

Agnico Eagle considers the input of the IEAC through our annual meetings and the input from other regulators through comments on the annual report.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-31
Re:	Air quality guidelines for dust deposition		

Request Made by Interested Party:

The KIA requests the following:

- *Please consider adopting the 2023 GNWT Ambient Air Quality Monitoring Guideline for contaminants where Nunavut does not currently have standards, such as dustfall.*
- *Please review and revise the Hope Bay Air Quality Management Plan, which has not been updated since 2019. Ambient air quality guidelines from various government agencies have since been updated and should be reflected in the revised AQMP.*

Agnico Eagle’s Response to Request:

The 2023 GNWT Ambient Air Quality Monitoring Guideline (GNWT Guideline) references a 2016 memorandum to the BC ENV Director of Monitoring, Assessment & Stewardship on Dustfall Monitoring and Pollution Control Objectives as the basis for the dustfall criteria provided in Table 2.5 of the GNWT Guideline. However, the 2020 BC ENV Technical Guidance document (“Dustfall Monitoring and Pollution Control Objectives”) states that “ the ministry considers dustfall monitoring and the dustfall Pollution Control Objectives as outdated methodology / criteria and, with the exception of specific limited circumstances, is no longer recommending or supporting their use...”.

One of the reasons provided is that the dustfall objectives were developed under the BC Pollution Control Objectives in 1979. The dustfall criteria published in the GNWT Guideline are therefore of the same vintage as the Alberta Environment dustfall objectives. However, the Alberta dustfall objectives are regulatory standards developed under the *Alberta Environmental Protection and Enhancement Act* (EPEA) and published in an Air Policy directive last updated in 2019. British Columbia no longer has a dustfall objective nor does the NWT. The GNWT document “Guideline for Ambient Air Quality Standards in the Northwest Territories” does not include dustfall – the GNWT Guideline is specific to diamond mine operators in the NWT and is not applicable to other entities.

The Alberta objectives therefore are still the relevant current jurisdictional dustfall standards

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-32
Re:	Camera monitoring reporting periods		

Request Made by Interested Party:

The KIA requests the following:

- *Please clarify which camera reporting period(s) are meant to be presented in the main body of the 2023 WMMP Compliance Report and associated tables, figures, and appendices. Refer to the Detailed Review Comment for specific examples of discrepancies.*
- *Please endeavour to present consistent information and appropriate reporting period(s) throughout the WMMP Compliance Report in the future.*

Agnico Eagle's Response to Request:

The 2023 Annual Report for wildlife included a typo in some of the table headings; however, when looking at the table it is clear what periods are being discussed since the time period is clearly presented. This typo does not change the content or validity of the tables and will be updated in future reports.

Interested Party:	KitlA	Rec No.:	KitlA-NIRB-33
Re:	Snowbank monitoring results		

Request Made by Interested Party:

The KIA requests the following:

- *Please ensure that snowbank monitoring methods are reported accurately and in line with the WMMP Plan. There appeared to be an inconsistency in survey frequency (i.e., monthly vs. twice monthly) in 2023 that was only resolved upon reviewing Appendix B.*
- *Please endeavour to report snowbank monitoring results clearly, including defining which averages are being used and reconciling values in text with values in tables.*
- *Please confirm the compiled snowbank program average heights and ranges, as there is inconsistent information presented in Section 2.4.3.2 versus Section 2.4.4.1.*

Agnico Eagle's Response to Request:

During the review of the Madrid-Boston FEIS Addendum, the KitlA and GN requested more information on whether plowing of Project roads would result in snowbanks that could alter wildlife movement. The Proponent made commitment GN-19:

"TMAC will implement a program to monitor and report snow bank heights along Project roads. This program will allow estimation of mean height and variance at a series of designated monitoring locations that are representative of snow conditions along the roads. This program will continue until operational snow management is characterized."

Project Certificate No. 009 Condition 20 includes monitoring of snowbanks and requires an analysis of the effectiveness of mitigation measures.

Snowbank monitoring has been conducted for four years (from 2020-2024) twice monthly and has addressed the initial question of whether plowing the road would result in snowbanks that could impede wildlife movement. These results indicate that snowbanks over most of the road averaged 9.6 cm in 2023 and below 15 cm in all monitoring periods, which cannot conceivably prevent wildlife movement.

At this stage, the question has been answered. Further, Agnico Eagle discussed discontinuing these surveys with the IEAC at the July 2024 IEAC meeting. The IEAC, who after seeing the roads and snowbanks in person, did not have any issues with discontinuing this program and subsequently no longer reporting.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-34
Re:	Wildlife mortalities in 2023		

Request Made by Interested Party:

The KIA requests the following:

- *Please provide further rationale for why the wolverine mortality was deemed to be due to natural causes. Distance from infrastructure, as an explanation, should be supported by other evidence gathered from the carcass condition.*
- *Please clarify if the shearwater mortality may have resulted from injuries due to Project activities, such as a collision with a vehicle or a building, disease, or other factors. Please specify where it was found “on site”.*
- *Please explain why the Arctic fox and unknown songbird mortalities were not reported in the 2023 NIRB Annual Report and WMMP Compliance Report (main body and Appendix G) and provide more information about their suspected causes of mortality.*
- *Please submit wildlife for necropsies where their mortalities were caused by factors that remain uncertain. It is also important to the KIA that avian flu be investigated as contributing factors as Inuit harvest birds and the investigations into the spread of this illness are limited in the Arctic, though it is known to occur.*

Agnico Eagle’s Response to Request:

Agnico Eagle records and reports wildlife incidents and mortalities and reports them to the appropriate agencies – either the KIA and GN and NIRB for mammals and raptors and CWS for migratory birds.

Response bullet 1)

During 2023, a wolverine mortality was found when the snow was melting in the tundra and reported.

Response bullet 2)

A shearwater was found frozen next to the warehouse, and another was observed being attacked by a raven in the tundra west of site. It is not possible to determine if the shearwater mortality was due to the Project with the information available.

Response bullet 3)

The missed mortalities were an oversight and Agnico Eagle thanks the KitIA for pointing these out. The fox was found in a pile of snow next to an exhaust vent from the kitchen once the snow had melted. The cause of death could not be determined. There was no additional information on the birds found at the Madrid Sump 2.

Response bullet 4)

Wildlife mortalities are reported to KitlA, GN DoE, and NIRB and migratory bird mortalities are reported to CWS. Agnico Eagle typically bags and freezes any fresh mortalities and will deliver them to government agencies if they request them at the time of reporting and they are otherwise incinerated.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-35
Re:	Wildlife interactions: active ptarmigan nest		

Request Made by Interested Party:

The KIA requests the following:

- *Please provide more information about the active ptarmigan nest found in 2023, including where it was found in proximity to Project activities, whether a no-disturbance buffer was set up around the nest, and whether the nest was monitored until it was no longer active.*

Agnico Eagle's Response to Request:

Agnico Eagle recorded an incidental observation of an active ptarmigan nest on the tundra. The area was not an active work site, and no work was planned through the summer. Since no work was occurring or planned in the area, the nest was noted but no buffer or flagging was installed, and no follow-up monitoring was conducted to minimize disturbance to the ptarmigan.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-36
Re:	Wildlife camera program in 'Ladder Area' and Boston		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain whether the potential ZOI camera monitoring zone will be expanded south when the 'Ladder Area' becomes part of the Treatment zone.*
- *Please consider deploying additional cameras south of the Ladder Area to act as true ZOI and Control cameras. These cameras should be set up at least one year prior to planned construction at Madrid.*
- *If the Boston camera program will be discontinued until Project activities resume at the site, please commit to redeploying cameras at least one year prior to planned construction.*

Agnico Eagle's Response to Request:

Response bullet 1)

The Hope Bay project worked with the KitIA and GN to re-design the camera program in 2016. This re-design included a "Ladder Area" surrounding Madrid north and south in response to a KitIA suggestion. The ladder area includes several cameras which were considered as zone of influence cameras (between 2 and 10 km from the active mine) before Madrid north was constructed and as part of the treatment area (between 0 and 2 km from the active mine) after Madrid north was constructed.

Response bullet 2)

Agnico Eagle is not planning to add an additional ZOI area to the south of Madrid. The three zones of the camera program (treatment, ZOI, and control) are arranged in an East-West manner because there is a North-South gradient in wildlife abundance, with more bears near the coast and more caribou to the south inland. At this time, Agnico Eagle is not planning on adding additional ZOI cameras to the south because this would add another variable to the analysis (north-south).

Response bullet 3)

Agnico Eagle agrees with redeploying the Boston camera program one year prior to planned construction.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-37
Re:	Facilities cameras and Roberts Bay waste management		

Request Made by Interested Party:

The KIA requests the following:

- *Please clarify if both Cameras 18 and 21 were moved to the new location of the Roberts Bay Waste Management Facility.*
- *Please clarify if the grizzly bear detections on Camera 21, as shown in Appendix E, occurred during this 2022-2023 monitoring period.*
- *Please clarify the location of the Roberts Bay ‘waste sorting area’ in relation to the Waste Management Facility and cameras.*
- *Please confirm if there had been previous wildlife interactions at the Roberts Bay waste sorting area, to inform whether the Facilities Camera Monitoring program may need to be expanded.*
- *Please provide updated examples of the monitoring views for relocated cameras and modified site conditions/infrastructure.*

Agnico Eagle’s Response to Request:

Agnico Eagle has two types of cameras installed in and around the mine – a) facilities cameras monitor the waste management locations to record if predators and scavengers are attracted to mine infrastructure; and b) Zone of Influence cameras record whether wildlife are avoiding the mine.

Response bullet 1)

Cameras 18 and 21 are placed at the waste management facility. Camera 21 was moved to the new location within the facility, and camera 18 was not moved.

Response bullet 2)

Neither camera 18 or 21 recorded grizzly bears at the waste facility in 2022-2023. There is an error in Appendix E that erroneously reports a grizzly bear at the site.

Response bullet 3)

The Waste Sorting Area is the same location as the Waste Management Facility.

Response bullet 4)

In the last 5 years, there were no grizzly bears were observed in 2022 and 2023. One grizzly was observed walking through the Roberts Bay laydown in 2019, 2021, and 2022. There have been no observations of bears investigating the waste facility buildings or acquiring any food rewards. As such, Agnico Eagle concludes that the waste facility cleanliness is good and is not attracting predators.

Response bullet 5)

This photo is the field of view from new camera 21 location at the new Roberts Bay Waste Management Handling Facility.



Interested Party:	KitIA	Rec No.:	KitIA-NIRB-38
Re:	Inaccurate reporting of wildlife observations/detections		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain why the numbers and months of wildlife observations/detections are inconsistent for muskox, wolverine, potential nest predators, and raptors (as described in the Detailed Review Comment).*
- *Please endeavour to present complete, accurate, and consistent results in future WMMP Compliance Reports.*

Agnico Eagle's Response to Request:

Agnico Eagle thanks the KitIA for pointing out any inconsistencies in the wildlife observations/detections. Agnico Eagle has implemented QAQC procedures with ERM to improve data management and reduce the chance of multiple accounts of the same incidental observation and improve reporting in the future.

Note that the numbers of raptors has changed over time because ravens were included as raptors when nest monitoring was being conducted, but now that that program has been retired, ravens are being reported as nest predators.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-39
Re:	Caribou Height of Land Monitoring SOP		

Request Made by Interested Party:

The KIA requests the following:

- *Please confirm if reported caribou sightings at the Project would trigger caribou height of land (HOL) surveys year-round.*
- *Please clarify if there is a distance or group size trigger for HOL monitoring with respect to caribou activity information provided by the Cambridge Bay HTO.*
- *Please clarify if Agnico Eagle will also be monitoring/analyzing caribou collar data to trigger HOL monitoring.*
- *Please clarify what is meant by “additional monitoring” in the first bullet of Section 3.1 of the Caribou HOL Monitoring SOP, and if “>10 individuals” is meant to define groups of caribou for this additional monitoring.*
- *Please explain how HOL monitoring results could trigger management or mitigation actions, and the timeline that such adaptive management could occur (immediately, after annual review, etc.).*

Agnico Eagle’s Response to Request:

Height of Land (HOL) surveys for caribou were requested by the KitIA and GN during the review of the Madrid-Boston FEIS and Hope Bay committed to developing this program with the IEAC. This program was developed with the IEAC between 2020 and 2022, which included writing a standard operating procedure and field testing the methods at site with the IEAC.

Response bullet 1) and 2)

The Hope Bay Caribou HOL SOP lists the following triggers for HOL:

Surveys will occur at regular intervals:

- 1. During spring and fall migration, when data indicate that the majority of road crossing events occur, and*
- 2. When local observations or radio-collar data indicate that caribou are within 10 km of Project roads.*

Response bullet 3)

Section 2.2 indicates that HOL monitoring will occur for 6 days once triggered. Section 3.1 indicates that if groups of caribou are observed in the first 6 days that an additional 6 days of monitoring will occur.

Response bullet 4)

In Section 4 of the SOP it discusses reporting the surveys and outcomes in the annual report. Adaptive management would occur after this report is complete and discussion with the IEAC on next steps.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-40
Re:	Revegetation studies and monitoring		

Request Made by Interested Party:

The KIA requests the following:

- Please confirm if Agnico Eagle will apply the recommendations from the Meliadine revegetation studies to the Hope Bay Project. If so, please specify when these revegetation efforts will take place.*
- Please consider a revegetation pilot study at the decommissioned Windy Camp as part of the progressive reclamation efforts outlined in New Term and Conditions No. 8 and 18.*

Agnico Eagle's Response to Request:**Response bullet 1)**

At this time, and as outlined in the 2023 Annual Report (Project Certificate No. 009, T&C 18) Hope Bay site requires additional assessment for natural revegetation during closure activities; therefore, applying recommendations of Meliadine revegetation studies are not being considered at this time.

Response bullet 2) and 3)

With respect to further reclamation and revegetation at the Windy Camp, our next steps and timelines are currently being assessed. Agnico Eagle plans to update the site assessment to confirm soil conditions from previous activities at the camp. The site assessment will help indicate whether further rehabilitation is required (e.g., soil excavation) or if the reclamation activities are complete. An update will be provided in the next annual report.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-41
Re:	Additional comments on Shipping Management Plan		

Request Made by Interested Party:

The KIA requests the following:

- *Please clarify if the key seabird and marine mammal habitat maps in the Shipping Management Plan should have been updated in 2024.*
- *Please include Jenny Lind Island and revise mapping for the Northwestern Brodeur Peninsula on Figure 2-1. These Important Bird Areas are located along the Project's shipping route.*
- *Please confirm if vessel operators are still provided with additional materials associated with the Shipping Management Plan, such as marine wildlife ID guides and sightings and incident reporting forms.*

Agnico Eagle's Response to Request:

Agnico Eagle will update the Shipping Management Plan when the project returns to production - to include the additional Important Bird Areas listed by the KitIA along the Project's shipping route.

Agnico Eagle confirms that vessel operators are provided with all of the materials associated with the Shipping Management Plan.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-42
Re:	Security of dustfall canisters		

Request Made by Interested Party:

The KIA requests the following:

- *Please devise measures to secure dustfall canisters from falling due to wind and bears.*

Agnico Eagle's Response to Request:

Unfortunately, there are elements out of our control (e.g., wildlife) that can impact the function of the stands. We recognize the importance of securing dustfall canisters and do check on instruments frequently.

In early July 2024 all dustfall jars were swapped, and pieces of wood were used to 'shim and snug' the bottles to make each one more secure within the round base (image below). This should prevent wind from blowing the jars out of their seating.



Interested Party:	KitIA	Rec No.:	KitIA-NIRB-43
Re:	Assessing compliance to Canadian Ambient Air Quality Standards		

Request Made by Interested Party:

The KIA requests the following:

- *Please confirm if future AQMP reporting will include reports based on calendar year, such that measures of PM2.5 and NO2 can be explicitly compared, and assessed for compliance, to CAAQS.*

Agnico Eagle's Response to Request:

In future reports, Agnico Eagle will start doing a comparison to the CAAQs using 3-years of data, as this comparison was agreed during the Phase 2 FEIS review process.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-44
Re:	Fuel transfer risk assessment		

Request Made by Interested Party:

The KIA requests the following:

- *Please provide a higher quality, legible version of the annual fuel transfer risk assessment during future annual reporting and updates of the OPPP/OPEP.*
- *Please provide a key/legend explaining the numerical and categorical rankings presented for Likelihood of Occurrence, Consequence, and Risk Level. Example scenarios would be helpful.*
- *Please explain why application of controls would increase, rather than decrease, certain identified risks (see IDs #6 and #9 in Schedule 9). If this is an error, please correct these risk assessments in the future.*
- *Please ensure Potential Outcomes are included for all identified risks. It is unclear how the various “Emergency Spill Response Land/Water” risks differ in Schedule 9.*
- *Please ensure that measures to prevent or reduce worker fatigue are included in the OPPP/OPEP and/or Bulk Fuel Transfer Procedure. Worker fatigue was identified as a Critical risk in TMAC’s 2020 annual fuel transfer risk assessment review.*

Agnico Eagle’s Response to Request:

Agnico Eagle thanks the KitIA for their detailed review and agrees with the comments provided. Agnico Eagle commits to make these updates to the OPPP/OPEP for the next round of management plan submissions.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-45
Re:	Updated ECCC-CWS guidance for emergency wildlife response		

Request Made by Interested Party:

The KIA requests the following:

- *Please incorporate the 2022 updated ECCC-CWS guidance for emergency wildlife response into the OPPP/OPEP and Spill Contingency Plan.*

Agnico Eagle's Response to Request:

Agnico Eagle thanks the KitIA for their detailed review and will consider incorporating ECCC-CWS's 2022 Guidance and Protocols.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-46
Re:	Species of conservation concern		

Request Made by Interested Party:

The KIA requests the following:

- *Please incorporate territorial status information from the NatureServe database and/or Arctic Ocean rankings from the CESSC's Wild Species: The General Status of Species in Canada report series when reporting on species of conservation concern.*

Agnico Eagle's Response to Request:

Agnico Eagle notes that this information are already provided in Table 11 of the 2023 Wildlife Mitigation and Monitoring Program Compliance Report that displays Federal and Nunavut status from the CESSC's Wild Species: The General Status of Species in Canada report series. This information is also displayed in Appendix J of the Wildlife Compliance Report.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-47
Re:	Caribou interactions with the TIA		

Request Made by Interested Party:

The KIA requests the following:

- *Please consider additional investigations, such as vegetation sampling and contaminant testing, of the area where a caribou was detected on camera interacting with the TIA.*

Agnico Eagle's Response to Request:

Hope Bay committed to monitoring the TIA to determine if caribou are attracted to the tailings as a form of salt and installed cameras to record if caribou are regularly using the site. These cameras report that caribou are not regularly using the site, with no observations of caribou in most years and only one observation in 2023.

The caribou that was observed at the TIA was recorded walking through the area and did not stop to feed, rest, or consume tailings. The monitoring addresses the initial request to monitor if caribou are attracted to the TIA as a salt lick, and it appears that caribou are infrequently walking through the site, but not feeding or using the site. As such, no additional tests are planned.

The WMMP indicates that if caribou were attracted to the site and observed feeding on tailings or drinking the water, that there would be additional monitoring and review of water quality information.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-48
Re:	Caribou herd identification		

Request Made by Interested Party:

The KIA requests the following:

- *Please consider undertaking retroactive caribou herd identification analyses of wildlife camera data to improve the power of future analyses of seasonal occurrence trends.*
- *Please consider including Peary caribou in a future update of the caribou ID guide as it is a species at risk. The suspected Peary caribou images could also be provided to the IEAC for herd identification assistance.*

Agnico Eagle's Response to Request:**Response to bullet 1)**

The classification of caribou in photos was a suggestion by the IEAC, who worked with Agnico Eagle to develop the methods for classification. At this stage, it hasn't been decided yet how these data will be used or whether earlier years will be analyzed. This will be discussed at the next IEAC meeting.

Response to bullet 2)

The IEAC specifically requested that Agnico Eagle specify whether caribou observed on cameras were Dolphin and Union (Island caribou) or Beverly (mainland caribou). The IEAC did not identify Peary caribou as potentially occurring at Hope Bay. The recovery strategy for Peary caribou, likewise, indicates that these animals occur in the Arctic Archipelago and not at Hope Bay (ECCC 2021).

Agnico Eagle does not plan to add Peary caribou as a third class of caribou identification guide, as they are typically misidentified Dolphin and Union caribou.

Reference:

Environment Canada 2021. Recovery strategy for the Peary Caribou (*Rangifer tarandus pearyi*) in Canada 2021.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-49
Re:	Using caribou collar data to define seasonal ranges		

Request Made by Interested Party:

The KIA requests the following:

- *Please clarify if movement analyses are used to define the end of the Beverly/Ahiak calving period, in addition to the beginning.*
- *Please consider re-analyzing winter range and spring and fall migration dates for Dolphin and Union caribou (including on an annual basis) instead of applying the dates derived from 2004.*

Agnico Eagle's Response to Request:

Agnico Eagle maps the location of the calving grounds for the Beverly/Ahiak caribou populations on an annual basis and has committed during the Madrid-Boston FEIS review to additional mitigation should the calving range overlap the mine site.

The beginning of the calving period is marked by an abrupt shift from caribou moving quickly to the calving range to calving and slowing down quickly. Dates of calving provided in academic papers and government reports were established in the 2000s and 2010s. In some cases, females are still migrating quickly (covering > 20 km/day) at the beginning of the calving dates. Agnico Eagle removes the data from these fast-moving migrating females from the calving range analysis to get an accurate picture of where females are actually calving.

The end of the calving season is characterized by a gradual speeding up of movement into the post-calving period and summer and generally occurs in the Queen Maude Guld Migratory Bird Sanctuary to the east of the mine. No movement analysis is conducted to separate calving and post-calving because movement is relatively similar between calving and post-calving for this herd.

As climate change alters caribou life history, the true calving period may start to shift earlier or later than the published dates. Agnico Eagle will consider whether moving to a movement-based definition of calving would be beneficial compared to a date-based definition of calving.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-50
Re:	Errors and disorganization of wildlife camera events		

Request Made by Interested Party:

The KIA requests the following:

- *Please ensure that camera data are entered/transcribed properly, including for date/time formatting and ensuring that information is not accidentally displaced.*
- *Please explain how Appendix F is organized in the 2023 WMMP Compliance Report and ensure that data are organized in a more sensible way during future annual reporting.*

Agnico Eagle's Response to Request:

Response bullet 1)

Agnico Eagle works hard to have robust data entry, QAQC, and reporting systems. Data is entered by technicians on site in a Microsoft Access database that controls what types of data can be entered and their format. For reporting purposes, data is exported to Microsoft Excel and summarized in tables.

The KitIA have pointed out a formatting error in the summary table. It appears that this formatting error was caused by an excel formatting issue and will be addressed in future reports. Note that the data is held in the long-term Access database and is not missing or lost.

Response bullet 2)

Appendix F is organized by "Camera No." and secondarily by "Camera Type". Missing values in the "Camera Type" column caused some minor separation and inconsistency in sorting. Organization will be completed by "Camera No." and secondly by "Date" to reduce confusion from readers scanning the document in the future.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-51
Re:	Incidental wildlife observations		

Request Made by Interested Party:

The KIA requests the following:

- *Please confirm if the incidental hare observation on 16 July 2023 also identified needed repairs for wildlife exclusion at the G wing, and if these repairs have been made.*
- *Please clarify if the values in Appendix I and Appendix J should correspond with respect to incidental wildlife sightings by biologists.*

Agnico Eagle's Response to Request:

Response bullet 1)

A hare was observed near the G wing of the Doris Camp. There were no repairs identified or required after this hare observation.

Response bullet 2)

The Appendix I provides a summary of wildlife recorded incidentally by biologists at the Project, 1996 to 2023. Appendix J provides a summary of the Hope Bay project wildlife sightings log and incidental sightings 2011-2023 – which are observations made by all other personnel on site who are not biologists. These data are separated because biologists are typically working in the field and have a higher chance of observing wildlife and are well trained and likely more accurate with species identification than other personnel.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-52
Re:	Invasive plant monitoring program		

Request Made by Interested Party:

The KIA requests the following:

- *Please consider including additional exotic vegetation species (i.e., subnational rank SNA in Nunavut in the NatureServe database) on the list of invasive species targeted for monitoring.*
- *Please confirm if the entire decommissioned Windy Camp area was surveyed for invasive plants, as the maps in Appendix AD are ambiguous.*
- *Please plan to complete the next cycle of invasive plant monitoring in 2028 (rather than 2029), which would comply with the 5-year monitoring interval specified in the WMMP Plan.*

Agnico Eagle's Response to Request:

Response bullet 1)

Agnico Eagle is referencing the Government of Nunavut's (2022) *Non-native and Invasive species in Nunavut list* for monitoring at Hope Bay, in addition to other non-native species with potential to occur at Hope Bay. To produce a more comprehensive list of non-native plants, supplemental information was obtained from the Northwest Territories' Species Infobase plant list and these species also targeted in monitoring at Hope Bay.

Agnico Eagle's understanding is that Nunavut does not currently have an invasive species council and the Nunavut Conservation Data Centre is still under development and a plant species status list was not available on their website as of 2023. If a NatureServe plant species status has since been or will be developed for Nunavut, then these additional species can be added to the list of species for monitoring. Agnico Eagle recommends that the Government of Nunavut publish this list of plant species status if/when available and update their list of invasive species likewise.

Response bullet 2)

Agnico Eagle confirms the entire area of the decommissioned Windy Camp was surveyed for invasive species.

Response bullet 3)

Agnico Eagle will plan to comply with the 5-year monitoring interval in the WMMP with the next survey in 2028.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-53
Re:	Exceedance of PM _{2.5} in January 2023		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain what may have caused the exceedance of PM_{2.5} in January 2023, as shown in Figure 4-7 of the 2023 AQMP Compliance Report.*

Agnico Eagle's Response to Request:

As noted in Section 4.3.3.2, compliance with the PM_{2.5} CAAQS is based on the average of the 98th percentile PM_{2.5} concentrations over each of 3 consecutive years being below 27 µg/m³. Thus, in any year, daily average PM_{2.5} concentrations can be above 27 µg/m³ for at least 2% of the time without an exceedance of the CAAQS occurring. Figure 4-7 shows that in the last 4 years, measured PM_{2.5} concentrations have been below 27 µg/m³ more than 98% of the time in each year.

The discussion of Figure 4-7 in Section 4.3.3.2 was poorly worded and was intended to identify that the very large concentration peaks seen in 2023 were due to forest fires, not to imply that any measurement above 27 µg/m³ is an exceedance of the CAAQS.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-54
Re:	Lack of precipitation data for 2023		

Request Made by Interested Party:

The KIA requests the following:

- *Please explain how the lack of precipitation data in 2023 affected interpretation of atmospheric compliance monitoring results.*
- *Please clarify whether the Doris meteorological station continues to collect precipitation data, and if these data could have been used for 2023 analyses.*

Agnico Eagle's Response to Request:**Response to bullet 1)**

The most important meteorological parameters used in the interpretation of ambient monitoring measurement data are wind direction and wind speed, which are used to identify potential sources of elevated measurements. Precipitation data is of secondary importance in the interpretation of the ambient air quality data and the lack of precipitation data in 2023 did not affect the interpretation of the monitoring data.

Response to bullet 2)

The rain gauge located at the Doris meteorological station is no longer operational and no data was collected from it in 2023.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-55
Re:	Socio-economic Monitoring Program		

Request Made by Interested Party:

KitIA asks for more information about how Agnico Eagle collects baseline data and how that data is validated by local and traditional knowledge.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitIA's comments and recommendations on the socio-economic monitoring program.

Agnico Eagle recognizes and appreciates the impact and effects its operations can have on local communities, the Kitikmeot region, and Nunavut as a whole. Agnico Eagle is committed to continuously engaging stakeholders through public consultation. The participation of community members, including Elders, Women, Youth, Hunters and Community Organizations, maximizes opportunities for local knowledge to be considered and to incorporate Inuit Qaujimajatuqanit (IQ) or Traditional Knowledge (TK) and community feedback into the project's design.

Consultations have been recorded from 2005 to the present, and have included information sessions, focus groups, consultation, informed participation, community hall meetings, and negotiations. In its public engagement and consultation, Agnico Eagle has focused on those communities in close proximity to the project, namely Kugaaruk, Taloyoak, Gjoa Haven, Cambridge Bay, Umingmaktok, Kingaok, and Kugluktuk.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-56
Re:	Community Involvement Plan		

Request Made by Interested Party:

KitIA requests further discussions with Agnico Eagle about how communications can be improved.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitIA's comments and recommendations on communication.

Agnico Eagle notes that under the Terms of the Hope Bay while the project is under Care and Maintenance certain provisions of the IIBA related to the frequency of Implementation Committee Meetings and Inuit employment and training provisions remained. Within the bounds of the agreement, Agnico Eagle commits to improving communication with the KitIA.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-57
Re:	Inuit Social Values (ISV)		

Request Made by Interested Party:

KitIA recommends that KitIA be consulted prior to Agnico Eagle concluding that it has reflected ISV in its work. KitIA seeks more information about why they make the conclusions that Agnico actions reflect ISV.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitIA's comments and recommendations on recognizing Inuit Societal Values.

During the preparation of Agnico Eagle's socio-economic monitoring report, the third-party support which included a Socio-Economic and Cultural Advisor reviewed the report from an IQ and ISV perspective. This advisor who is originally from Nunavut, is a respected researcher and policy professional specializing in the socio-economic dynamics of Canada's North, especially within Nunavut's communities. Throughout his career, he has worked collaboratively with Inuit communities and elders, ensuring that Inuit Societal Values (ISVs) and Inuit Qaujimajatuqangit (IQ) are at the forefront of policy, research, and regulatory processes. The report also leveraged on the Government of Nunavut's Inuit Societal values and how they are incorporated into the design and delivery of policies, programs and services.

Considering the importance of Inuit Societal Values, Agnico Eagle is open to discussion with the KitIA and other members of the SEMWG on recommendations, comments, and questions on ISV reflections in the report.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-59
Re:	Kitikmeot Qualified Businesses		

Request Made by Interested Party:

KitIA seeks an explanation to why non-Kitikmeot based businesses are included on this table

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitIA's comments and recommendations on Kitikmeot based businesses.

After reviewing the mentioned table in the 2023 report, the 3 identified businesses marked as "Other non-Kitikmeot" are owned in partnership with Kitikmeot Corporation.

Interested Party:	KitlA	Rec No.:	KitlA-NIRB-60
Re:	Inuit and Kitikmeot Employment		

Request Made by Interested Party:

KitlA asks when will numbers be available for contract employees. KitlA asks Agnico Eagle to be deliberate about taking steps before the end of care and maintenance to put them in a position to significantly improve Kitikmeot and Inuit employment post care and maintenance.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitlA's comment and recommendations on Kitikmeot and Inuit employment.

The Hope Bay IIBA, signed in 2015, includes the following schedules which contain specific provisions of adaptive socio-economic effect mitigation measures aimed at Kitikmeot Inuit:

- Schedule D – Training and Education Opportunities: whereby Inuit are provided support and training for opportunities at the Hope Bay Project
- Schedule E – Employment: whereby measures and supports are provided to maximize Inuit participation in the Hope Bay Project
- Schedule F – Business and Contracting Opportunities: whereby Inuit are provided business and contracting opportunities
- Schedule I – Inuit Environmental Advisory Committee: whereby Inuit have the opportunity to receive and consider information, provide advice and attempt to resolve community concerns relative to the environment and wildlife for the Hope Bay Project

Please note that due to Hope Bay currently being under Care and Maintenance, certain sections of the IIBA have been suspended. The implementation of Schedules D and E are currently on hold. It is understood that if and when site operations restart, the implementation work between KitlA and Agnico Eagle will proceed.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-61
Re:	Kitikmeot Employment		

Request Made by Interested Party:

KitIA asks Agnico Eagle to increase the numbers of Inuit employees from other Kitikmeot communities, without decreasing the numbers employed from Cambridge Bay.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitIA's comment and recommendations on Kitikmeot employment.

During the reporting period Agnico Eagle reinstituted, from pandemic practices of no-contact, Northern crew change flights, between Cambridge Bay and Hope Bay only. The decision to charter only to Cambridge Bay was based on financial considerations. Hires from other Kitikmeot communities were required during the reporting period to travel to and from work site using commercial flights. Despite this logistical decision, all Hope Bay employment opportunities are advertised through the KitIA and other means to every community in the region - without bias.

Some employees - or potential employees - may view additional travel time as onerous which may explain why the Hope Bay Inuit workforce is primarily from Cambridge Bay. Agnico Eagle notes that during the reporting period alternative remote site work opportunities increased dramatically in the regions, a result of the start of construction of the Back River project. Agnico Eagle further notes that many of the Inuit employees of Hope Bay, prior to the pandemic are now employed at this site. This may also explain how the distribution of the Hope Bay Inuit workforce has changed over time.

Agnico Eagle agrees with KitIA on the desirability of increasing the Hope Bay Inuit workforce and making it more representative. Despite Hope Bay's IIBA Inuit employment provision being suspended, Agnico Eagle intends to engage every Kitikmeot community during Q4 2024, in part to promote Hope Bay job opportunities.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-62
Re:	High School Achievement Awards		

Request Made by Interested Party:

KitIA asks that the high school achievement awards be reinstated during care and maintenance.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges and notes the KitIA's comment and recommendations on High School Achievement Awards.

Interested Party:	KitlA	Rec No.:	KitlA-NIRB-63
Re:	Inuit Employment - turnover		

Request Made by Interested Party:

Agnico should create a plan to mitigate the high Inuit turnover rate.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges KitlA's comments and recommendations on Inuit employment turnover rate.

In response to the inquiry about the turnover rate over the past few years, it's important to consider the unique circumstances of the period in question. The turnover rate was influenced by several factors, most notably the impact of COVID-19 and the transition of Hope Bay into the Care and Maintenance.

However, we can confirm that over the past year, Agnico Eagle has seen a significant improvement in the turnover rate at the site. In fact, there has been no Inuit turnover during this period, with the exception of one employee who retired.

It is understood that if and when site operations restart, proper Inuit employment recruitment, development and retention activities will be implemented.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-64
Re:	Training		

Request Made by Interested Party:

KitIA repeats its request made in 2023 that Agnico Eagle get ahead of the curve on training so that when care and maintenance is over, Agnico Eagle has an improved chance to maximize Inuit employment.

Agnico Eagle's Response to Request:

Please refer to response under KitIA-NIRB-60.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-65
Re:	Training		

Request Made by Interested Party:

KitIA repeats its request made in 2023 that Agnico Eagle increase training in more versatile and transferrable skills KitIA asks what is included in organic growth training.

Agnico Eagle's Response to Request:

Please refer to response under KitIA-NIRB-60.

Interested Party:	KitIA	Rec No.:	KitIA-NIRB-66
Re:	Training		

Request Made by Interested Party:

KitIA asks why these sessions are paused during care and maintenance. Keeping them up may help Agnico Eagle get ahead of the curve on training so that when care and maintenance is over, Agnico Eagle has an improved chance to maximize Inuit employment.

Agnico Eagle's Response to Request:

Please refer to response under KitIA-NIRB-60.

GOVERNMENT OF NUNAVUT (GN)

Interested Party:	GN	Rec No.:	GN-AR-01
Re:	Snowbank Monitoring		

Request Made by Interested Party:

The GN recommends the following regarding the above concerns:

- *Prior to discontinuing snowbank height monitoring, the GN recommends that the Proponent undertake a review to confirm that snowfall during the monitoring program (2020–2023) was within climate norms and averages.*
- *If punctuated snowbank height monitoring is discontinued, snowbank height should be incidentally inspected and recorded.*
- *The Proponent should provide an explanation for the absence of snow track surveys reported in the 2023 annual report materials. If punctuated snowbank height monitoring is discontinued, the Proponent should continue punctuated (i.e., not incidental) snow track surveys.*

Agnico Eagle's Response to Request:

Response to bullet 1)

Agnico Eagle will confirm in the 2024 Annual Report that the snowfall amounts during the snowbank height monitoring program were within long term averages prior to discontinuing the snowbank height monitoring program.

Response to bullet 2)

Agnico Eagle refers the reader to response provided in KitIA-NIRB-33.

Response to bullet 3)

Active snow track surveys are a separate program, currently being developed with the IEAC.

Interested Party:	GN	Rec No.:	GN-AR-02
Re:	Noise Monitoring		

Request Made by Interested Party:

The GN recommends the following regarding the above concerns:

- *Take the necessary steps to address confounding ambient noise (e.g., vehicles, workshop, alarms) during noise monitoring to provide an accurate representation of Project effects.*

Agnico Eagle's Response to Request:

Agnico Eagle agrees that noise monitoring of blasts should be free of confounding ambient noise, but other sources of noise such as wind, generators, etc. are a fact of life that we need to work with. Agnico Eagle will continue to take measurements and account for extraneous noises as best as possible.

Interested Party:	GN	Rec No.:	GN-AR-03
Re:	Statistical Analysis		

Request Made by Interested Party:

The GN recommends the following regarding the above concerns:

- *In analyses presented in future annual reports the Proponent should include 'Year' (or a similar factor variable such as 'Project Phase') as a fixed effect to examine temporal trends.*
- *In analyses presented in future annual reports the Proponent should include an interaction term between 'Year' and 'Treatment' where possible.*

Agnico Eagle's Response to Request:

Agnico Eagle designed the camera monitoring program with the KitIA and GN in 2016 with the purpose of measuring whether wildlife are avoiding or are attracted to the mine site.

The original statistical analysis used Generalized Additive Mixed Models (GAMMs) to test whether there were differences in the number caribou events in Treatment vs Control locations. The original model included three fixed effects (northing, month, and treatment), an offset term for camera effort, and categorical random effects for camera and year. Camera and year were included as a random effect to account for the use of repeated measures within cameras and years (Section 6.1.2, Appendix A page 24).

The GN recommended that, in future analyses, Agnico Eagle adds two additional parameters to this model: (1) add year as a continuous fixed effect; and (2) add the interaction of year with treatment. These were not included in the original models because the primary objective of the model was to assess differences in caribou occupancy between treatment and control areas. However, Agnico Eagle agrees that understanding temporal change during the development of the Project is an important analysis. Making the suggested change would provide formal estimates of change in caribou events over time and change in treatment effects over time.

Agnico Eagle will consider this effect in future models – i.e. when analyses are repeated every three years. However, it is noted that including year and the interaction between year and distance adds substantial complexity to the model. This is especially relevant given that the models are GAMMs which also require estimation of smoothing parameters for each added variable or interaction. This may lead to convergence and/or overfitting issues that reduce the robustness of the results.

Agnico Eagle proposes that in future analyses:

- Two additional models will be fit – one with year as a fixed effect, and one with both year as a fixed effect and the interaction of year with treatment.

- These models will be retained for consideration if they are able to converge after suitable effort (e.g., increasing iterations, trying alternative optimization algorithms).
- All three models will be compared using Aikake's information criteria (AIC) to evaluate if the added parameters offer practical improvement in model fit. (AIC compares model fit while penalizing models for increasing complexity, helping to avoid potential overfitting).
- Where the more complex models converge and offer an improved fit, we will use these for our final analysis.
- In this circumstance, we would present results showing treatment effects on activity as before.
- In a successive section, we would present results for change over time.
- If the more complex models do not offer an improved fit, we would note this in the results section of the report.

Interested Party:	GN	Rec No.:	GN-AR-04
Re:	Aircraft – Wildlife Protection		

Request Made by Interested Party:

Regarding the above concerns, the GN recommends that the Proponent make substantial improvements to record and report the following information in future annual reports:

- *Where applicable, the Proponent should include the minimum, maximum and mean of all numerical aircrafts data, including but not limited to the number of daily one-way trips and aircraft flight elevations.*
- *The Proponent should endeavor to include long-form tabular data of flight logs. These tables should include information such as: date, flight purpose, flight distance, flight's mean height above ground level (m), justification for low-level flights, wildlife observations made by the pilot and any course corrections made as a result.*
- *The Proponent should differentiate between helicopter flights which occur for the purpose of site maintenance and monitoring activities versus exploration activities.*

Agnico Eagle's Response to Request:

Agnico Eagle will present the minimum, maximum, and mean of weekly flights to compare against the predictions of the FEIS to continue to verify that these predictions were accurate. The additional requested raw data of flights is not recorded by pilots and is therefore not available for reporting. There is no obvious rationale for the request to differentiate helicopter flights for the purpose of site maintenance and monitoring activities versus exploration activities, most flights are related to exploration. Agnico Eagle makes sure that aircraft and helicopter pilots are aware of and abide by the mitigation from the WMMP Plan from the section Aircraft Management.

Interested Party:	GN	Rec No.:	GN-AR-05
Re:	Spills		

Request Made by Interested Party:

The GN recommends the following regarding the above concerns:

- *In this and future annual reports, the Proponent should specify the type of glycol involved in Project activities and spills.*
- *If and where applicable to this Project, the GN recommends using less toxic propylene glycol instead of ethylene glycol.*

Agnico Eagle's Response to Request:

Agnico Eagle will consider alternatives where the option exists with the manufactures recommended products.

Interested Party:	GN	Rec No.:	GN-AR-06
Re:	Employment, Turnover		

Request Made by Interested Party:

The GN recommends the following:

- *That AEM explains the fall in turnover rate among Inuit employees at the Hope Bay mine, and offer explanation for how any AEM-run programs may be supporting this trend.*
- *That AEM provide details about how many Inuit workers, out of the 168 employees no longer working at this site, were redeployed by the company on other Agnico Eagle projects / sites?*
- *That AEM provide additional information about what incentives, including information, the proponent is using to recruit more Inuit employees once the mine reopens*

Agnico Eagle's Response to Request:

Response to bullet a)

At the time of answering this recommendation, Agnico Eagle is not in a position to provide a clear conclusion explaining the fall in turnover rate among Inuit Employees at the Hope Bay mine. Current assumptions are targeting multiple root causes linked to Nunavummiut employees being sent home as a result of Covid-19, acquisition of TMAC by Agnico Eagle, site being placed under Care and Maintenance, and return to work of Nunavummiut post Covid-19. Since all those events took place only in the last 2 years, Agnico Eagle is not in a position to provide clear explanations for such results.

Response to bullet b)

Inuit employees who retained jobs while moving from Operations to Care and Maintenance and continued exploration activities included mostly those in management, professional, skilled, and semi-skilled levels.

Further, several Agnico Eagle employees previously working during Hope Bay operations were redeployed to other Agnico Eagle projects when the Hope Bay Project was placed under care and maintenance. Approximately 80% of employees redeployed to Meadowbank, Meliadine, and Detour were in skilled trades, another 20% were professionals. In 2022, two Inuit employees were redeployed to other Kivalliq divisions. Two more were also redeployed under Agnico Eagle Exploration division, in activities at Hope Bay.

Response to bullet c)

Agnico Eagle currently remains in Care and Maintenance and is assessing the project economics before taking any decisions. Once and if project restart operations, workforce and employment plans will be put in place in accordance with existing obligations and Terms and Conditions to benefit Inuit employment at the mine site.

Interested Party:	GN	Rec No.:	GN-AR-07
Re:	Housing		

Request Made by Interested Party:

In regard to Term and Condition 49, AEM could create it's own survey much like it has for workers at the Kivalliq mines, in order to inform the Housing VSEC and measure the predictions outlined in FEIS.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges the Government of Nunavut's rationale and recommendations on Housing matters.

In regard to Term and Condition 49, Agnico Eagle will respect the current wording on the condition and is will not be creating its own survey. Agnico Eagle is open to refer to other publicly available data in the region that could be collected by other organizations.

Interested Party:	GN	Rec No.:	GN-AR-08
Re:	Archaeology		

Request Made by Interested Party:

The GN strongly recommend that those commitments be maintained in the Terms and Conditions and in the commitments from 2006.

Agnico Eagle's Response to Request:

Agnico Eagle is not suggesting removing Terms and Conditions related to archaeology in the original Project Certificate. Agnico Eagle is suggesting that commitments made in 2006 during the issuance of Project Certificate No. 003 are no longer applicable to the project. Reviewing and reporting on these is counterproductive as PC Terms and Conditions are already applicable to project activities and are being followed. Furthermore, archaeology specific commitments from 2006 which provide direction of what to do when an archaeological site is discovered, are covered in the Cultural Heritage and Natural Resources Management Plan.

CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS CANADA (CIRNAC)

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-1
Re:	Spill Reported for Water Discharged at Portal Decline (BOS-9)		

Request Made by Interested Party:

CIRNAC recommends that AEM:

- a) Provide a section justifying potential reasons for any differences identified in arsenic concentrations in all applicable annual reporting,*
- b) Clarify what steps AEM will take to ensure that due diligence sampling will be completed in time for reception of analytical results prior to discharge commencing (at this or other similar sampling sites), and include updates in appropriate management plans, and*
- c) Explain why this spill was not included in the 2023 Annual Report submitted to the NIRB.*

Agnico Eagle's Response to Request:

Response bullet a)

The thawing of ice, and therefore the release of trapped metalloids, is likely attributed to higher concentrations of Arsenic in the August 4, 2024 sample, compared to the June 3, 2024 sample (e.g., Boron is also significantly higher in the August sample; 0.086 mg/L compared to <0.010 mg/L in June).

As per Part J, Item 12 of the Type B Water Licence (2BB-BOS1727), the requirement is to sample BOS-9 once prior to discharge and therefore, the reliance on the June sample. With the additional due-diligence sample taken in August 2024, and understanding the potential effects that thawing may have on water quality, Agnico Eagle will attempt to sample BOS-9 as close to the intended discharge date as possible for all future sampling.

Response bullet b)

A water quality sample will be collected before any material is released to the tundra as per the Water Licence. Material will not be released to the tundra until the sample comes back and all parameters are within acceptable limits. There will be no other samples collected.

Response bullet c)

The exclusion of the spill in Table 6.1.1 was an oversight. The remainder of the details were not included in the NIRB report, as it was specific to the 2BB-BOS1727 Water Licence.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-2
Re:	Updated Management Plans - Report Improvements / Clarifications		

Request Made by Interested Party:

CIRNAC recommends that AEM:

- a) Improve Documentation of Revisions: AEM should review its approach to documenting revision updates in the Management Plans, ensuring that revisions are precisely described with specific details on the nature of the changes and their locations within the documents.*
- b) Adhere to NIRB Guidelines: Ensure that all updates are in full compliance with NIRB guidelines on documentation and transparency*

Agnico Eagle's Response to Request:

Response bullet a) and b)

Agnico Eagle agrees that revisions can be reflected more clearly moving forward. Agnico Eagle will endeavor to provide details in the document control section of plans, as well as provide indicators within the plan where changes have been made where possible. These corrections will be implemented moving forward.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-3
Re:	Secondary Containment and Spill Contingency Plan		

Request Made by Interested Party:

CIRNAC recommends that AEM ensures that all hazardous materials are stored within secondary containment, consistent with the requirements of the Hope Bay water licenses and the approved Spill Contingency Plan.

Agnico Eagle's Response to Request:

Additional discussions between CIRNAC, Agnico Eagle, and the NWB are planned in the near future regarding this topic. Agnico Eagle looks forward to those discussions to find a path forward.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-4
Re:	Resolution of Proponent Commitments		

Request Made by Interested Party:

CIRNAC requests that AEM provide the resolution status for all commitments it is responsible for fulfilling pursuant to Term and Condition 1 of the amended Project Certificate 003.

Agnico Eagle's Response to Request:

Agnico Eagle believes with the details provided in Appendix C of the 2023 Annual Report we have provided the NIRB with appropriate information to clearly demonstrate where commitments have been completed, as well as those that are still active. We do reiterate our position stated in Appendix C of the Annual Report that the majority of these commitments have been superseded by Project Certificate Terms and Conditions or Management Plans that were not in place at the time the commitment was made by Hope Bay predecessors. These are noted in Appendix C of the Annual Report and should be considered complete with these specific mechanisms in place.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-5
Re:	Information Regarding Labour Force Needs of the Project		

Request Made by Interested Party:

CIRNAC requests that AEM provide information pertaining to the labour force needs of the project as specified in Term and Condition 46 of the amended Project Certificate.

Agnico Eagle's Response to Request:

Agnico Eagle acknowledges the Government of Nunavut's rationale and recommendations on information regarding labour force needs.

In accordance with the Hope Bay IIBA, signed in 2015, Agnico Eagle regularly engages Inuit on a range of matters directly, as well as through the KitlIA. The IIBA includes the following schedules which contain specific provisions of adaptive socio-economic effect mitigation measures aimed at Kitikmeot Inuit:

- Schedule D – Training and Education Opportunities: whereby Inuit are provided support and training for opportunities at the Hope Bay Project;
- Schedule E – Employment: whereby measures and supports are provided to maximize Inuit participation in the Hope Bay Project;
- Schedule F – Business and Contracting Opportunities: whereby Inuit are provided business and contracting opportunities; and
- Schedule I – Inuit Environmental Advisory Committee: whereby Inuit have the opportunity to receive and consider information, provide advice and attempt to resolve community concerns relative to the environment and wildlife for the Hope Bay Project.

It is important to note that due to Hope Bay being under Care and Maintenance, certain sections of the IIBA are being suspended. Schedules D and E implementation are currently on hold. Once and if site operations restart, implementation work will proceed between organizations. Agnico Eagle will then be able to answer CIRNAC recommendation on labour force needs, commonly with the KitlIA.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-6
Re:	Resolution of Proponent Commitments		

Request Made by Interested Party:

CIRNAC requests that AEM:

- a) Continue to provide the resolution status for all commitments it is responsible for fulfilling as noted in section 3.4 of the Project Certificate.*
- b) Include the numbering format provided in Appendix B of the Project Certificate when presenting the resolution status of its commitments.*

Agnico Eagle's Response to Request:

The reader is referred to CIRNAC-NIRB-4.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-NIRB-7
Re:	Consultations with Outfitting and Guide Business		

Request Made by Interested Party:

CIRNAC recommends that AEM provide a more detailed summary of information as to how it has satisfied the reporting requirements for Term and Condition 44. Specifically, provided there are no privacy concerns with the sharing of information, it would be beneficial for AEM to provide information on how it reaches outfitting and guiding businesses, which businesses it consulted over the past year, when these meetings occurred, and the topics that were discussed.

Agnico Eagle's Response to Request:

Agnico Eagle hopes the following helps provide additional context to address this request from CIRNAC:

- The IEAC includes representatives from EHTO and BHTO. Both of these groups are the primary outfitters in this area. Agnico Eagle meets with representatives of outfitters at least twice a year as part of the IEAC.
- Elu Inlet Lodge to the east of Hope Bay is not active. This is based on discussion with local community members who are the primary owners of the lodge. There is no tourism happening there that could be adversely affected by the Hope Bay Project.
- The EHTO conducts muskox hunts from Kent Peninsula to the north of Hope Bay. The BHTO conducts muskox and grizzly bear hunts to the northwest of Hope Bay.
 - Agnico Eagle has provided logistic support for this outfitting activity.
 - In 2023 (and now again in 2024), we have provided drums of fuel to heat the cabins at Naujaat and Kungukyok, that house guides and clients during their hunts.

ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC)

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-01
Re:	Recovery Rate of Total Suspended Particulate (TSP) Monitoring Equipment		

Request Made by Interested Party:

ECCC recommends that the Proponent update the 2023 Atmospheric Compliance Monitoring Program Report to include information on follow-up, with an approximate timeline, for the anticipated resolution of TSP monitoring data collection issues that have prevented the calculation of an annual average.

Agnico Eagle's Response to Request:

Agnico Eagle is conducting ongoing review and diagnosis of the issues with the continuous monitors. This has included increasing the frequency of monitor inspections by site personnel and monthly reviews of the data recovery rates by Nunami Stantec. Since implementation of these measures in March 2024, data recovery rates for both the TSP and PM_{2.5} monitors have improved and have been at or above the 75% criterion for the last three months.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-02
Re:	Reporting Incidents Involving Migratory Birds		

Request Made by Interested Party:

ECCC recommends that the Proponent notify ECCC's Canadian Wildlife Service (cwsnorth-scfnord@ec.gc.ca) when any mortality events, incidents, and/or interactions with migratory bird species occur.

Agnico Eagle's Response to Request:

Agnico Eagle will report to ECCC's Canadian Wildlife Service when any mortality events, incidents, and/or interactions with migratory bird species occur.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-03
Re:	Post-Closure Monitoring of Wildlife		

Request Made by Interested Party:

ECCC recommends that the Proponent clarify if post-closure wildlife monitoring has been integrated into project management plans. If so, please indicate which plan; if not, please clarify the timeline for integration of post-closure wildlife monitoring into project management plans.

Agnico Eagle's Response to Request:

As per the direction received on March 12, 2024 from the NWB, Agnico Eagle will be submitting an update Interim Closure and Reclamation Plan by September 12, 2024 to the NWB. However, as per the response provided to ECCC by Agnico Eagle on February 20, 2024, we will consider including post-closure wildlife monitoring in the final closure plan.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-04
Re:	Scenario Addition in the Spill Contingency Plan		

Request Made by Interested Party:

ECCC recommends that the Proponent include the possibility of a ‘salty water leak’ as an ‘issue’ in Section 4 of the Spill Contingency Plan, and include appropriate mitigation measures to prevent the situation from occurring.

Agnico Eagle’s Response to Request:

Agnico Eagle agrees with the comment and will include ‘salty water leak’ as an ‘issue’ in Section 4 of the plan. Accordingly, Agnico Eagle will include appropriate mitigation measures to prevent the situation from occurring.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-05
Re:	Use of Emergency Response Guidebook to Respond to a Chemical Release		

Request Made by Interested Party:

ECCC recommends that the Proponent provide appropriate updates to ‘Emergency Measures’ described in Sections 7.5 and 7.9 of the Emergency Response and Crisis Management Plan, to be reflective of these scenarios occurring in a fixed facility.

Agnico Eagle’s Response to Request:

Agnico Eagle agrees with the reviewer and will include a more detailed response plan in future versions of the Emergency Response Plan.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-06
Re:	Toxic Gas Release Event		

Request Made by Interested Party:

ECCC recommends that the Proponent update Section 7.5 of the Emergency Response and Crisis Management Plan, to indicate which toxic gases are at risk of being released and include a description of preparedness measures to address toxic gas releases, including any air quality monitoring practices, communication plans, and equipment available.

Agnico Eagle's Response to Request:

Agnico Eagle thanks the reviewer for their suggestion. As the project is currently not in operations, there is little concern about the risk of toxic gas release. If/when the Hope Bay Project resumes operations, these specific emergency response procedures will be included in the Emergency Response Plan.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-07
Re:	In-Situ Burning (ISB) as a Response Method for Spills		

Request Made by Interested Party:

ECCC recommends that the Proponent elaborate on the cleanup process for the residue left following the utilization of in-situ burning (ISB) for hydrocarbon spills. It is crucial to ensure that these cleanup efforts do not contravene prohibitions outlined in the Migratory Birds Convention Act (MBCA) and Migratory Bird Sanctuary Regulations (MBSR).

Agnico Eagle's Response to Request:

Agnico Eagle would like to note that although this spill response action is listed in the Spill Contingency Plan, the likelihood of in-situ burning of a hydrocarbon spill is low. Should this spill response action be taken, Agnico Eagle will review the Migratory Birds Convention Act and the Migratory Birds Sanctuary Regulations.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-08
Re:	Environmental Emergencies (E2) Regulated Commodities		

Request Made by Interested Party:

ECCC recommends that the Proponent add a table in the Spill Contingency Plan, summarizing the commodities subject to the E2 Regulations. This will ensure that the Proponent is fully aware of its responsibilities under the E2 Regulations.

Additionally, ECCC recommends that the Proponent include an acknowledgment that a notice under the E2 Regulations will be required if any stored commodities exceed the thresholds identified in Part 1 and 2 of Schedule 1 of the E2 Regulations in the section “Additional E2 Regulations Schedule 2 Materials to be Stored Onsite” on p.16 of the Appendix 1: Hazardous Materials and Product Specific Emergency Response Plans.

Agnico Eagle’s Response to Request:

Agnico Eagle will update the Spill Contingency Plan to add a table summarizing the commodities subject to the E2 Regulations. We will also include an acknowledgement that a notice under the E2 Regulations is required if any stored commodities exceed the thresholds identified in Part 1 and 2 of Schedule 1 of the E2 Regulations in the section “Additional E2 Regulation Schedule 2 Material to be Stored Onsite” on p.16 of the Appendix 1: Hazardous Material and Product Specific Emergency Response Plans.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-09
Re:	Hazardous Materials Storage Practices		

Request Made by Interested Party:

ECCC recommends that the Proponent clarify the origin of the industry practice of not storing hazardous materials with appropriate secondary containment, as mentioned in Section 4.1.1 of the Spill Contingency Plan.

ECCC recommends that the Proponent commit to installing a lined and bermed area, or other appropriate secondary containment method, for the storage of hazardous chemicals at the sealift location and wherever appropriate secondary containment is not currently available. This measure would minimize the potential release of hazardous chemicals from storage areas into the environment.

Agnico Eagle's Response to Request:

Additional discussions between CIRNAC, Agnico Eagle and the NWB are planned in the near future regarding this topic. Agnico Eagle looks forward to those discussions to find a path forward.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-10
Re:	Interim Dike and Aquadam		

Request Made by Interested Party:

ECCC recommends that the Proponent clarify whether the Aquadam was decommissioned after the completion of the interim dike or whether it continues to be utilized for water segregation, and update the Annual Report with this information.

Agnico Eagle's Response to Request:

Agnico Eagle clarifies that the details of the Aquadam provided in Section 3.1 of the Annual Report was provided as background information. The Aquadam was removed and replaced by the Interim Dike immediately downstream (north) of the Aquadam in 2023. The Interim Dike is the mechanism currently in place to segregate saline and non-saline water.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-11
Re:	Federal Environment Quality Guidelines		

Request Made by Interested Party:

ECCC recommends that the Proponent review the FEQG and consider updating the water quality benchmarks for the AEMP to include FEQG.

Agnico Eagle's Response to Request:

Agnico Eagle thanks the reviewer for this recommendation and will consider the Federal Environmental Quality Guidelines (FEQG) for water quality in the next update of the Aquatic Effects Monitoring Plan.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-12
Re:	Saline Water Management		

Request Made by Interested Party:

ECCC recommends that the Proponent thoroughly review the Water Management Plan and update the plan to capture the changes to saline water management in all relevant sections.

Agnico Eagle's Response to Request:

Agnico Eagle thanks the reviewer for this recommendation and will thoroughly review the Water Management Plan (WMP), such that the next update of the WMP will be clear in all relevant sections how saline water/mine water is managed at site.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-13
Re:	Monitoring Saline Water in the TIA		

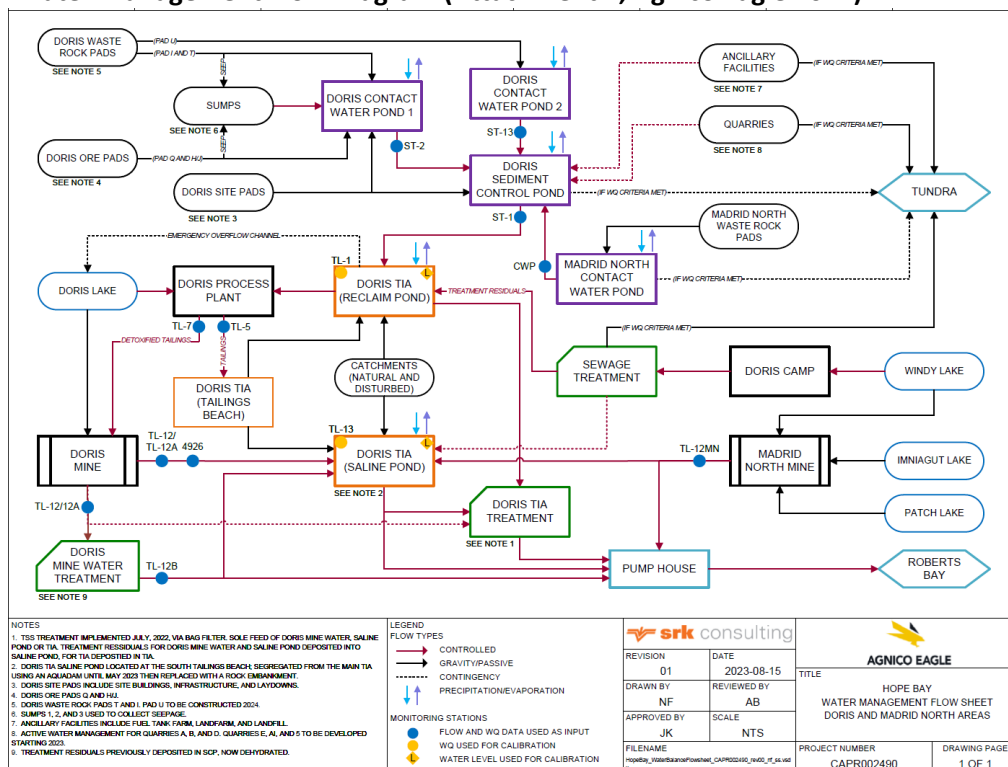
Request Made by Interested Party:

ECCC recommends that the Proponent clarify whether any changes to TIA water quality monitoring are proposed as a result in changes to saline water management, specifically, whether separate monitoring of the saline and freshwater sections of the TIA is proposed.

Agnico Eagle's Response to Request:

Agnico Eagle clarifies that TL-1 (TIA at the Reclaim Pipeline) monitors water quality in the non-saline section of the TIA and TL-12 (Doris Mine Water Discharge Point) monitors water quality in the saline section. Both these sampling stations are listed in Table 5-1 of the Water Management Plan. No changes to TIA water quality monitoring is currently required. Figure 1 (below) will be included in the next update of the Water Management Plan to better illustrate the locations of these sampling stations.

Figure 1 – Water Management Flow Diagram (Attachment 1, Agnico Eagle 2024)



Reference:

Agnico Eagle. 2024. 2023 Annual Report NWB, Appendix E: Doris Mine Annual Water and Load Balance – 2023 Calendar Year. March 2024.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-14
Re:	Water Management Schematic		

Request Made by Interested Party:

ECCC recommends that the Proponent update Figures 1 and 2 to reflect the current mine water management strategy.

Agnico Eagle's Response to Request:

Agnico Eagle will include an updated figure to replace Figures 1 and 2. Please see response to comment ECCC-NIRB-13.

Interested Party:	ECCC	Rec No.:	ECCC-NIRB-15
Re:	2023 Compliance Monitoring		

Request Made by Interested Party:

Refer to ECCC's submission for the summary of 2023 compliance monitoring.

Agnico Eagle's Response to Request:

We appreciate ECCC's detailed comments which summarize the results of ECCC's compliance reviews throughout 2023 including MDMER, Annual Effluent Monitoring Report, and the Annual EEM Report.

FISHERIES AND OCEANS CANADA (DFO)

Interested Party:	DFO	Rec No.:	DFO-NIRB-01
Re:	Underwater Noise		

Request Made by Interested Party:

Proponent to monitor and model their noise footprint. This model should be developed in consultation with DFO and evaluate noise levels and the impact(s) of shipping noise on marine mammals present in the shipping route. DFO requests that they be consulted for the design of the noise monitoring plan to ensure that adequate data is being collected to develop appropriate indicators and thresholds. DFO reiterates, that underwater noise modelling, including baseline studies, is an essential component of the monitoring protocol for underwater noise.

The Shipping Management Plan should be updated to include noise level monitoring with appropriate indicators and thresholds.

DFO looks forward to collaborating with AEM on the marine mammal monitoring plan and for input on indicators and thresholds, mitigation measures, including considerations for underwater noise monitoring.

Agnico Eagle's Response to Request:

Agnico Eagle would like to note that discussions were already initiated between Agnico Eagle and DFO on the topic of underwater noise monitoring. As previously communicated to DFO, Agnico Eagle is willing to participate in a committee led by DFO and includes all relevant stakeholders involved with shipping activities in Nunavut.

Agnico Eagle reminds the reader that in 2023 there was only one vessel attributed to the Hope Bay Project (Section 5.2 of the Annual Report, page 5-81). Further, Agnico Eagle maintains its position as provided to DFO on December 21, 2023 in response to the 2022 Annual Report comments (Agnico Eagle 2023) which states:

Agnico Eagle has included the required monitoring protocol in Section 4 of the recently updated Shipping Management Plan and baseline data collection for the monitoring protocol commenced in 2023. The monitoring program is designed to assess disturbance to marine wildlife resulting from vessel noise in Roberts Bay. Direct monitoring of marine wildlife presence/absence before, during, and after shipping activity provides data to assess potential disturbance in Roberts Bay. The Standard Operating Procedure (SOP) and data entry form for marine wildlife monitoring was included as a separate document (Hope Bay Marine Mammal Monitoring SOP). The data collected in 2023 will be provided to NIRB as part of the 2024 Wildlife Mitigation and Monitoring Plan (WMMP) Report.

As noted by DFO in their comments and stated in the Shipping Management Plan “ appropriate indicators and thresholds to determine if negative impacts on marine wildlife are occurring will be established after at least two years of data collection”. Year one (1) of the data collection is currently in progress and the monitoring protocol is considered in development because thresholds cannot be reliably developed until sufficient observation data is available to determine the overall frequency of marine mammal sightings in Roberts Bay. Thresholds for mitigations will be based on the number of marine mammal sightings during initial monitoring as well as any incidental sightings or interactions with marine mammals. Agnico Eagle welcomes feedback on the marine mammal monitoring methods and will work with DFO to determine indicators and thresholds after the first two years of monitoring; the frequency of marine mammal sightings will guide future monitoring decisions, indicators, thresholds and adaptive management.

The monitoring protocol is focused on assessing potential disturbance to marine wildlife rather than monitoring underwater noise, as per PC 009, T&C 33. There is no requirement in T&C 33 for Agnico Eagle to contact DFO prior to baseline data collection, nor is there a requirement for underwater noise modeling. Agnico Eagle is currently meeting the requirements under PC 009, T&C 33 and feels this issue is resolved.

Furthermore, the Agnico Eagle Hope Bay Mine has been in Care and Maintenance since March 2022. A total of one cargo vessel and one fuel vessel visited the site in 2022. Only one cargo vessel visited the site in 2023.

As was reported in Section 5.2 of the NIRB 2023 Annual Report (page 5-84 of the report):

“This [2023] was the first year of surveys for this monitoring program, and as such the sample size is too small to analyze patterns in marine mammal occurrence with shipping activity. As per the Shipping Management Plan, the first two years of monitoring will inform appropriate indicators and thresholds to determine if negative impacts on marine wildlife are occurring. Indicators and thresholds cannot be set until the overall rate of marine wildlife observations is known.”

References:

Agnico Eagle (Agnico Eagle Mines Limited). 2023. Hope Bay Project DFO Comments Received on the 2022 Annual Report. Submitted to the Nunavut Water Board. December 21, 2023.

Interested Party:	DFO	Rec No.:	DFO-NIRB-02
Re:	Marine Mammal Monitoring Program		

Request Made by Interested Party:

Proponent to implement a more substantial marine mammal monitoring protocol for shipping vessels. The protocol should be reviewed and approved by DFO and aim at effectively detecting and avoiding marine mammals during shipping.

An updated marine mammal monitoring protocol must be implemented for all vessels, regardless of the operational status of the mine. The avoidance of sensitive habitat(s) and incidental mammal sightings are not sufficient protocols, to effectively detect and avoid marine mammals during shipping.

Current monitoring does not ensure that marine shipping activities avoid adversely impacting marine mammals (Project Certificate No. 009, T&C No.31), and does not “assess the environmental impact of the Project on Wildlife..” (Project Certificate No.003, T&C No. 27), nor adequately “ensure that that marine shipping activities avoid seabirds and marine mammals” (Project Certificate No. 009, T&C No.32).

The proponent to work with DFO to develop a updated Shipping Management Plan that includes increased monitoring measures for marine mammals.

Agnico Eagle’s Response to Request:

Agnico Eagle thanks DFO for their comment and wishes to emphasize that Agnico Eagle is operating as per its approved Shipping Management Plan.

Agnico Eagle maintains its position as provided to DFO on December 21, 2023 in response to the 2022 Annual Report comments (Agnico Eagle 2023) which states:

“Per the above noted T&Cs, all vessels supplying the Hope Bay Project are required to avoid sensitive habitat, as identified in the Shipping Management Plan, Section 2 (PC 009, T&C 31), and to report any vessel strikes, Section 5.1 (T&C 32). Also, vessel crew are required to scan for sightings of marine mammals during shipping and to record incidental sightings (Section 3). Additionally, Agnico Eagle asks vessels to confirm sightings of marine mammals (minimum once per day). Results are reported to NIRB in the annual WMMP Report.

Agnico Eagle has been attempting to work with DFO to ensure “that marine mammal mitigation measures common for all vessels in the Canadian Arctic are applied to project-contracted vessels as appropriate” (PC 009, T&C 31). Through these comments, DFO is demanding Agnico Eagle implement Marine Mammal Observer Program. However, there is no T&C related to the Hope Bay Project requiring a Marine Mammal Observer Program on shipping vessels nor is it common across all vessels in the Canadian Arctic. The NIRB directly addressed this issue Nunavut Impact Review

Board Final Hearing Report Phase 2 Hope Bay Belt Project, NIRB File No. 12MN001 (NIRB 2018), stating “with respect to potential cumulative effects on marine mammals, the Board is of the view that it would be most appropriate for the Government of Canada to establish and implement standardized requirements that would pertain to all certified vessels transiting through Arctic waters, rather than placing the onus on proponents”. If a marine observer program becomes a required standard mitigation for avoiding marine wildlife on shipping vessels, Agnico Eagle will participate in this program alongside all other vessels in the Canadian Arctic.

PC 009, T&C 31 and 32, as well as PC 003, T&C 27 have specific objectives which are clearly outlined in the Shipping Management Plan and addressed in the annual WMMP report (incidental sightings, reporting vessel tracks to confirm avoidance of sensitive habitat, and incident reporting). Agnico Eagle is currently meeting the requirements under PC 009, T&C 31 and 32, as well as PC 003, T&C 27 and we feel this issue is resolved.

In addition, the NIRB deemed Project Certificate No. 009 T&C 31 and 32 and Project Certificate No. 003 T&C 27 to be in compliance in 2023, as indicated in their 2022-2023 Annual Monitoring Report (NIRB 2023).

References:

Agnico Eagle (Agnico Eagle Mines Limited). 2023. Hope Bay Project DFO Comments Received on the 2022 Annual Report. Submitted to the Nunavut Water Board. December 21, 2023.

NIRB (Nunavut Impact Review Board). 2023. 2022-2023 Monitoring Report, Doris North Gold Mine and Phase 2 Hope Bay Belt Project. NIRB File No. 05MN047 and 12MN001. January 17, 2024.

Interested Party:	DFO	Rec No.:	DFO-NIRB-03
Re:	Aquatic Invasive Species		

Request Made by Interested Party:

Proponent to consider a non-Indigenous Species/Aquatic Invasive Species Monitoring Program around zones of higher risk.

Proponent to provide specific monitoring and mitigation measure that are being conducted, including but not limited to any ballast water treatment, monitoring for aquatic invasive species, and any haul clean-up and maintenance protocols.

Agnico Eagle's Response to Request:

Agnico Eagle maintains its position as provided to DFO on December 21, 2023 in response to the 2022 Annual Report comments (Agnico Eagle 2023) which states:

Agnico Eagle requires the shipping companies contracted to supply the Hope Bay mine through the annual sea-lift operations to comply with the Ballast Water Regulations, which reduces the risk of invasive species being introduced as a result of mine related shipping activities.

Under the Ballast Water Regulations, all vessels are required to have a Ballast Water Management Plan. The Ballast Water Management Plan is written in accordance with the requirements of Regulation B-1 of the International Convention for the Control and Management of Vessels' Ballast Water and Sediments and aims to prevent, minimize, and ultimately eliminate the risk of introducing harmful aquatic organisms and pathogens from vessels' ballast water and associated sediments, while protecting vessel's safety.

The hulls of shipping vessels are typically coated with anti-fouling agents to discourage marine organisms from attaching to the hull. Regulations around anti-fouling agents are generally related to managing of the coatings themselves and not control of the organisms.

DFOs comment confirms that "the Shipping Management Plan does comply with Ballast Water Regulation" and Agnico Eagle is using standard and acceptable practices common for all vessels in the Canadian Arctic, complying with the requirements and shipping regulations related to the concerns DFO has expressed, including Project Certificate Terms and Conditions, the Shipping Act, the and the Ballast Water Regulations. Agnico Eagle feels this issue is resolved.

References:

Agnico Eagle (Agnico Eagle Mines Limited). 2023. Hope Bay Project DFO Comments Received on the 2022 Annual Report. Submitted to the Nunavut Water Board. December 21, 2023.

Interested Party:	DFO	Rec No.:	DFO-NIRB-05
Re:	Appendix on Fish and Fish Habitat		

Request Made by Interested Party:

Proponent to provide an appendix including, but not limited to:

- *Report on death of fish;*
- *Report on Harmful Alteration, Disruption and Destruction of fish habitat;*
- *Report on fish passage issues;*
- *Fish-out activities;*
- *Measures implemented to avoid and mitigate impacts to fish or fish habitat; and*
- *Offsetting activities.*

Specifically, this request relates to the format in which it is presented and DFO wishes to see all information consolidated into one document for ease of review. This document should report on all elements listed and state if there is nothing to report for each e.g. no fish out activity was conducted in the reporting year.

- *Report on death of fish (003, Revised T&C 1, 17);*
- *Report on Harmful Alteration, Disruption and Destruction of fish habitat (009, New T&C 11);*
- *Report on fish passage issues (003, Revised T&C 1, 009, New T&C 13);*
- *Fish-out activities (003, Revised T&C 1);*
- *Measures implemented to avoid and mitigate impacts to fish or fish habitat (003, Revised T&C 1); and*
- *Offsetting activities (003, Revised T&C 1)*

Agnico Eagle's Response to Request:

Agnico Eagle refers DFO to Table 5.2-1 of the 2023 Annual Report which provides a summary of the requested information. We note it is not an appendix; however, given Hope Bay is under Care and Maintenance there was little activity in 2023 related to fish and fish habitat; therefore, are of the opinion that the summary as provided is appropriate for the time being.

We also refer DFO to the 2022 Annual Report responses provided on the NWB on October 31, 2023 (Section 6.7) where Agnico Eagle replied: *"Thank you for the clarification. In the upcoming NIRB annual report, Agnico Eagle will prepare a summary table in the annual report for ease of DFO review."* (Agnico Eagle 2023).

References:

Agnico Eagle (Agnico Eagle Mines Limited). 2023. Hope Bay Project – Responses to Reply Comments Received from CIRNAC and DFO on the 2022 NWB Annual Report and 2022 Annual Geotechnical Inspection Reports. Prepared for Nunavut Water Board. October 31, 2023.

HEALTH CANADA (HC)

Interested Party:	HC	Rec No.:	HC-NIRB-01
Re:	Exceedances in dustfall		

Request Made by Interested Party:

HC recommends:

1. *Continued monitoring of dustfall to confirm whether the anomalous results were one-time events.*
2. *Proactive engagement with Inuit and Indigenous communities to ensure that monitoring locations reflect areas where there are potential exposures to human receptors, including traditional land users, and communication on the potential health risks associated with land use in the project vicinity area to discourage avoidance of the area when it is not necessary.*

Agnico Eagle's Response to Request:

Response bullet 1)

Agnico Eagle will continue to monitor dustfall as per Project Certificate No. 009, Term & Condition 1 and the Air Quality Management Plan.

Response bullet 2)

Agnico Eagle meets with the Inuit Environmental Advisory Committee (IEAC) approximately twice a year. IEAC members are Hope Bay area land users. As a note, only a few families are still traveling through the area. During IEAC meetings, Agnico Eagle presents environmental monitoring results and proposed adjustments to existing monitoring programs and IEAC members ask questions and discuss concerns. Agnico Eagle is confident this is the proactive approach Health Canada is referring to.

TRANSPORT CANADA

Interested Party:	TC	Rec No.:	TC-NIRB-01
Re:	Marine Transportation Oil Handling Facility		

Request Made by Interested Party:

Transport Canada requests that the above information be brought to AEM's attention, and that AEM respond to Transport Canada's request for construction plans for the fuel distribution line.

Agnico Eagle's Response to Request:

Agnico Eagle notes a site inspection is being scheduled for late August for TC to go to Hope Bay, which will enable TC to see the construction of the fuel distribution line and address associated questions.

Interested Party:	TC	Rec No.:	TC-NIRB-02
Re:	Shipping Management Plan - Ballast Water		

Request Made by Interested Party:

Transport Canada requests that Section 7 of the Shipping Management Plan be updated to reflect the changes.

Agnico Eagle's Response to Request:

Agnico Eagle notes there is no Section 7 of the Shipping Management Plan, as per Transport Canada's comment/request. However, in the next revision of the plan Agnico Eagle can add reference to Ballast Water Regulations, SOR/2021-120 in Section 1.2 of the plan.

That said, it is important to remind parties that Agnico Eagle is not responsible for the vessels themselves nor its operations, rather it is the responsibility of shipping companies (Section 1.3 of the Shipping Management Plan). Therefore, any vessel conformity requirements is the responsibility of the shipping company.

Interested Party:	TC	Rec No.:	TC-NIRB-03
Re:	Shipping Management - Biofouling		

Request Made by Interested Party:

Transport Canada requests that the above information be brought to AEM's attention.

Agnico Eagle's Response to Request:

We acknowledge the notification and details from Transport Canada; however, remind parties that Agnico Eagle is not responsible for the vessels themselves nor the operations, rather it is the responsibility of shipping companies.

Interested Party:	TC	Rec No.:	TC-NIRB-04
Re:	Permits - Navigation Protection Program		

Request Made by Interested Party:

The proponent must submit a transfer of ownership of the mine from TMAC Resources to Agnico Eagle Mines for each of the three NPP approvals. The template is attached. They can be submitted via PDF to: TC.NPPPNRPPNRPN.TC@tc.gc.ca.

Agnico Eagle's Response to Request:

Agnico Eagle thanks TC for raising this and providing guidance to execute the transfer of ownership. Agnico Eagle has initiated the process with TC/NPP through the appropriate channel.

Interested Party:	TC	Rec No.:	TC-NIRB-05
Re:	Transportation of Dangerous Goods / Hazardous Materials		

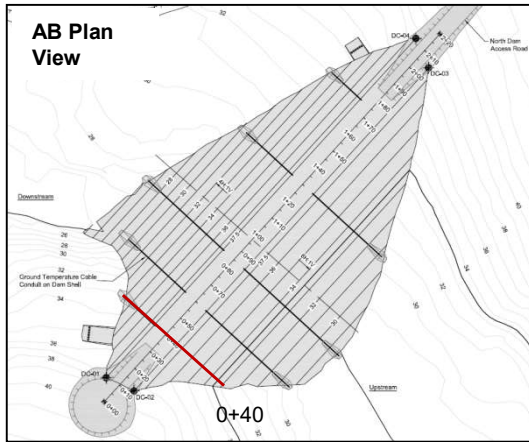
Request Made by Interested Party:

With respect to Transport Canada, in 2023, No Transportation of Dangerous Goods (TDG) approvals were issued. No TDG inspections were conducted. No TDG monitoring was conducted. No TDG complaints/concerns were received regarding this project. No TDG enforcement actions were required.

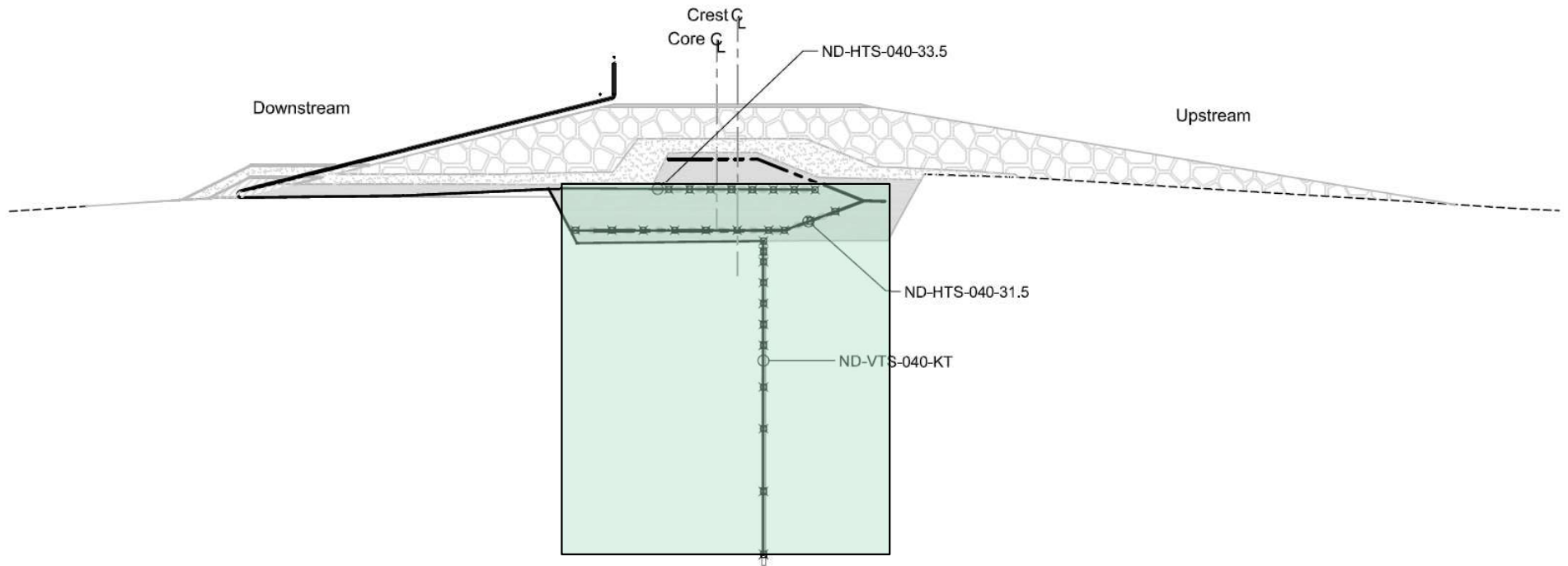
Agnico Eagle's Response to Request:

Agnico Eagle thanks Transport Canada for the comments.

APPENDIX A: Sensor-specific Thermal Monitoring TARPs (from OMS Manual)



- Legend:**
- GTC Status: Cable irreparably damaged [Excluded]
 - GTC Status: Bead damaged or data missing [Excluded]
 - Critical Zone
 - Excluded Beads



AGNICO EAGLE

TIA GTC TARPS

**North Dam
Station 0+40**

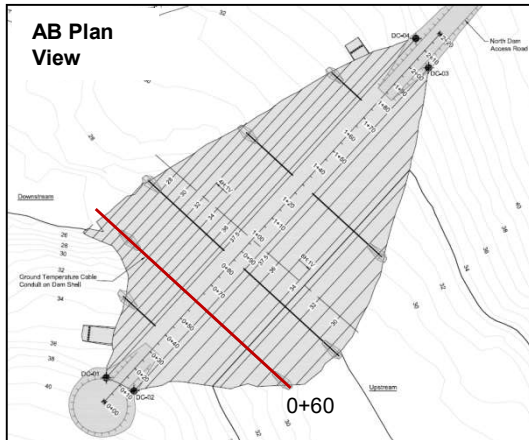
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HOPE BAY

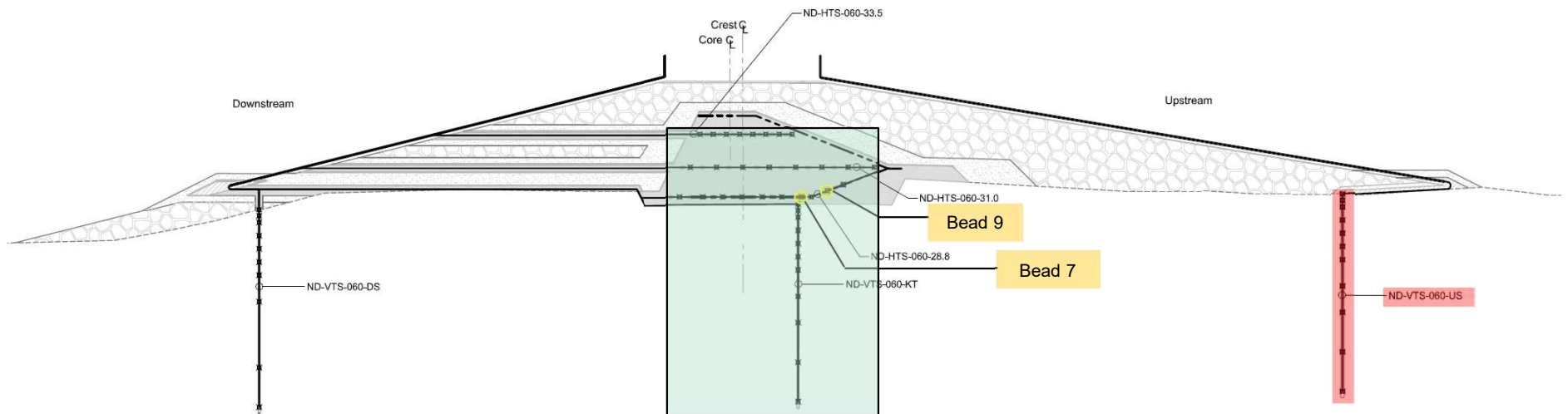
Date:
March 2023

Approved:
PL

Figure: **1**



- Legend:**
- GTC Status: Cable irreparably damaged [Excluded]
 - GTC Status: Bead damaged or data missing [Excluded]
 - Critical Zone
 - Excluded Beads



AGNICO EAGLE

TIA GTC TARPS

**North Dam
Station 0+60**

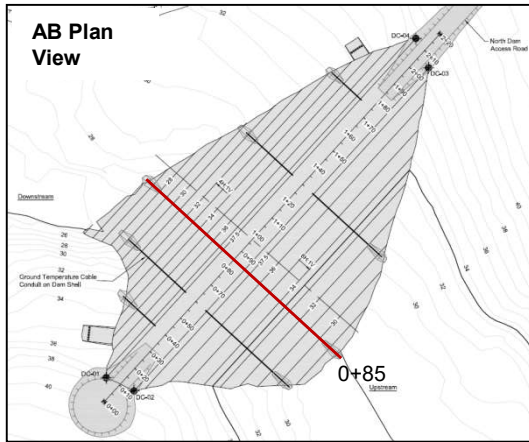
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Filename: TIA GTC TARPS_20230308.pptx

HOPE BAY

Date:
March 2023

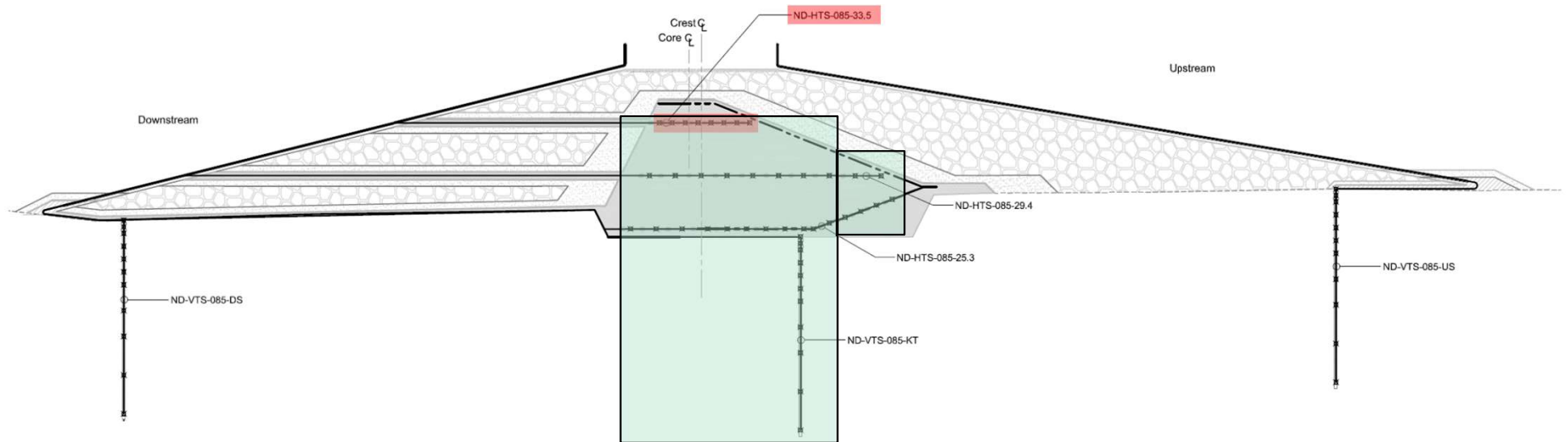
Approved:
PL

Figure: **1**



Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



AGNICO EAGLE

TIA GTC TARPS

**North Dam
Station 0+85**

Proj. No.: CAPR002491

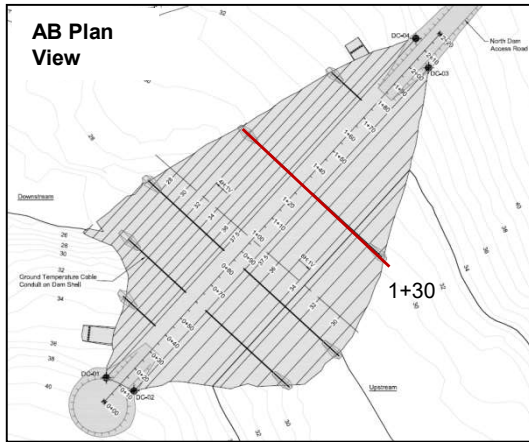
Filename: TIA GTC TARPS_20230308.pptx

HOPE BAY

Date:
March 2023

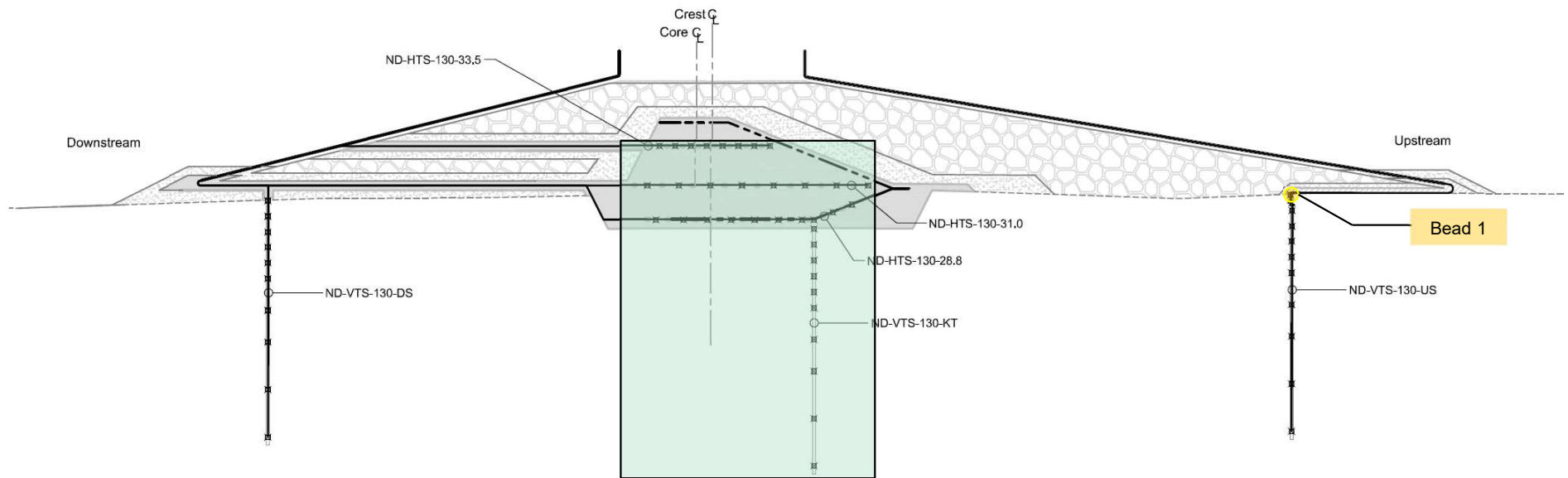
Approved:
PL

Figure: **1**



Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



AGNICO EAGLE

TIA GTC TARPS

**North Dam
Station 1+30**

Proj. No.: CAPR002491

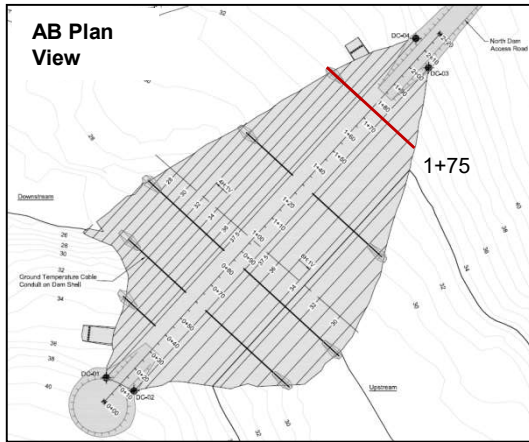
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HOPE BAY

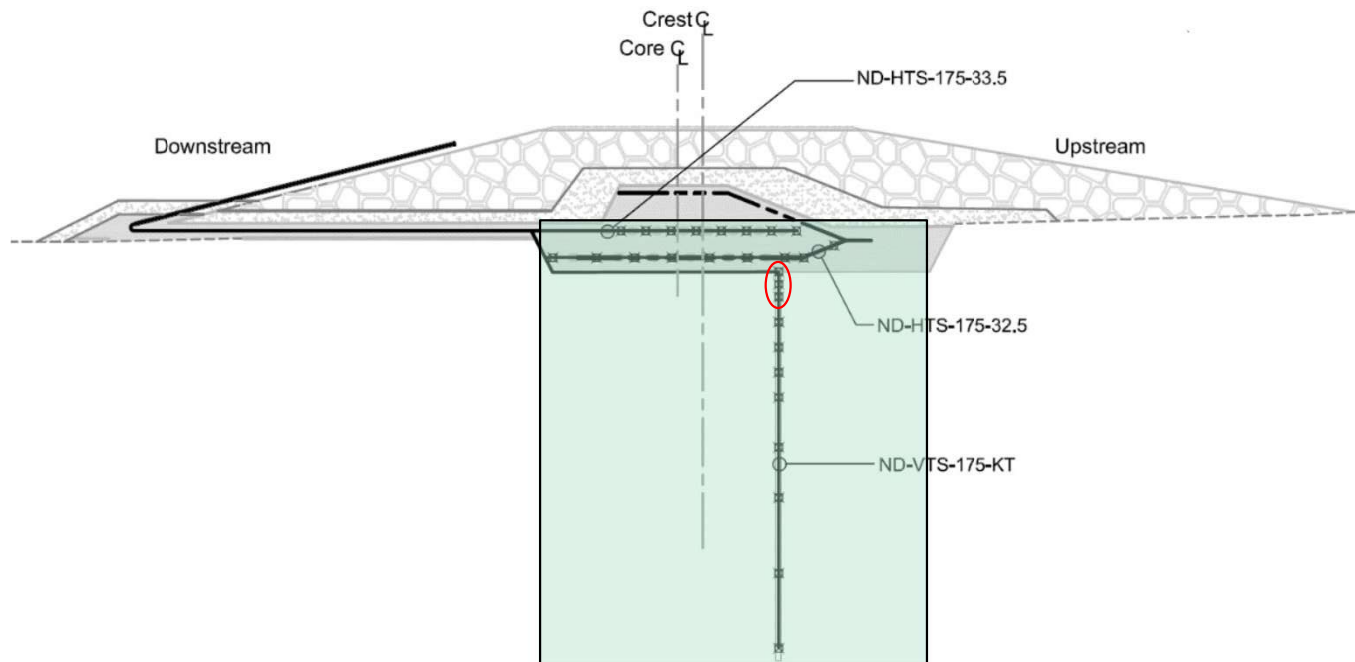
Date:
March 2023

Approved:
PL

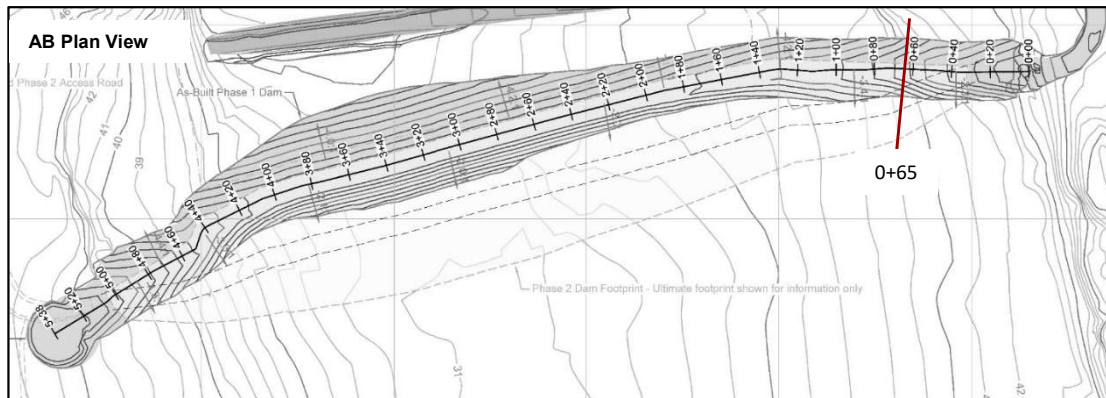
Figure: **1**



- Legend:**
- GTC Status: Cable irreparably damaged [Excluded]
 - GTC Status: Bead damaged or data missing [Excluded]
 - Critical Zone
 - Excluded Beads

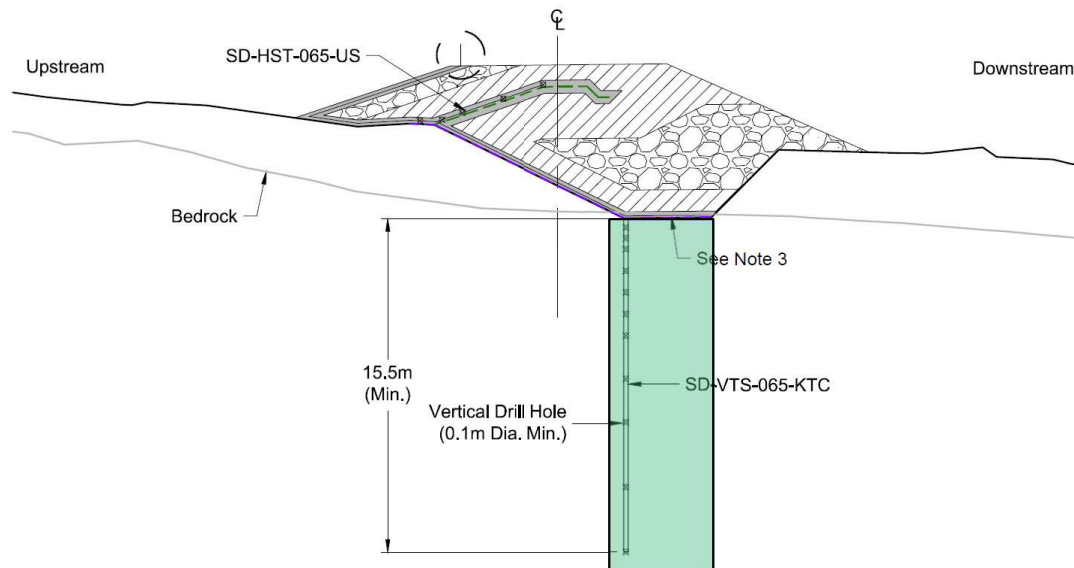


		TIA GTC TARPS		
		North Dam Station 1+75		
Proj. No.: CAPR002491 Filename: TIA GTC TARPS_20230308.pptx	HOPE BAY	Date: March 2023	Approved: PL	Figure: 1

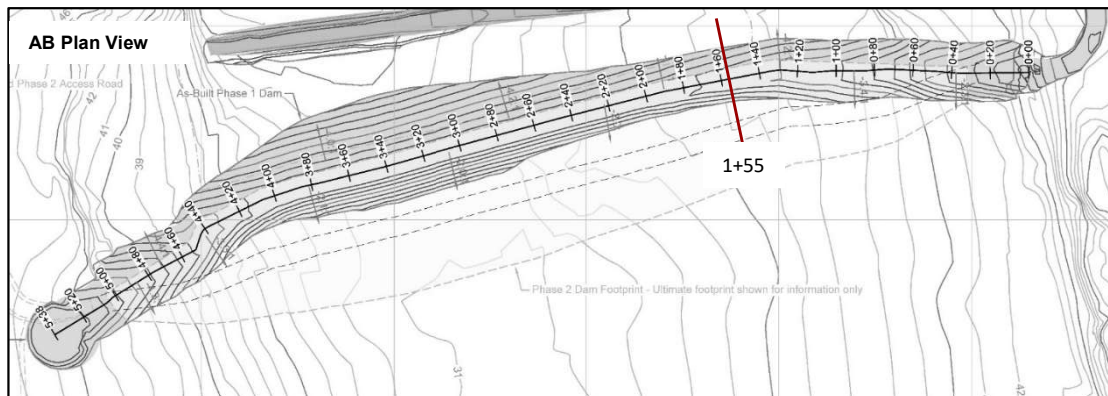


Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads

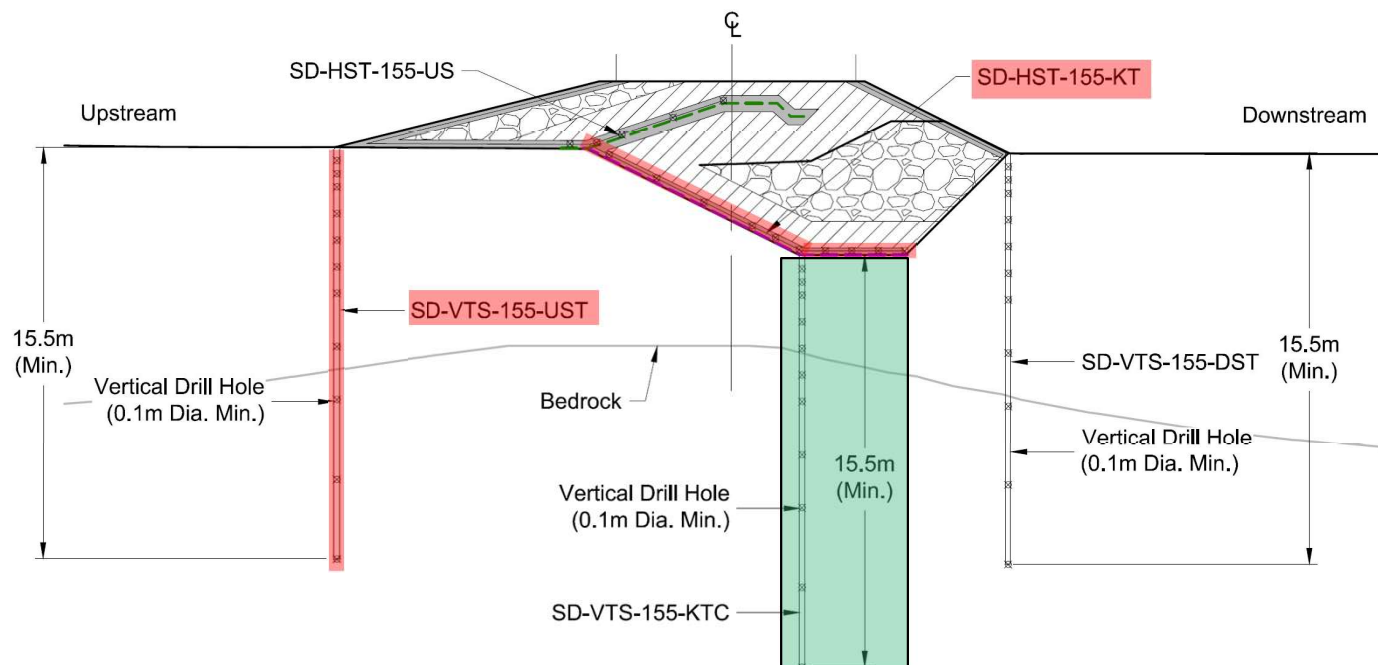


	 AGNICO EAGLE	TIA GTC TARPS		
		South Dam Station 0+65		
Proj. No.: CAPR002491 Filename: TIA GTC TARPS_20230308.pptx	HOPE BAY	Date: March 2023	Approved: PL	Figure: 1

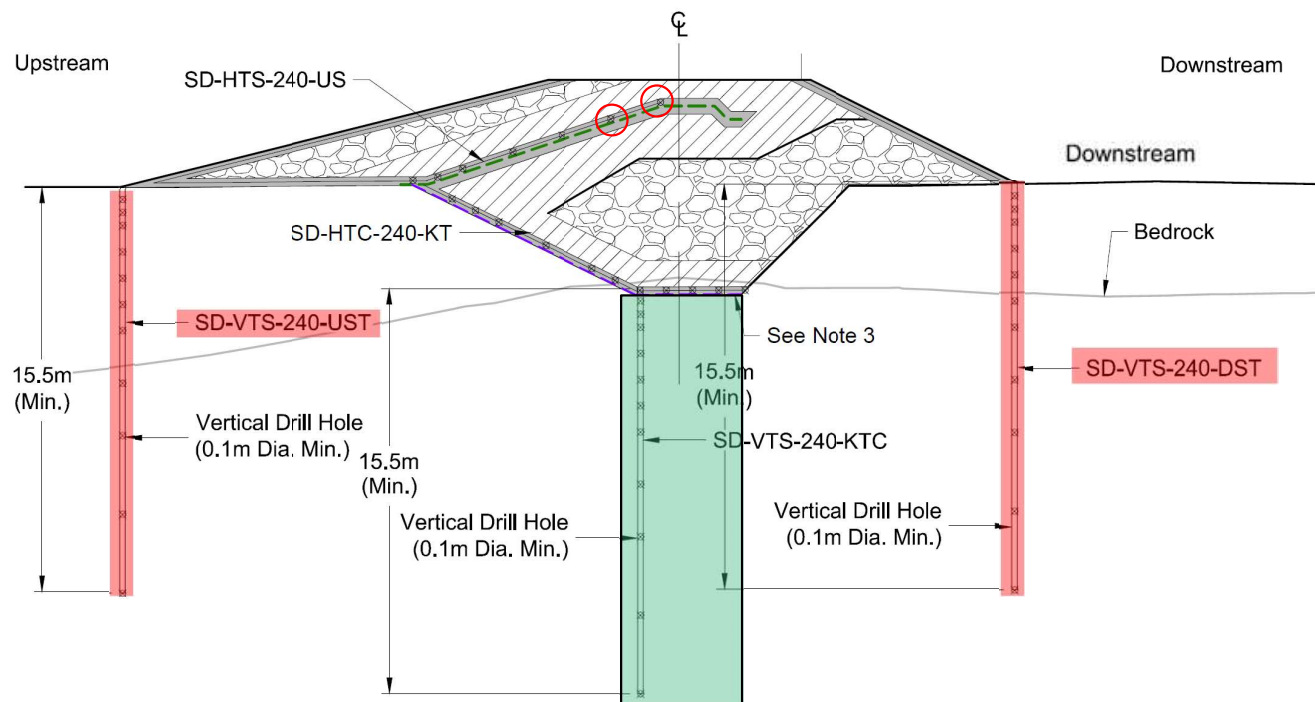
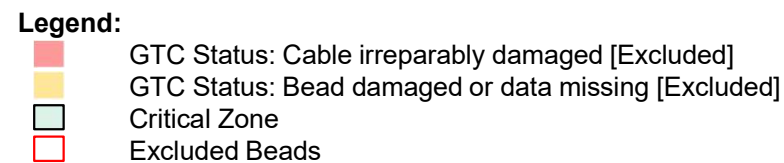


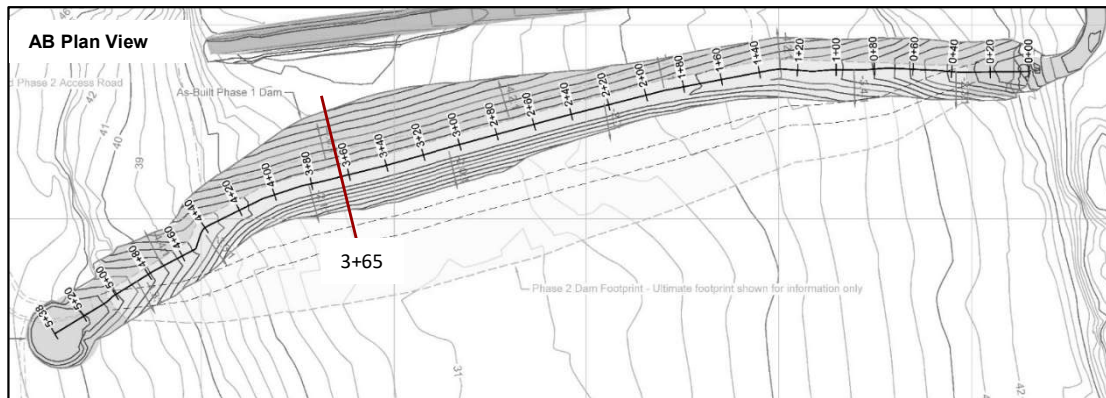
Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



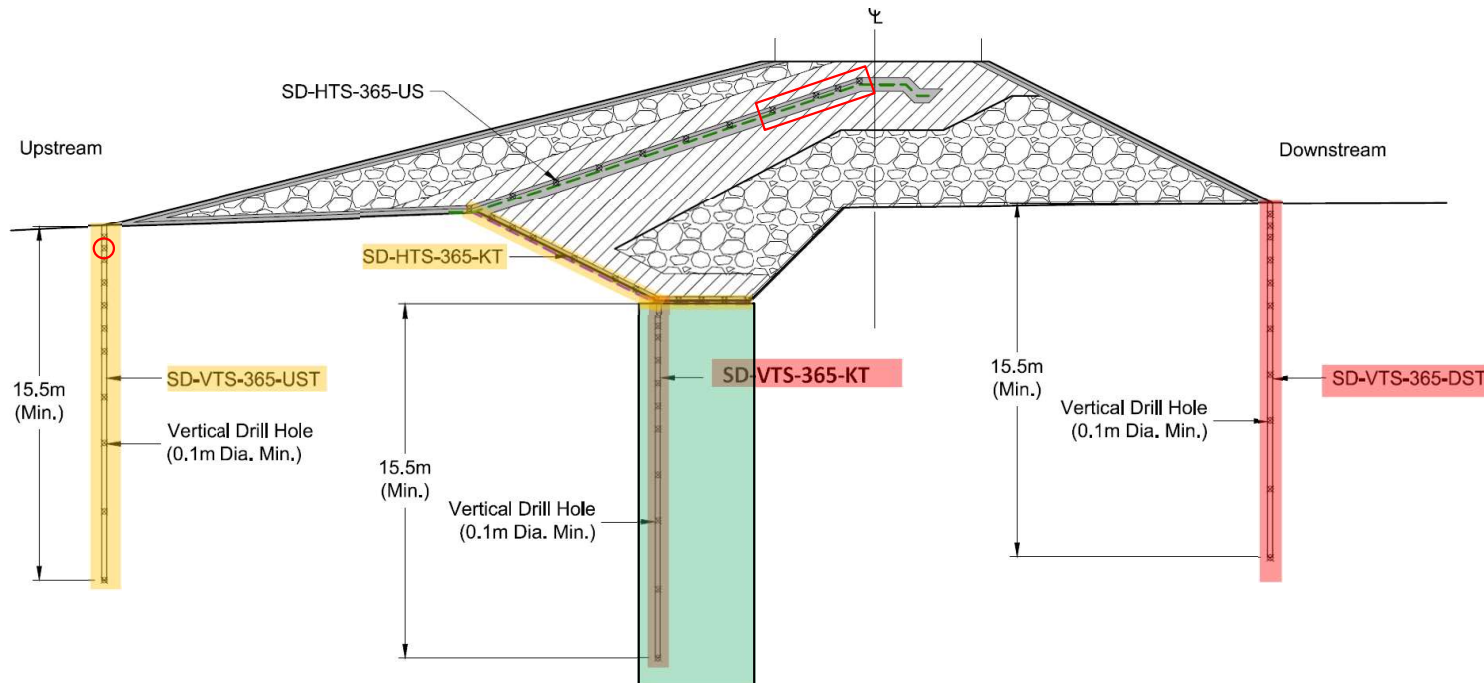
	 AGNICO EAGLE	TIA GTC TARPS		
		South Dam Station 1+55		
Proj. No.: CAPR002491 Filename: TIA GTC TARPS_20230308.pptx	HOPE BAY	Date: March 2023	Approved: PL	Figure: 1





Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



TIA GTC TARPS

**South Dam
Station 3+65**

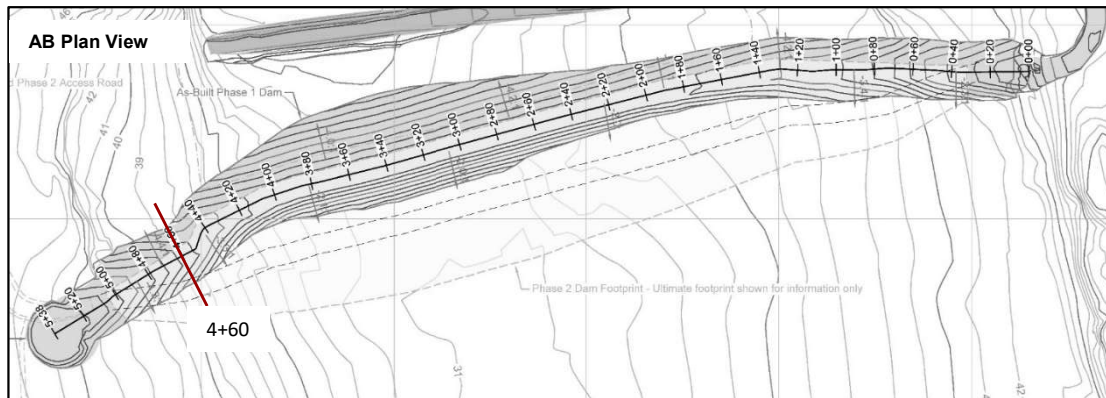
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Filename: TIA GTC TARPS_20230308.pptx

HOPE BAY

Date:
March 2023

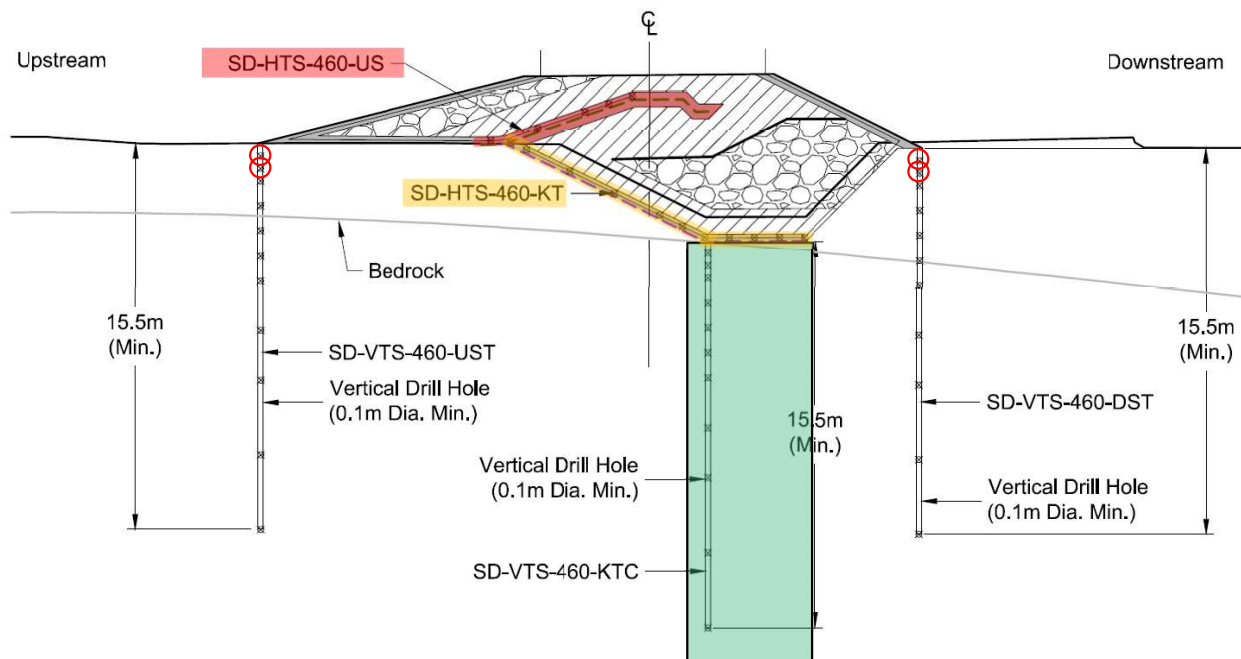
Approved:
PL

Figure: **1**



Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



AGNICO EAGLE

TIA GTC TARPS

**South Dam
Station 4+60**

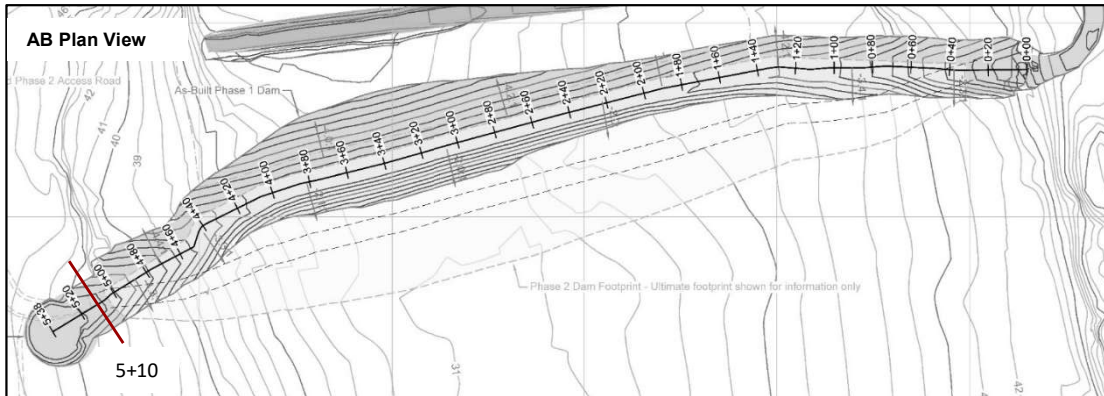
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HOPE BAY

Date:
March 2023

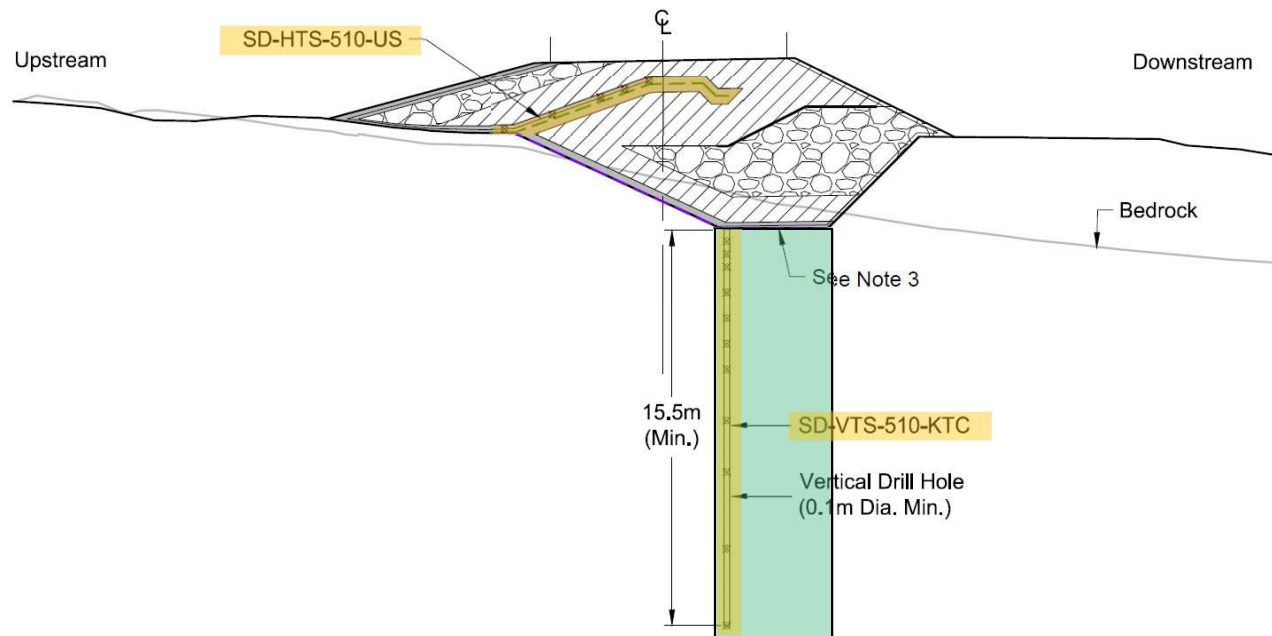
Approved:
PL

Figure: **1**



Legend:

- GTC Status: Cable irreparably damaged [Excluded]
- GTC Status: Bead damaged or data missing [Excluded]
- Critical Zone
- Excluded Beads



		TIA GTC TARPS		
		South Dam Station 5+10		
Proj. No.: CAPR002491 Filename: TIA GTC TARPS_20230308.pptx	HOPE BAY	Date: March 2023	Approved: PL	Figure: 1

GTC Code Legend

Structure	TARP Zones	GTC Code
North Dam	Critical Zone - Core Temperature	1
	Critical Zone - Foundation Temperature	1
	Non-Critical Zone - Foundation Temperature	3
	Excluded Beads	4
South Dam	Critical Zone - Foundation Temperature	1
	Non-Critical Zone - Key Trench Base Temperature	2
	Non-Critical Zone - Foundation Temperature Upstream and Downstream, GCL Liner face	3
	Excluded Beads	4
	Upstream Tailings Temperature	5

GTC Table North Dam

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_HTS_040_315	01	1	No	-2
ND_HTS_040_315	02	1	No	-2
ND_HTS_040_315	03	1	No	-2
ND_HTS_040_315	04	1	No	-2
ND_HTS_040_315	05	1	No	-2
ND_HTS_040_315	06	1	No	-2
ND_HTS_040_315	07	1	No	-2
ND_HTS_040_315	08	1	No	-2
ND_HTS_040_315	09	1	No	-2
ND_HTS_040_315	10	1	No	-2
ND_HTS_040_335	01	1	No	-2
ND_HTS_040_335	02	1	No	-2
ND_HTS_040_335	03	1	No	-2
ND_HTS_040_335	04	1	No	-2
ND_HTS_040_335	05	1	No	-2
ND_HTS_040_335	06	1	No	-2
ND_HTS_040_335	07	1	No	-2
ND_HTS_040_335	08	1	No	-2
ND_VTS_040_KT	01	1	No	-8
ND_VTS_040_KT	02	1	No	-8
ND_VTS_040_KT	03	1	No	-8
ND_VTS_040_KT	04	1	No	-8
ND_VTS_040_KT	05	1	No	-8
ND_VTS_040_KT	06	1	No	-8
ND_VTS_040_KT	07	1	No	-8
ND_VTS_040_KT	08	1	No	-8

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_VTS_040_KT	09	1	No	-8
ND_VTS_040_KT	10	1	No	-8
ND_VTS_040_KT	11	1	No	-8
ND_HTS_060_288	01	1	No	-2
ND_HTS_060_288	02	1	No	-2
ND_HTS_060_288	03	1	No	-2
ND_HTS_060_288	04	1	No	-2
ND_HTS_060_288	05	1	No	-2
ND_HTS_060_288	06	1	No	-2
ND_HTS_060_288	07	1	Excluded	-2
ND_HTS_060_288	08	1	No	-2
ND_HTS_060_288	09	1	Excluded	-2
ND_HTS_060_288	10	1	No	-2
ND_HTS_060_310	01	1	No	-2
ND_HTS_060_310	02	1	No	-2
ND_HTS_060_310	03	1	No	-2
ND_HTS_060_310	04	1	No	-2
ND_HTS_060_310	05	1	No	-2
ND_HTS_060_310	06	1	No	-2
ND_HTS_060_310	07	1	No	-2
ND_HTS_060_310	08	1	No	-2
ND_HTS_060_335	01	1	No	-2
ND_HTS_060_335	02	1	No	-2
ND_HTS_060_335	03	1	No	-2

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_HTS_060_335	04	1	No	-2
ND_HTS_060_335	05	1	No	-2
ND_HTS_060_335	06	1	No	-2
ND_HTS_060_335	07	1	No	-2
ND_HTS_060_335	08	1	No	-2
ND_VTS_060_DS	01	3	No	None
ND_VTS_060_DS	02	3	No	None
ND_VTS_060_DS	03	3	No	None
ND_VTS_060_DS	04	3	No	None
ND_VTS_060_DS	05	3	No	None
ND_VTS_060_DS	06	3	No	None
ND_VTS_060_DS	07	3	No	None
ND_VTS_060_DS	08	3	No	None
ND_VTS_060_DS	09	3	No	None
ND_VTS_060_DS	10	3	No	None
ND_VTS_060_DS	11	3	No	None
ND_VTS_060_KT	01	1	No	-8
ND_VTS_060_KT	02	1	No	-8
ND_VTS_060_KT	03	1	No	-8
ND_VTS_060_KT	04	1	No	-8
ND_VTS_060_KT	05	1	No	-8
ND_VTS_060_KT	06	1	No	-8
ND_VTS_060_KT	07	1	No	-8
ND_VTS_060_KT	08	1	No	-8
ND_VTS_060_KT	09	1	No	-8
ND_VTS_060_KT	10	1	No	-8
ND_VTS_060_KT	11	1	No	-8
ND_VTS_060_US	01	3	Excluded	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_VTS_060_US	02	3	Excluded	None
ND_VTS_060_US	03	3	Excluded	None
ND_VTS_060_US	04	3	Excluded	None
ND_VTS_060_US	05	3	Excluded	None
ND_VTS_060_US	06	3	Excluded	None
ND_VTS_060_US	07	3	Excluded	None
ND_VTS_060_US	08	3	Excluded	None
ND_VTS_060_US	09	3	Excluded	None
ND_VTS_060_US	10	3	Excluded	None
ND_VTS_060_US	11	3	Excluded	None
ND_HTS_085_253	01	1	No	-2
ND_HTS_085_253	02	1	No	-2
ND_HTS_085_253	03	1	No	-2
ND_HTS_085_253	04	1	No	-2
ND_HTS_085_253	05	1	No	-2
ND_HTS_085_253	06	1	No	-2
ND_HTS_085_253	07	1	No	-2
ND_HTS_085_253	08	1	No	-2
ND_HTS_085_253	09	1	No	-2
ND_HTS_085_253	10	1	No	-2
ND_HTS_085_253	11	1	No	-2
ND_HTS_085_253	12	1	No	-2

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_HTS_085_253	13	1	No	-2
ND_HTS_085_253	14	1	No	-2
ND_HTS_085_253	15	1	No	-2
ND_HTS_085_294	01	1	No	-2
ND_HTS_085_294	02	1	No	-2
ND_HTS_085_294	03	1	No	-2
ND_HTS_085_294	04	1	No	-2
ND_HTS_085_294	05	1	No	-2
ND_HTS_085_294	06	1	No	-2
ND_HTS_085_294	07	1	No	-2
ND_HTS_085_294	08	1	No	-2
ND_HTS_085_294	09	1	No	-2
ND_HTS_085_294	10	1	No	-2
ND_HTS_085_335	01	1	Excluded	-2
ND_HTS_085_335	02	1	Excluded	-2
ND_HTS_085_335	03	1	Excluded	-2
ND_HTS_085_335	04	1	Excluded	-2
ND_HTS_085_335	05	1	Excluded	-2
ND_HTS_085_335	06	1	Excluded	-2
ND_HTS_085_335	07	1	Excluded	-2
ND_HTS_085_335	08	1	Excluded	-2
ND_VTS_085_DS	01	3	No	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_VTS_085_DS	02	3	No	None
ND_VTS_085_DS	03	3	No	None
ND_VTS_085_DS	04	3	No	None
ND_VTS_085_DS	05	3	No	None
ND_VTS_085_DS	06	3	No	None
ND_VTS_085_DS	07	3	No	None
ND_VTS_085_DS	08	3	No	None
ND_VTS_085_DS	09	3	No	None
ND_VTS_085_DS	10	3	No	None
ND_VTS_085_DS	11	3	No	None
ND_VTS_085_KT	01	1	No	-8
ND_VTS_085_KT	02	1	No	-8
ND_VTS_085_KT	03	1	No	-8
ND_VTS_085_KT	04	1	No	-8
ND_VTS_085_KT	05	1	No	-8
ND_VTS_085_KT	06	1	No	-8
ND_VTS_085_KT	07	1	No	-8
ND_VTS_085_KT	08	1	No	-8
ND_VTS_085_KT	09	1	No	-8
ND_VTS_085_KT	10	1	No	-8
ND_VTS_085_KT	11	1	No	-8
ND_VTS_085_US	01	3	Excluded	None
ND_VTS_085_US	02	3	No	None
ND_VTS_085_US	03	3	No	None
ND_VTS_085_US	04	3	No	None
ND_VTS_085_US	05	3	No	None
ND_VTS_085_US	06	3	No	None
ND_VTS_085_US	07	3	No	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_VTS_085_US	08	3	No	None
ND_VTS_085_US	09	3	No	None
ND_VTS_085_US	10	3	No	None
ND_VTS_085_US	11	3	No	None
ND_HTS_130_288	01	1	No	-2
ND_HTS_130_288	02	1	No	-2
ND_HTS_130_288	03	1	No	-2
ND_HTS_130_288	04	1	No	-2
ND_HTS_130_288	05	1	No	-2
ND_HTS_130_288	06	1	No	-2
ND_HTS_130_288	07	1	No	-2
ND_HTS_130_288	08	1	No	-2
ND_HTS_130_288	09	1	No	-2
ND_HTS_130_288	10	1	No	-2
ND_HTS_130_310	01	1	No	-2
ND_HTS_130_310	02	1	No	-2
ND_HTS_130_310	03	1	No	-2
ND_HTS_130_310	04	1	No	-2
ND_HTS_130_310	05	1	No	-2
ND_HTS_130_310	06	1	No	-2
ND_HTS_130_310	07	1	No	-2
ND_HTS_130_310	08	1	No	-2

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_HTS_130_335	01	1	No	-2
ND_HTS_130_335	02	1	No	-2
ND_HTS_130_335	03	1	No	-2
ND_HTS_130_335	04	1	No	-2
ND_HTS_130_335	05	1	No	-2
ND_HTS_130_335	06	1	No	-2
ND_HTS_130_335	07	1	No	-2
ND_HTS_130_335	08	1	No	-2
ND_VTS_130_DS	01	3	No	None
ND_VTS_130_DS	02	3	No	None
ND_VTS_130_DS	03	3	No	None
ND_VTS_130_DS	04	3	No	None
ND_VTS_130_DS	05	3	No	None
ND_VTS_130_DS	06	3	No	None
ND_VTS_130_DS	07	3	No	None
ND_VTS_130_DS	08	3	No	None
ND_VTS_130_DS	09	3	No	None
ND_VTS_130_DS	10	3	No	None
ND_VTS_130_DS	11	3	No	None
ND_VTS_130_KT	01	1	No	-8
ND_VTS_130_KT	02	1	No	-8
ND_VTS_130_KT	03	1	No	-8
ND_VTS_130_KT	04	1	No	-8
ND_VTS_130_KT	05	1	No	-8
ND_VTS_130_KT	06	1	No	-8
ND_VTS_130_KT	07	1	No	-8

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_VTS_130_KT	08	1	No	-8
ND_VTS_130_KT	09	1	No	-8
ND_VTS_130_KT	10	1	No	-8
ND_VTS_130_KT	11	1	No	-8
ND_VTS_130_US	01	3	No	None
ND_VTS_130_US	02	3	No	None
ND_VTS_130_US	03	3	No	None
ND_VTS_130_US	04	3	No	None
ND_VTS_130_US	05	3	No	None
ND_VTS_130_US	06	3	No	None
ND_VTS_130_US	07	3	No	None
ND_VTS_130_US	08	3	No	None
ND_VTS_130_US	09	3	No	None
ND_VTS_130_US	10	3	No	None
ND_VTS_130_US	11	3	No	None
ND_HTS_175_325	01	1	No	-2
ND_HTS_175_325	02	1	No	-2
ND_HTS_175_325	03	1	No	-2
ND_HTS_175_325	04	1	No	-2
ND_HTS_175_325	05	1	No	-2
ND_HTS_175_325	06	1	No	-2
ND_HTS_175_325	07	1	No	-2
ND_HTS_175_325	08	1	No	-2
ND_HTS_175_325	09	1	No	-2

Cable	Bead	GTC Code	Excluded	Trigger Temperature
ND_HTS_175_335	01	1	No	-2
ND_HTS_175_335	02	1	No	-2
ND_HTS_175_335	03	1	No	-2
ND_HTS_175_335	04	1	No	-2
ND_HTS_175_335	05	1	No	-2
ND_HTS_175_335	06	1	No	-2
ND_HTS_175_335	07	1	No	-2
ND_HTS_175_335	08	1	No	-2
ND_VTS_175_KT	01	1	Excluded	-8
ND_VTS_175_KT	02	1	Excluded	-8
ND_VTS_175_KT	03	1	Excluded	-8
ND_VTS_175_KT	04	1	No	-8
ND_VTS_175_KT	05	1	No	-8
ND_VTS_175_KT	06	1	No	-8
ND_VTS_175_KT	07	1	No	-8
ND_VTS_175_KT	08	1	No	-8
ND_VTS_175_KT	09	1	No	-8
ND_VTS_175_KT	10	1	No	-8
ND_VTS_175_KT	11	1	No	-8

GTC Table North Dam

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD HTS 065 US	01	3	No	None
SD HTS 065 US	02	3	No	None
SD HTS 065 US	03	3	No	None
SD HTS 065 US	04	3	No	None
SD HTS 065 US	05	3	No	None
SD VTS 065 KT	01	1	No	0
SD VTS 065 KT	02	1	No	0
SD VTS 065 KT	03	1	No	0
SD VTS 065 KT	04	1	No	0
SD VTS 065 KT	05	1	No	0
SD VTS 065 KT	06	1	No	0
SD VTS 065 KT	07	1	No	0
SD VTS 065 KT	08	1	No	0
SD VTS 065 KT	09	1	No	0
SD VTS 065 KT	10	1	No	0
SD VTS 065 KT	11	1	No	0
SD HTS 155 US	01	3	No	None
SD HTS 155 US	02	3	No	None
SD HTS 155 US	03	3	No	None
SD HTS 155 US	04	3	No	None
SD HTS 155 US	05	3	No	None
SD_VTS_155_DS	01	3	No	None
SD_VTS_155_DS	02	3	No	None
SD_VTS_155_DS	03	3	No	None
SD_VTS_155_DS	04	3	No	None
SD_VTS_155_DS	05	3	No	None
SD_VTS_155_DS	06	3	No	None
SD_VTS_155_DS	07	3	No	None
SD_VTS_155_DS	08	3	No	None
SD_VTS_155_DS	09	3	No	None
SD_VTS_155_DS	10	3	No	None
SD_VTS_155_DS	11	3	No	None
SD_VTS_155_KT	01	1	No	0

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD_VTS_155_KT	02	1	No	0
SD_VTS_155_KT	03	1	No	0
SD_VTS_155_KT	04	1	No	0
SD_VTS_155_KT	05	1	No	0
SD_VTS_155_KT	06	1	No	0
SD_VTS_155_KT	07	1	No	0
SD_VTS_155_KT	08	1	No	0
SD_VTS_155_KT	09	1	No	0
SD_VTS_155_KT	10	1	No	0
SD_VTS_155_KT	11	1	No	0
SD_VTS_155_US	01	3	Excluded	None
SD_VTS_155_US	02	3	Excluded	None
SD_VTS_155_US	03	3	Excluded	None
SD_VTS_155_US	04	3	Excluded	None
SD_VTS_155_US	05	3	Excluded	None
SD_VTS_155_US	06	3	Excluded	None
SD_VTS_155_US	07	3	Excluded	None
SD_VTS_155_US	08	3	Excluded	None
SD_VTS_155_US	09	3	Excluded	None
SD_VTS_155_US	10	3	Excluded	None
SD_VTS_155_US	11	3	Excluded	None
SD_HTS_240_KT	01	2	Excluded	0
SD_HTS_240_KT	02	2	No	0
SD_HTS_240_KT	03	2	No	0
SD_HTS_240_KT	04	2	No	0
SD_HTS_240_KT	05	2	No	0
SD_HTS_240_KT	06	2	No	0
SD_HTS_240_KT	07	2	No	0
SD_HTS_240_KT	08	2	No	0
SD_HTS_240_KT	09	2	No	0
SD_HTS_240_KT	10	2	No	0
SD_HTS_240_KT	11	2	No	0
SD_HTS_240_US	01	3	No	None
SD_HTS_240_US	02	3	No	None
SD_HTS_240_US	03	3	No	None
SD_HTS_240_US	04	3	No	None
SD_HTS_240_US	05	3	No	None
SD_HTS_240_US	06	3	No	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD_HTS_240_US	07	3	No	None
SD_VTS_240_DS	01	3	Excluded	None
SD_VTS_240_DS	02	3	Excluded	None
SD_VTS_240_DS	03	3	Excluded	None
SD_VTS_240_DS	04	3	Excluded	None
SD_VTS_240_DS	05	3	Excluded	None
SD_VTS_240_DS	06	3	Excluded	None
SD_VTS_240_DS	07	3	Excluded	None
SD_VTS_240_DS	08	3	Excluded	None
SD_VTS_240_DS	09	3	Excluded	None
SD_VTS_240_DS	10	3	Excluded	None
SD_VTS_240_DS	11	3	Excluded	None
SD_VTS_240_KT	01	1	No	0
SD_VTS_240_KT	02	1	No	0
SD_VTS_240_KT	03	1	No	0
SD_VTS_240_KT	04	1	No	0
SD_VTS_240_KT	05	1	No	0
SD_VTS_240_KT	06	1	No	0
SD_VTS_240_KT	07	1	No	0
SD_VTS_240_KT	08	1	No	0
SD_VTS_240_KT	09	1	No	0
SD_VTS_240_KT	10	1	No	0
SD_VTS_240_KT	11	1	No	0
SD_VTS_240_US	01	3	Excluded	None
SD_VTS_240_US	02	3	Excluded	None
SD_VTS_240_US	03	3	Excluded	None
SD_VTS_240_US	04	3	Excluded	None
SD_VTS_240_US	05	3	Excluded	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD_VTS_240_US	06	3	Excluded	None
SD_VTS_240_US	07	3	Excluded	None
SD_VTS_240_US	08	3	Excluded	None
SD_VTS_240_US	09	3	Excluded	None
SD_VTS_240_US	10	3	Excluded	None
SD_VTS_240_US	11	3	Excluded	None
SD_HTS_365_KT	01	2	Excluded	0
SD_HTS_365_KT	02	2	Excluded	0
SD_HTS_365_KT	03	2	Excluded	0
SD_HTS_365_KT	04	2	Excluded	0
SD_HTS_365_KT	05	2	Excluded	0
SD_HTS_365_KT	06	2	Excluded	0
SD_HTS_365_KT	07	2	Excluded	0
SD_HTS_365_KT	08	2	Excluded	0
SD_HTS_365_KT	09	2	Excluded	0
SD_HTS_365_KT	10	2	Excluded	0
SD_HTS_365_KT	11	2	Excluded	0
SD_HTS_365_US	01	3	No	None
SD_HTS_365_US	02	3	No	None
SD_HTS_365_US	03	3	No	None
SD_HTS_365_US	04	3	No	None
SD_HTS_365_US	05	3	No	None
SD_HTS_365_US	06	3	No	None
SD_HTS_365_US	07	3	No	None
SD_HTS_365_US	08	3	No	None
SD_HTS_365_US	09	3	No	None
SD_HTS_365_US	10	3	No	None
SD_HTS_365_US	11	3	No	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD_VTS_365_DS	01	3	Excluded	None
SD_VTS_365_DS	02	3	Excluded	None
SD_VTS_365_DS	03	3	Excluded	None
SD_VTS_365_DS	04	3	Excluded	None
SD_VTS_365_DS	05	3	Excluded	None
SD_VTS_365_DS	06	3	Excluded	None
SD_VTS_365_DS	07	3	Excluded	None
SD_VTS_365_DS	08	3	Excluded	None
SD_VTS_365_DS	09	3	Excluded	None
SD_VTS_365_DS	10	3	Excluded	None
SD_VTS_365_DS	11	3	Excluded	None
SD_VTS_365_US	01	3	Excluded	None
SD_VTS_365_US	02	3	Excluded	None
SD_VTS_365_US	03	3	Excluded	None
SD_VTS_365_US	04	3	Excluded	None
SD_VTS_365_US	05	3	Excluded	None
SD_VTS_365_US	06	3	Excluded	None
SD_VTS_365_US	07	3	Excluded	None
SD_VTS_365_US	08	3	Excluded	None
SD_VTS_365_US	09	3	Excluded	None
SD_VTS_365_US	10	3	Excluded	None
SD_VTS_365_US	11	3	Excluded	None
SD HTS 460 KT	01	2	Excluded	0

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD HTS 460 KT	02	2	Excluded	0
SD HTS 460 KT	03	2	Excluded	0
SD HTS 460 KT	04	2	Excluded	0
SD HTS 460 KT	05	2	Excluded	0
SD HTS 460 KT	06	2	Excluded	0
SD HTS 460 KT	07	2	Excluded	0
SD HTS 460 KT	08	2	Excluded	0
SD HTS 460 KT	09	2	Excluded	0
SD HTS 460 KT	10	2	Excluded	0
SD HTS 460 KT	11	2	Excluded	0
SD_VTS_460_DS	01	3	Excluded	None
SD_VTS_460_DS	02	3	Excluded	None
SD_VTS_460_DS	03	3	No	None
SD_VTS_460_DS	04	3	No	None
SD_VTS_460_DS	05	3	No	None
SD_VTS_460_DS	06	3	No	None
SD_VTS_460_DS	07	3	No	None
SD_VTS_460_DS	08	3	No	None
SD_VTS_460_DS	09	3	No	None
SD_VTS_460_DS	10	3	No	None
SD_VTS_460_DS	11	3	No	None
SD_VTS_460_KT	01	1	No	0
SD_VTS_460_KT	02	1	No	0
SD_VTS_460_KT	03	1	No	0
SD_VTS_460_KT	04	1	No	0
SD_VTS_460_KT	05	1	No	0
SD_VTS_460_KT	06	1	No	0
SD_VTS_460_KT	07	1	No	0
SD_VTS_460_KT	08	1	No	0
SD_VTS_460_KT	09	1	No	0
SD_VTS_460_KT	10	1	No	0
SD_VTS_460_KT	11	1	No	0
SD_VTS_460_US	01	3	Excluded	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD_VTS_460_US	02	3	Excluded	None
SD_VTS_460_US	03	3	No	None
SD_VTS_460_US	04	3	No	None
SD_VTS_460_US	05	3	No	None
SD_VTS_460_US	06	3	No	None
SD_VTS_460_US	07	3	No	None
SD_VTS_460_US	08	3	No	None
SD_VTS_460_US	09	3	No	None
SD_VTS_460_US	10	3	No	None
SD_VTS_460_US	11	3	No	None
SD_HTS_510_US	01	3	Excluded	None
SD_HTS_510_US	02	3	Excluded	None
SD_HTS_510_US	03	3	Excluded	None
SD_HTS_510_US	04	3	Excluded	None
SD_HTS_510_US	05	3	Excluded	None
SD_VTS_510_KT	01	1	Excluded	None
SD_VTS_510_KT	02	1	Excluded	None
SD_VTS_510_KT	03	1	Excluded	None
SD_VTS_510_KT	04	1	Excluded	None
SD_VTS_510_KT	05	1	Excluded	None
SD_VTS_510_KT	06	1	Excluded	None
SD_VTS_510_KT	07	1	Excluded	None
SD_VTS_510_KT	08	1	Excluded	None
SD_VTS_510_KT	09	1	Excluded	None
SD_VTS_510_KT	10	1	Excluded	None
SD_VTS_510_KT	11	1	Excluded	None
SD_HTS_B1_KT	01	2	No	None
SD_HTS_B1_KT	02	2	No	None
SD_HTS_B1_KT	03	2	No	None
SD_HTS_B1_KT	04	2	No	None

Cable	Bead	GTC Code	Excluded	Trigger Temperature
SD HTS B1 KT	05	2	No	None
SD HTS B1 KT	06	2	No	None
SD HTS B1 KT	07	2	No	None
SD HTS B1 KT	08	2	No	None
SD HTS B1 KT	09	2	No	None
SD HTS B1 KT	10	2	No	None
SD HTS B1 KT	11	2	No	None
SD HTS B1 KT	12	2	No	None
SD HTS B1 KT	13	2	No	None
SD HTS B1 KT	14	2	No	None
SD HTS B1 KT	15	2	No	None
SD HTS B1 KT	16	2	No	None
SD HTS B1 KT	17	2	No	None
SD HTS B1 KT	18	2	No	None
SD HTS B1 KT	19	2	No	None
SD HTS B1 KT	20	2	No	None
SD VTS US1	01	5	No	None
SD VTS US1	02	5	No	None
SD VTS US1	03	5	Excluded	None
SD VTS US1	04	5	Excluded	None
SD VTS US1	05	5	Excluded	None
SD VTS US1	06	5	Excluded	None
SD VTS US1	07	5	Excluded	None
SD VTS US1	08	5	Excluded	None
SD VTS US1	09	5	Excluded	None
SD VTS US1	10	5	Excluded	None
SD VTS US1	11	5	Excluded	None
SD VTS US1	12	5	Excluded	None
SD VTS US1	13	5	Excluded	None
SD VTS US2	01	5	No	None
SD VTS US2	02	5	Excluded	None
SD VTS US2	03	5	Excluded	None
SD VTS US2	04	5	Excluded	None
SD VTS US2	05	5	Excluded	None
SD VTS US2	06	5	Excluded	None
SD VTS US2	07	5	Excluded	None
SD VTS US2	08	5	Excluded	None
SD VTS US2	09	5	Excluded	None
SD VTS US2	10	5	Excluded	None
SD VTS US2	11	5	Excluded	None
SD VTS US2	12	5	Excluded	None
SD VTS US2	13	5	Excluded	None
SD VTS US2	14	5	Excluded	None
SD VTS US2	15	5	Excluded	None

APPENDIX B: 2023 Annual Geochemistry Monitoring Report Addendum - Quarry Monitoring Results and Discussion

FINAL

Technical Memo

To	Lisa Mah, Cecilia Zafiris, Agnico	Client	Agnico Eagle Mines Ltd.
From	Kyle Jang, Lisa Barazzuol, SRK	Project	CAPR003064
Cc	Colleen Prather, Agnico Lucie Courtine, SRK	Date	June 28, 2024
Subject	2023 Annual Geochemistry Monitoring Report Addendum - Quarry Monitoring Results and Discussion		

File name: HB_Doris_Madrid_2023_QuarryResults_Addendum_CAPR003064_FINAL_20240628.docx

1 Background

SRK (2024)¹ documents the sampling procedures (Section 7.1.1), geological inspection (Section 7.2.2.1), and interpretation of acid-base accounting (ABA) results for sample of blasted rock collected from Quarry 2 (Section 7.2.2.2). As documented in the QMP and Water Licence (2AM-DOH1335), a full suite of laboratory analyses were required after the initial total sulphur content of the Quarry 2 sample exceeded 0.1 %. This addendum documents the complete ABA, elemental analysis, and shake flask extraction (SFE) results for two size fractions (+1 cm and -2 mm) of one sample collected from Quarry 2 and completes the required assessment of ML/ARD potential. This memorandum is an update to Section 7.2.2.2 of SRK (2024) and finalizes the content of SRK (2024).

2 Results and Discussion

A summary of QA/QC results is presented in Attachment 1. Complete laboratory results for ABA, elemental analysis, and SFE are presented in Attachment 2.

2.1 Acid Base Accounting

A summary of ABA data are presented in Figure 2-1 to Figure 2-4 and Table 2.1.

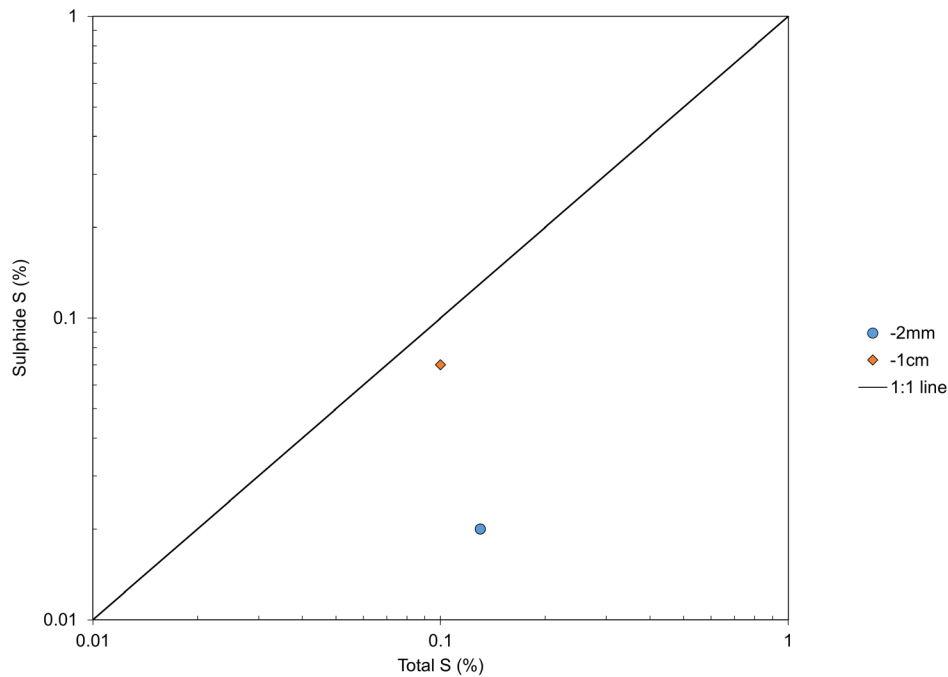
Values of paste pH ranged from 8.7 to 9.

¹ SRK 2024. 2023 Annual Geochemistry Monitoring Report, Hope Bay Project FINAL, March 2024

Total sulphur ranged from 0.1 to 0.13%. Sulphate sulphur ranged from 0.03 to 0.11% and was higher in the fine (-2 mm) size fraction. For the -2 mm fraction, sulphate content represented 85% of total sulphur, which is anomalously higher compared to previous monitoring and geochemical characterization of mafic metavolcanic quarry rock (SRK 2017)² and is likely contamination. Accordingly, AP was calculated from total sulphur due to the presence of sulphate in the samples (Figure 2-1)

Modified NP and TIC for both size fractions ranged between 52 and 110 kg CaCO₃/t and 44 to 95 kg CaCO₃/t, respectively (Figure 2-2). Modified NP was at near parity to TIC suggesting NP is in the form of calcium and/or magnesium carbonate minerals. Both size fractions were classified as non-PAG on the basis of NP/AP and TIC/AP (Figure 2-3 and Figure 2-4, respectively).

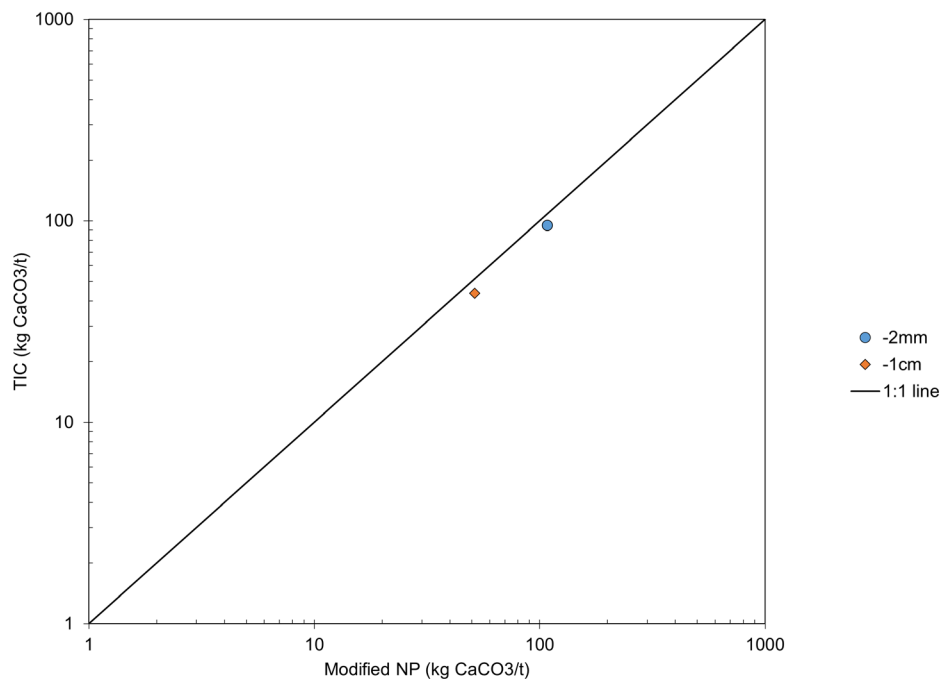
Figure 2-1: Comparison of Total Sulphur and Sulphide Sulphur



[https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

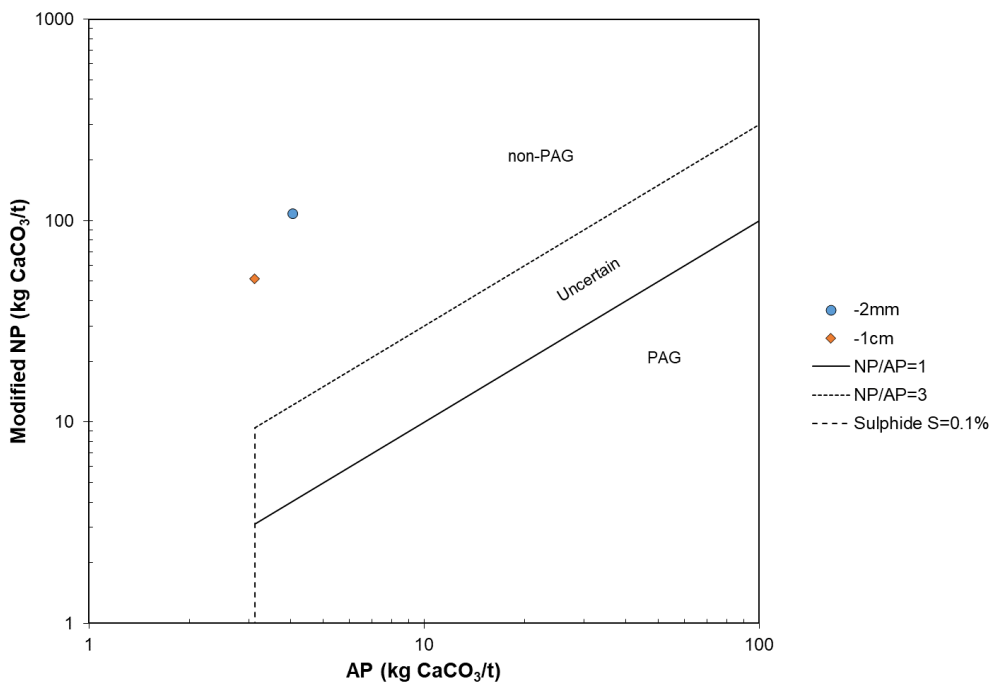
² SRK 2017. Geochemical Characterization of Madrid-Boston Project Quarries, Hope Bay Project FINAL, November 2017

Figure 2-2: Comparison of Modified NP and TIC



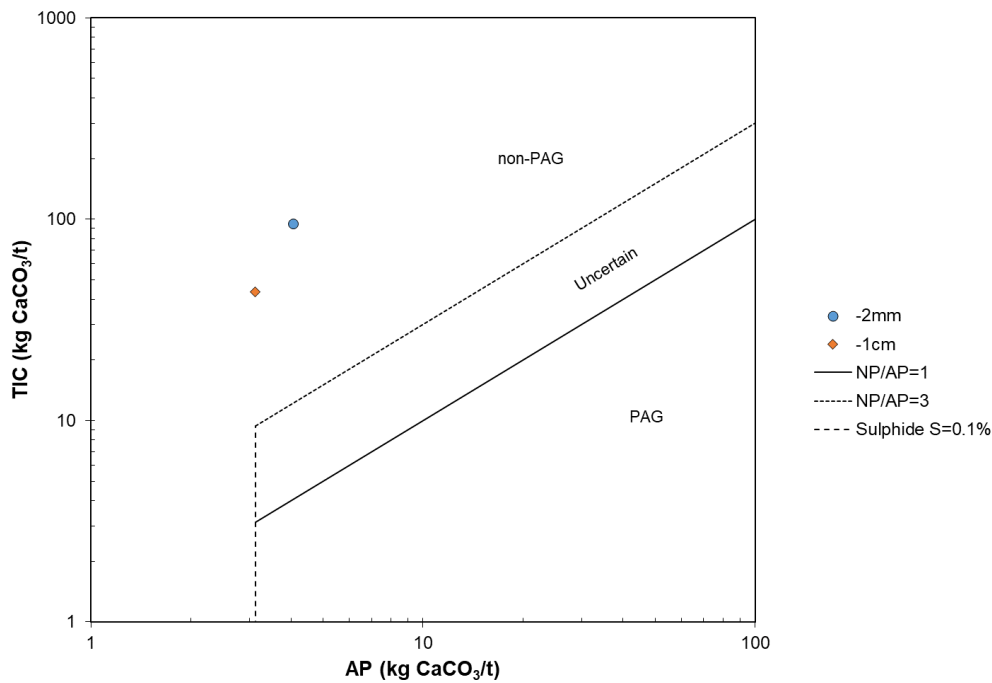
[https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

Figure 2-3: ARD Classifications by NP/AP



[https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

Figure 2-4: ARD Classifications by TIC/AP



[https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

Table 2.1: Summary of ABA Results

Rock Type ¹	Sample ID	Paste pH		Total S		SO ₄		AP		TIC		Modified NP		TIC/AP		NP/AP	
		s.u.		%		%		kg CaCO ₃ /t		kg CaCO ₃ /t		kg CaCO ₃ /t		-		-	
		- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm	- 2mm	+ 1cm
1a	QUARRY2-10152023	8.7	9	0.13	0.1	0.11	0.03	4.1	3.1	95	44	110	52	23	14	27	16

Source: [https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

Notes

¹ 1a = mafic metavolcanic

2.2 Elemental Analysis

The trace element content for the sample set is presented in Table 2.2. All parameters were less than ten times the average crustal abundance for basalt indicating no appreciable enrichment.

Table 2.2: Summary of Elemental Analysis Results

Parameter	Unit	Detection Limit	QUARRY2-11022022		10x Average Crustal Abundance* for Basalt
			-2 mm	-1 cm	
Ag	ppm	0.002	82	67	1100
As	ppm	0.1	0.2	<0.1	20
Ba	ppm	0.5	9.9	1.6	3300
Ca	%	0.01	4.2	2.3	76
Cd	ppm	0.01	0.15	0.03	2.2
Co	ppm	0.1	34	35	480
Cr	ppm	0.5	160	170	1700
Cu	ppm	0.01	120	130	870
Fe	%	0.01	5	5	87
Hg	ppm	0.005	5	<5	90
Mg	%	0.01	1.9	1.8	46
Mn	ppm	1	1000	960	15000
Mo	ppm	0.01	0.68	0.14	15
Ni	ppm	0.1	57	65	1300
P	%	0.001	0.024	0.023	1
Pb	ppm	0.01	0.88	0.28	60
S	%	0.02	0.13	0.09	0.3
Sb	ppm	0.02	0.03	<0.02	2
Sr	ppm	0.5	12	10	4650
U	ppm	0.1	<0.1	<0.1	10
V	ppm	2	100	97	2500
W	ppm	0.1	<0.1	<0.1	7
Zn	ppm	0.1	72	56	1050

Source: [https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

2.3 SFE Tests

A summary of results for key SFE parameters is presented in Table 2.3.

SFE pH was 9.4 and EC was 150 $\mu\text{S}/\text{cm}$. Major cation chemistry for Quarry 2 rock was dominated by sodium (17 mg/L) with lesser calcium (7.4 mg/L), while major anions were dominated by total alkalinity (21 mg/L) with lesser sulphate (13 mg/L). Concentrations of nitrate, nitrite, and ammonia were 0.41, 0.05, and 0.047 mgN/L, respectively. Overall, trace element concentrations were low, with some constituents near or below the analytical detection limit.

Table 2.3: Summary of SFE Results

Sample ID	Unit	Detection Limit	QUARRY2-10152023
			-2mm
pH	pH Units	N/A	9.4
EC	uS/cm	1	150
Total Alkalinity	mg/L	0.5	21
SO ₄	mg/L	0.5	13
Ca	mg/L	0.05	7.4
Mg	mg/L	0.05	1
K	mg/L	0.05	0.84
Na	mg/L	0.05	17
Nitrate	mg/L as N	0.02	0.41
Nitrite	mg/L as N	0.050	0.05
Ammonia	mg/L as N	0.005	0.047
Al	mg/L	0.0005	0.31
Sb	mg/L	0.00002	0.000092
As	mg/L	0.00002	0.000071
Ba	mg/L	0.00002	0.00082
B	mg/L	0.05	0.081
Cs	mg/L	0.00005	<0.000050
Cd	mg/L	0.000005	<0.0000050
Cr	mg/L	0.0001	0.0002
Co	mg/L	0.000005	0.000027
Cu	mg/L	0.00005	0.000098
Fe	mg/L	0.001	0.0048
La	mg/L	0.00005	<0.000050
Pb	mg/L	0.000005	0.000054
Li	mg/L	0.0005	<0.00050
Mn	mg/L	0.00005	0.00077
Hg	mg/L	0.00005	<0.000050
Mo	mg/L	0.00005	0.017
Ni	mg/L	0.00002	0.00002
Se	mg/L	0.00004	0.00035
Sr	mg/L	0.00005	0.0069
S	mg/L	10	<10
Tl	mg/L	0.000002	0.000005
U	mg/L	0.000002	0.000005
V	mg/L	0.0002	0.0015
Zn	mg/L	0.0001	0.00021

Source: [https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023 Annual Reporting/Doris Madrid/020_Tables/\[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx\]](https://srk.sharepoint.com/sites/NACAPR002393/Deliverables/2023%20Annual%20Reporting/Doris%20Madrid/020_Tables/[HopeBay_Quarry_Table_CAPR002393_Rev00_KWJ.xlsx])

3 Summary

The sample results of the geochemical monitoring program indicate that both size fractions of the sample of blasted quarry rock collected from Quarry 2 has a low risk of ML/ARD. This memorandum is an update to Section 7.2.2.2 of SRK (2024) and completes the 2023 regulatory reporting requirements for geochemical monitoring at the Hope Bay Project.

Regards,
SRK Consulting (Canada) Inc.

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Kyle Jang, GIT (BC)
Staff Consultant (Geochemistry)

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EGBC Permit to Practice Reg. No.: EGBC 1003655

Attachments:

Attachment 1	QA/QC Summary
Attachment 2	Complete Laboratory Results

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The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

Attachment 1 QA/QC Summary

QC Test	n	SRK QC Criteria	Results
paste pH			
Pulp Duplicate	(n=1)	For any samples, +/- 0.5 difference pH unit	All passed
Split duplicates	(n=1)	For any samples, +/- 0.5 difference pH unit	All passed
Standard Reference Material	(n=1)	Within specified tolerance ranges.	All passed
Total C and TIC			
Lab Blank	(n=1) for TIC and (n=1) for Total C	<5X detection limit (DL)	All passed
Carbon balance (Total C > TIC)	(n=0)	For samples > 10X the detection limit (DL), Total Carbon should be greater than Total Inorganic Carbon, if not the % difference should be within +/-20%	No Total C reported
Pulp Duplicate	(n=1) for TIC	For samples > 10X the detection limit (DL), % RPD within +/-20%	All passed
Split duplicate	(n=1) for TIC	For samples > 10X the detection limit (DL), % RPD within +/-30%	All passed
Standard Reference Material	(n=1) for TIC	Within specified tolerance ranges.	All passed
Total S & Total Sulphate			
Lab Blank	(n=1) for Total S and (n=0) for Total Sulphate	<5X detection limit (DL)	All passed
Sulphur balance (total S > sulphate S)	(n=2)	For samples > 10X the detection limit (DL), Total Sulphur should be greater than Total Sulphate, if not the % difference should be within +/-20%	All passed
Split Duplicate	(n=1) for Total S and (n=1) for SO ₄	For samples > 10X the detection limit (DL), % RPD within +/-30%	All passed
Pulp Duplicate	(n=1) for SO ₄	For samples > 10X the detection limit (DL), % RPD within +/-20%	All passed
Standard Reference Material	(n=1) for Total S and (n=1) for SO ₄	Within specified tolerance ranges.	All passed
Modified NP and Terminal pH			
Lab Blank	(n=2) for NP	<5X detection limit (DL)	All passed
NP consistent with paste pH	(n=2)	Negative NP has paste pH ≤ 5	All passed
Pulp Duplicate	(n=1) for NP, (n=1) for Terminal pH and (n=1) for Fizz Rating	% RPD better than +/-15% for NP>20 kg/t, % RPD better than +/-20% for NP>10 kg/t, Difference within +/-5kg/t for NP<10 kg/t. Fizz test rating is the same.	All passed
Split duplicates	(n=1) for NP, (n=1) for Terminal pH and (n=1) for Fizz Rating	For samples > 10X the detection limit (DL), % RPD within +/-30%	All passed
Terminal pH	(n=2)	pH is between 1.5 - 2 pH unit (buffer of 0.1 units if higher than pH 2)	All passed
Standard Reference Material	(n=2) for NP	Within specified tolerance ranges.	All passed
Modified NP and TIC			
Comparison between Modified NP and TIC	(n=2)	Check for trends/correlation	NP is higher than TIC.
Total S-Leco and S-ICP			
Comparison between Total S-Leco and S-ICP	(n=2)	For samples >10X detection limit (DL), % RPD within +/-20%	All passed
Aqua Regia Metals			
Lab Blank	(n=1)	<5X detection limit (DL)	All passed
Split Duplicate	(n=1)	For samples >10X detection limit (DL), % RPD within +/-30%, ok 10% of metal scan failing.	All passed
Pulp Duplicate	(n=1)	For samples >10X detection limit (DL), % RPD within +/-20%, ok 10% of metal scan failing.	All passed
Standard Reference Material	(n=2)	<10X DL, Within specified tolerance ranges.	Sample is within internal tolerance ranges. Results are accepted.
MEND Shake Flask Extraction			
Method Blank	(n=1)	<5X Detection Limit; pH should be within 5-6 pH units	All passed
Ion Balance	(n=1)	If EC>100uS/cm, Ion balance should be within +/-10%	No Cl and F reported. Results are accepted.
Split Duplicate	(n=1)	For samples >10X detection limit (DL), % RPD within +/-30%, ok 10% of metal scan failing.	Results were confirmed by lab and accepted as is.
Leachate Duplicate	(n=1) for pH, EC, Total Alkalinity, Bicarbonate, Carbonate, Nitrite-N and Hydroxide	For samples > 10X the detection limit (DL), % RPD within +/-20%	All passed

Attachment 2 Complete Laboratory Results

Sample ID	Sieve Size	Paste pH	Fizz Rating	Total S	HCl Extractable Sulphur	Sulphide Sulphur (by diff.)	AP from S(T)	AP from S(S-2)	CO ₂	CaCO ₃ Equiv.	Mod. ABA Neutralization Potential	TIC/AP_S(T)	NP/AP_S(T)	TIC/AP_S(S-2)	NP/AP_S(S-2)
		pH Units	-	wt%	wt%	wt%	kg CaCO ₃ /t	kg CaCO ₃ /t	wt%	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-	-	-
		-	-	0.02	0.02	Calc.	0.6	#N/A	0.08	1.8	-	-	-	-	-
QUARRY2-WHOLE	-1cm	8.99	MODERATE	0.1	0.03	0.07	3.1	2.2	1.92	43.6	51.5	14.0	16.5	19.9	23.5
QUARRY2-CRUSH	-2mm	8.68	STRONG	0.13	0.11	0.02	4.1	0.6	4.18	95	108	23.4	26.6	152.0	172.8

		ppm	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm		%	ppm	%	ppm
		2	0.01	0.1	0.2	20	0.5	0.02	0.01	0.01	0.1	0.5	0.01	0.01	0.1	5	0.01	0.5	0.01	1
QUARRY2-WHOLE	1a	67	2.57	<0.1	0.2	42	1.6	<0.02	2.32	0.03	34.9	173	134	4.97	4.3	<5	<0.01	0.6	1.84	964
QUARRY2-CRUSH	1a	82	2.56	0.2	1.7	68	9.9	<0.02	4.24	0.15	33.8	160	124	5.02	4.8	5	0.04	1.4	1.86	1030

Sample ID	Rock Type	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
		ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
		0.01	0.001	0.1	0.001	0.01	0.02	0.02	0.1	0.1	0.5	0.02	0.1	0.001	0.02	0.1	2	0.1	0.1
QUARRY2-WHOLE	1a	0.14	0.026	64.7	0.023	0.28	0.09	<0.02	3.8	0.3	10.4	0.03	<0.1	0.299	0.03	<0.1	97	<0.1	55.9
QUARRY2-CRUSH	1a	0.68	0.021	56.8	0.024	0.88	0.13	0.03	4.3	0.5	11.7	0.02	0.2	0.286	0.04	<0.1	104	<0.1	72

Parameter	Units	LOD	1a
pH	pH Units	N/A	9.35
EC	uS/cm	1	147.00
SO4	mg/L	0.5	13.30
Acidity to pH4.5	mg/L	0.5	<0.5
Acidity to pH8.3	mg/L	0.5	<0.5
Total Alkalinity	mg/L	0.5	21.00
Bicarbonate	mg/L	0.5	26.00
Carbonate	mg/L	0.5	<0.5
Hydroxide	mg/L	0.5	<0.5
Total Ammonia	mg/L	0.005	0.05
Nitrate-N	mg/L	0.02	0.41
Nitrite-N	mg/L	0.005	0.05
Hardness CaCO3	mg/L	0.5	22.50
Dissolved Aluminum (Al)	mg/L	0.0005	0.31
Dissolved Antimony (Sb)	mg/L	0.00002	0.00
Dissolved Arsenic (As)	mg/L	0.00002	0.00
Dissolved Barium (Ba)	mg/L	0.00002	0.00
Dissolved Beryllium (Be)	mg/L	0.00001	<0.000010
Dissolved Bismuth (Bi)	mg/L	0.000005	<0.0000050
Dissolved Boron (B)	mg/L	0.05	0.08
Dissolved Cesium (Cs)	mg/L	0.00005	<0.000050
Dissolved Cadmium (Cd)	mg/L	0.000005	<0.0000050
Dissolved Calcium (Ca)	mg/L	0.05	7.35
Dissolved Chromium (Cr)	mg/L	0.0001	0.00
Dissolved Cobalt (Co)	mg/L	0.000005	0.00
Dissolved Copper (Cu)	mg/L	0.00005	0.00
Dissolved Lanthanum (La)	mg/L	0.00005	<0.000050
Dissolved Iron (Fe)	mg/L	0.001	0.00
Dissolved Lead (Pb)	mg/L	0.000005	0.00
Dissolved Lithium (Li)	mg/L	0.0005	<0.00050
Dissolved Magnesium (Mg)	mg/L	0.05	1.01
Dissolved Manganese (Mn)	mg/L	0.00005	0.00
Dissolved Phosphorus (P)	mg/L	0.002	0.01
Dissolved Molybdenum (Mo)	mg/L	0.00005	0.02
Dissolved Nickel (Ni)	mg/L	0.00002	0.00
Dissolved Potassium (K)	mg/L	0.05	0.84
Dissolved Rubidium (Rb)	mg/L	0.00005	0.00
Dissolved Selenium (Se)	mg/L	0.00004	0.00
Dissolved Silicon (Si)	mg/L	0.1	0.82
Dissolved Silver (Ag)	mg/L	0.000005	<0.0000050
Dissolved Sodium (Na)	mg/L	0.05	16.80
Dissolved Strontium (Sr)	mg/L	0.00005	0.01
Dissolved Sulphur (S)	mg/L	10	<10
Dissolved Tellurium (Te)	mg/L	0.00002	<0.000020
Dissolved Thallium (Tl)	mg/L	0.000002	0.00
Dissolved Thorium (Th)	mg/L	0.000005	<0.000050
Dissolved Tin (Sn)	mg/L	0.0002	0.00
Dissolved Titanium (Ti)	mg/L	0.0005	<0.00050
Dissolved Tungsten (W)	mg/L	0.00001	0.00
Dissolved Uranium (U)	mg/L	0.000002	0.00
Dissolved Vanadium (V)	mg/L	0.0002	0.00
Dissolved Zinc (Zn)	mg/L	0.0001	0.00
Dissolved Zirconium (Zr)	mg/L	0.0001	<0.00010
Dissolved Mercury (Hg)	mg/L	0.00005	<0.000050

APPENDIX C: Updated Care and Maintenance Plan



AGNICO EAGLE

HOPE BAY

Care and Maintenance Plan

JULY 2024
VERSION 2A

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DOCUMENT CONTROL

Version	Date	Section	Revision	Author
1	April 2022	All	In compliance with Agnico Eagle's Type A Water Licence 2AM-DOH1335, Part J, Item 5	Agnico Eagle Mines Limited
2	March 2024	Throughout (mainly Section 2)	Revised to reflect updated activities since entering Care and Maintenance	Agnico Eagle Mines Limited - Permitting Department
2a	July 2024	All	Updated date and version number as revisions made to address comments from 2023 Annual Report comments Additions are marked in right-hand margin as follows: 	Agnico Eagle Mines Limited - Permitting Department
		Table 1.5	Removal Doris North December 2016 Wildlife Mitigation and Monitoring Plan as this plan is no longer active. The plan is superseded by current version from January 2023, this date has also been updated in the table (per 2023 AR review KIA-NWB-54)	
		Table 1.5	Correction of current version of the Aquatic Effects Monitoring Plan (per 2023 AR review KIA-NWB-33)	
		Section 2.1	Added references to Water Management Plan (per 2023 AR review KIA-NWB-54)	
		Section 2.7.1	Added clarifications to saline and non-saline sections of the TIA (per 2023 AR review KIA-NIRB-07)	
		Section 2.9	Added progressive reclamation details to be consistent with ICRP (per 2023 AR review KIA-NWB-37)	
		Throughout and Table 1.5, Table 3.1	Update the title of the Incinerator Management Plan to Incinerator and Composter Waste Management Plan (per 2023 AR review KIA-NWB-54)	
		3.2	Corrected frequency of potable water quality at Doris camp (per 2023 AR review KIA-NWB-55)	
		Figure 4.1	Added activity to schedule (per 2023 AR review KIA-NIRB-23)	

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited
CCME	Canadian Council of Ministers of the Environment
CPRT	Crown Pillar Recovery Trench
CWP	Contact Water Pond
CWS	Canada wide Standards
DMCMP	Doris-Madrid Care and Maintenance Plan
IOL	Inuit Owned Land
KitlA	Kitikmeot Inuit Association
MVLWB	Mackenzie Valley Land and Water Board
NIRB	Nunavut Impact Review Board
NTI	Nunavut Tunngavik Incorporated
NWB	Nunavut Water Board
PDA	Project Development Area
(the) Project	Hope Bay Project
TIA	Tailings Impoundment Area
Water Licence	Type A Water Licence 2AM-DOH1335

SECTION 1. INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) operates the Hope Bay Project (the Project) located approximately 20 km by 80 km along the south shore of Melville Sound in Nunavut, Canada. The Project comprises four distinct areas of known mineralization plus extensive exploration potential and targets. The four areas that host the primary gold deposits are Doris, Madrid North, Madrid South, and Boston.

1.1 Purpose and Objectives

The Doris-Madrid Care and Maintenance Plan (DMCMP) details the site activities to continue or to be initiated through the temporary suspension period in accordance with Part J Item 5 of the Type A Water Licence 2AM-DOH1335 (the Water Licence). Management and monitoring activities to be completed at the Doris-Madrid sites during the temporary suspension of production are described in accordance with the terms and conditions in the Nunavut Water Board (NWB) Water Licence and Nunavut Impact Review Board (NIRB) Project Certificate No. 009.

The temporary closure principles and goals at the Doris-Madrid site are similar to the overall closure criteria: ensure the site is safe for humans, animals, and the environment, by ensuring physical and chemical stability; and protecting the future use of the site by, where practicable, maintaining mine infrastructure in a state that is amenable to recommencement of operations. Thus, the objectives of the DMCMP are to provide:

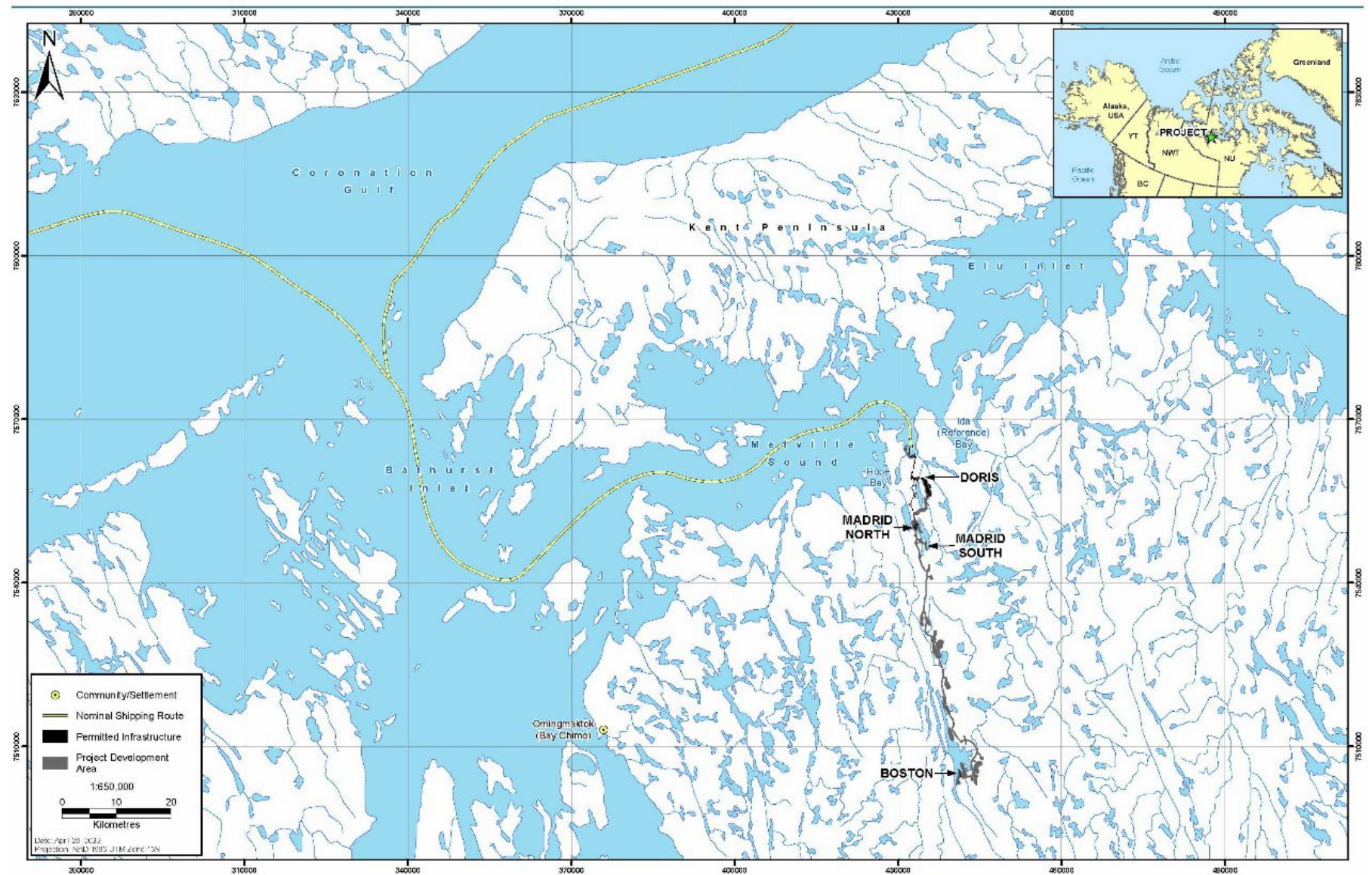
- The key roles and responsibilities of the site personnel for the duration of the temporary closure period;
- Activities to be implemented for the maintenance of mine site facilities for the duration of the temporary closure period; and
- Management and monitoring measures, and procedures to be implemented in accordance with temporary closure goals and regulatory requirements.

1.2 Project Overview

1.2.1 Project Location

The Project is located on Inuit Owned Land (IOL) administered by the Kitikmeot Inuit Association (KitIA) east of Bathurst Inlet, approximately 150 km southwest of Cambridge Bay and 700 km northeast of Yellowknife (Figure 1-1). The nearest settlements are Omingmaktok, located approximately 60 km to the west, and Kingaok (Bathurst Inlet), located 130 km southwest. Both Omingmaktok and Kingaok are historical settlements; past residents have moved to Cambridge Bay or other communities, although the settlements continue to be used seasonally intermittently.

Figure 1-1: Hope Bay Project Location



1.2.2 Project Environment

A summary of the environmental conditions for the Project are provided below and is detailed in TMAC (2017).

The climate at the Project is classified as Arctic, semi-arid. Snow accumulation and freeze-up of lakes begins in mid to late September and remains into mid-June, with areas in the higher elevation persisting through July. Temperatures in January are often below -30°C and the mean annual precipitation is approximately 220 mm. Prevailing winds are strong and steady from the northwest. Due to its location above the Arctic Circle, the site experiences 24-hour sunlight in mid-summer and 24-hour darkness in mid-winter.

Air quality in the Project area and elsewhere in Nunavut is generally of good quality, reflecting the low amount of air pollution from large populations. Outside of the Project area, most air emissions are from the use of diesel generators, heaters, vehicles, snowmobiles, all-terrain vehicles and boats. Noise levels are generally low.

The Project is located on the Canadian Shield. Exposed bedrock outcrops are common, and mostly devoid of vegetation. Surface observations and subsurface investigations of the foundation soils found in the Project area are characterized mostly by marine deposits of silty-clay with trace sand, as well as small pockets of glaciofluvial deposits of coarse sand and some gravel. Eskers are common in the southern part of the project area, but not within the disturbed footprint of the Doris-Madrid sites. Project-wide overburden consists of permafrost soils, which are mainly marine clays, silty clay, and clayey silt, with pockets of moraine till underlying these deposits.

Where rock outcrops, water, and cliffs are absent on the landscape, trees and summer flowers are numerous and dense in the tundra of the Project area. Terrestrial animals in the region include barren-ground caribou (of the Dolphin/Union, and Beverly herds), muskox, grizzly bear, wolverine, and grey wolves, as well as several species of raptor, waterfowl, and upland breeding birds.

Four species of cliff-nesting raptors (peregrine falcon, gyrfalcon, rough-legged hawk, and golden eagle) and three ground-nesting raptor species (snowy owl, short-eared owl, and northern harrier) may live in the area. Waterbird species in the Project area include geese, tundra swan, several species of ducks, gulls, Arctic tern, four species of loons, and sandhill crane.

A total of 14 fish species are found in lakes, ponds, and streams in the Project area. The most common fish species is the Ninespine Stickleback, followed by Lake Trout, Arctic Char, Arctic Grayling, Slimy Sculpin, Lake Whitefish, Cisco, Least Cisco, Burbot, and Broad Whitefish.

1.2.3 Project Infrastructure

The Doris Project (Phase 1) of the Project was approved by NIRB in 2006 (Project Certificate No. 003) and licensed by NWB in 2007 (Type A Water Licence 2AM-DOH0713). The Water Licence was amended in 2010, 2011, and 2012 and received modifications in 2009, 2010, and 2011. Construction of the Doris Project began in early 2010 and in early 2012, the Doris Project was placed into care and maintenance, suspending further Project-related construction and exploration activity along the Hope Bay Greenstone Belt. In 2016, the NIRB approved an amendment to Project Certificate No. 003 and NWB granted Amendment No. 1 to the Water Licence, extending operations from two to six years through mining two additional mineralized zones (Doris Connector and Doris Central zones) to be accessed via the existing Doris portal. The Doris Project began production early in 2017. In 2018 the Madrid-Boston (Phase 2) was approved and focused on the mining of the Madrid North, Madrid South, and Boston deposits by utilizing and expanding upon the Doris project infrastructure. The Madrid-Boston construction activities overlapped with the operation activities at Doris and extended the life of mine of the Project. The Project currently has developed infrastructure at four main sites: Roberts Bay, Doris, Madrid North, and Boston.

Currently the Roberts Bay area includes the seaport infrastructure, which consists of a jetty and large storage and laydown facilities, including two tank farms (one with capacity of 5 million litres and a second with capacity of 20 million litres) and a laydown area for offloaded equipment and materials (Figure 1-2). The Roberts Bay area also includes the Marine Outfall berm and underwater pipeline that facilitates marine discharge from the Doris underground mine and the Tailing Impoundment Area (TIA) at Doris.

The Roberts Bay port facilities are connected by an all-weather road to the Doris area, along which the aerodrome and waste management and incineration facilities are located. At Doris, there is a 345-person camp, administration facilities, power plant, firefighting facilities, water and sewage treatment facilities, contact water ponds (CWP) and water management infrastructure, process plant, maintenance shop, core shack, warehouse, laydown areas, an airstrip and helicopter staging area, a 7.5-million-liter fuel tank farm, and a portal that leads to the underground mine (Figure 1-3).

The Doris area is connected by an all-weather road to Madrid North and Windy Lake potable water intake area, 10 km to the south of Doris Mine. Madrid North infrastructure currently includes mining of the Naartok East Crown Pillar and Madrid North underground decline. Mining support infrastructure includes an overburden stockpile, CWP, waste rock storage pad, laydown area, and access roads (Figure 1-4). Doris camp currently houses employees for the Doris and Madrid operations. The Windy Camp at Windy Lake has been decommissioned with one dome structure remaining, which is planned to be removed the summer of 2024 (Figure 1-5).

The Boston area is 55 km south of Madrid South and is currently accessible by aircraft using a site airstrip or seasonally via a winter track. The Boston site has a 65-person camp, power generation, sewage treatment plant, incinerator, core shack and fuel storage facilities. The camp at Boston is currently unoccupied. The underground portal has been barricaded and sealed with an ice plug to prevent inflow of water and flooding of the mine workings.

Figure 1-2: Roberts Bay Site Layout

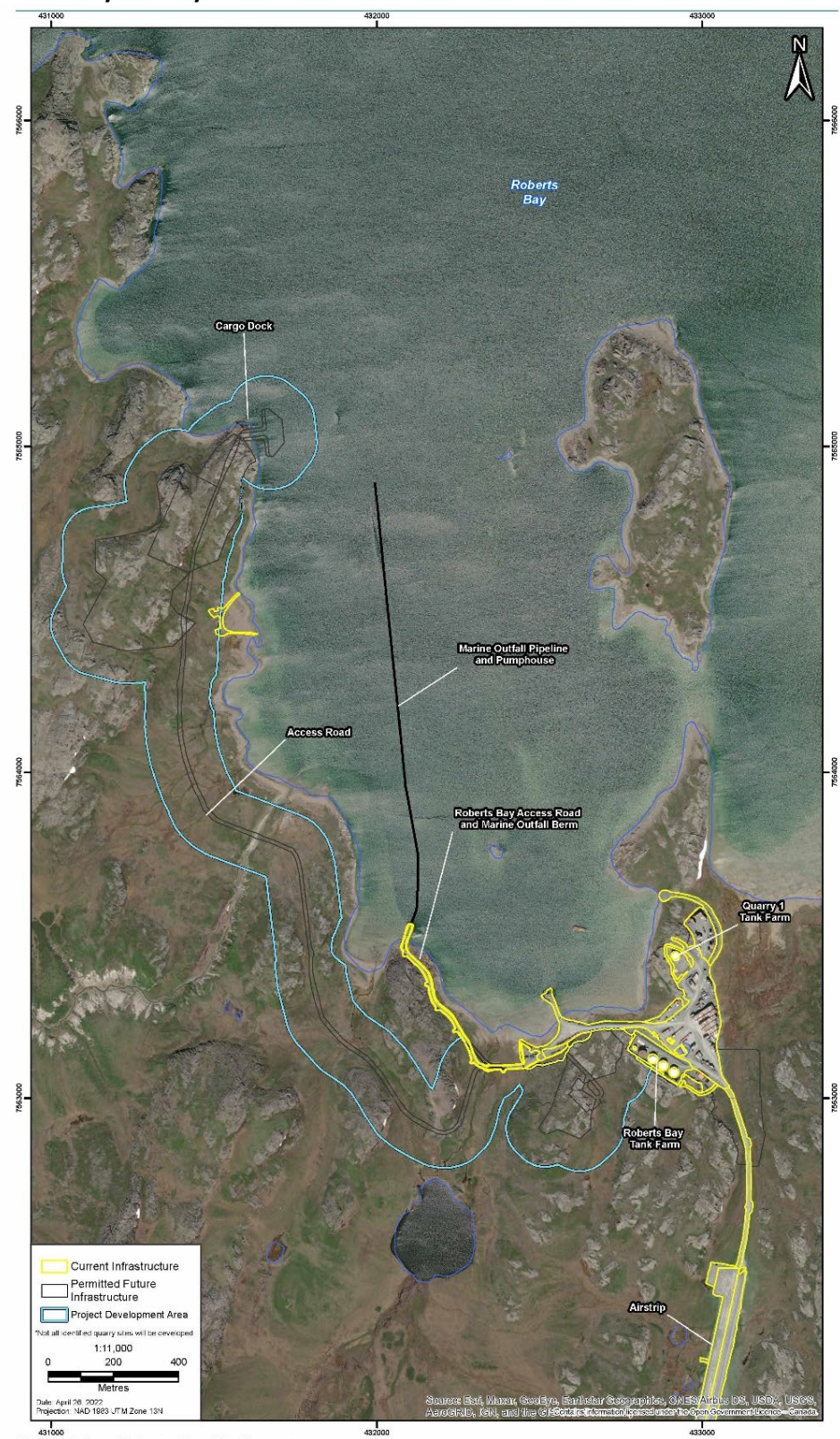


Figure 1-3: Doris Site Layout

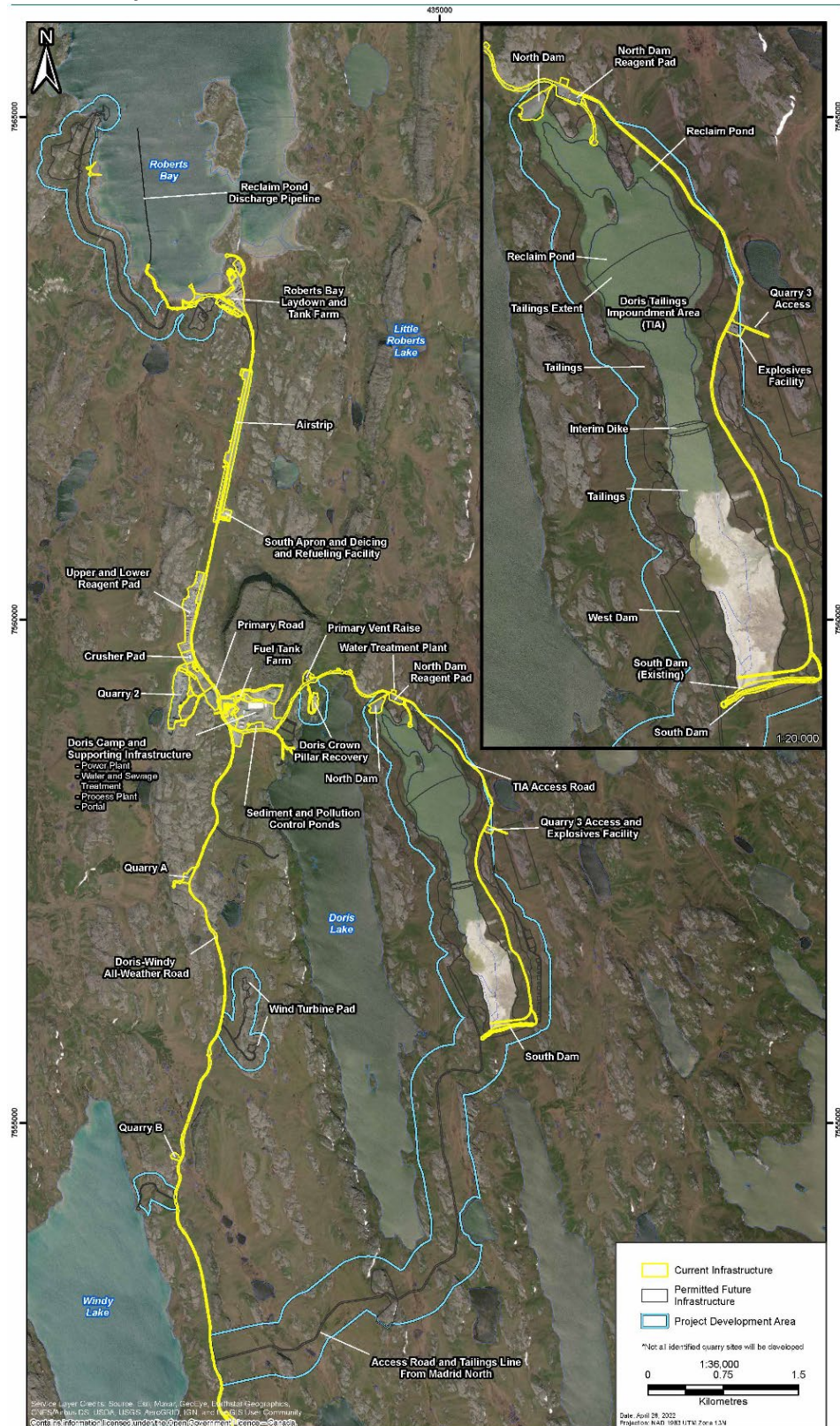


Figure 1-4: Madrid North Site Layout

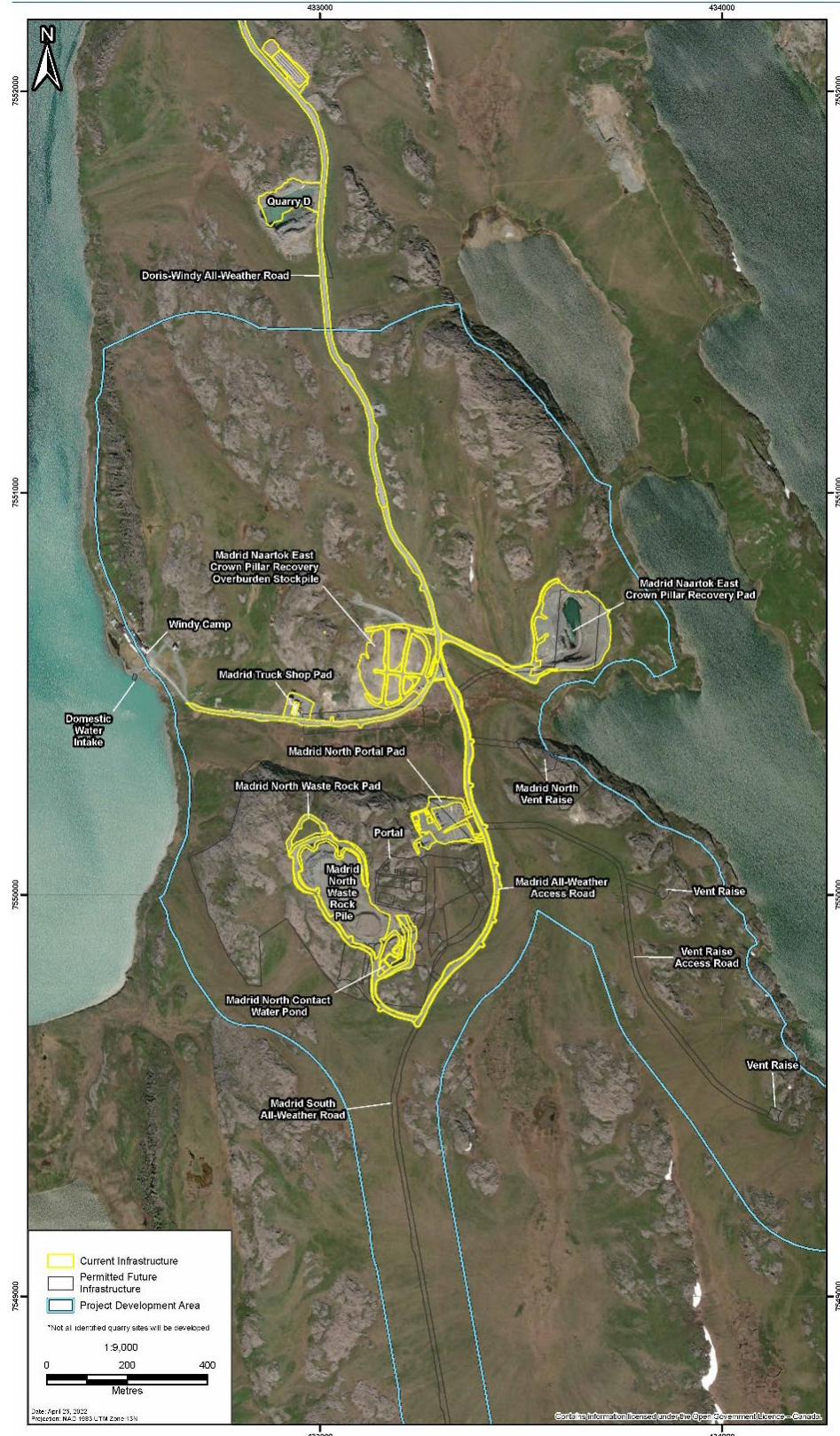


Figure 1-5: Old Windy Camp

Note: Remaining structure at decommissioned Windy Camp.

1.3 Temporary Closure

As defined in the Water Licence, Care and Maintenance is “in respect of a mine, means the status of the facility when the Licensee ceases production or commercial operation temporarily for an undefined period of time”.

Agnico Eagle announced its decision on February 18, 2022 to place the Doris Mill into Care and Maintenance and suspend production on the Project. On March 30, 2022, Agnico Eagle provided the NWB with a formal written notice of Care and Maintenance for the Doris-Madrid operations under Part J, Item 4 of the Water Licence.

Care and Maintenance at Doris and Madrid includes the temporary suspension of ore extraction at Doris and Madrid and milling operation at the Doris Mine. Agnico Eagle intends to continue exploration activities (site activities) as well as management and modification of facilities to remain in regulatory compliance with various permits, licenses, and approvals for the Project.

1.4 Regulatory Context

1.4.1 Legislation

Legislation applicable to mine operations including temporary suspension and planning in Nunavut include:

- Nunavut Agreement (1993);
- *Territorial Lands Act* (1985);
- Territorial Lands Regulations (undated);
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (2002);
- Nunavut Waters Regulations (2013);
- *Fisheries Act* (1985), and applicable regulations;
- *Arctic Waters Pollution Prevention Act* (1985);
- Arctic Waters Pollution Prevention Regulations (undated);
- *Transportation of Dangerous Goods Act* (1992);
- Transportation of Dangerous Goods Regulations (2001);
- *Environmental Protection Act* (1988);
- *Environmental Rights Act* (1988);
- *Mine Health and Safety Act* (1994); and
- Mine Health and Safety Regulations (1995).

1.4.2 Licences, Project Certificates, Approvals, and Permits

The regulatory and legal documents for the Project that are relevant to mine operations including temporary suspension are listed in Table 1-1.

Surface rights for IOL are vested in the KitlIA, which administers the access and management of the IOL for the benefit of the Inuit in the region. This is done through land use permits and lease agreements. Use of water resources and waste disposal in Nunavut is regulated by the NWB, and therefore, the Project operates under the Water Licence for mine development, pursuant to the *Nunavut Waters Act*. The DMCMP, including the associated cost estimate, will require approval under the Water Licence. Notification and submissions applicable to Care and Maintenance under the Water Licence and the Project's exploration Type B Water Licence 2BB-MAE1727 shall be provided to the NWB as indicated in Table 1-2.

The Project Certificate No.009, issued by NIRB for the development of the Madrid-Boston area for the operation of three new mines at Hope Bay: Madrid North, Madrid South, and Boston. Notification and submissions applicable to Care and Maintenance under Project Certificate No.009 shall be provided to the NIRB as indicated in Table 1-3.

Table 1-1: Hope Bay Project Licenses and Approvals Applicable to Doris and Madrid Care and Maintenance

Name	Approval No.	Scope / Purpose	Term / Duration	Expiration Date
Nunavut Impact Review Board (NIRB) Project Certificate	009	Authorization for Madrid-Boston to proceed, provided certain conditions and requirements are incorporated in the various regulatory permits and authorizations issued by the regulatory agencies with permitting authority for the Hope Bay Project. The Project includes the construction of all required surface Infrastructure and operation of three new mines at Hope Bay: Madrid North, Madrid South and Boston.	Life of Doris Project	None
NIRB Project Certificate	003	Authorization for Doris to proceed provided certain conditions and requirements are incorporated in the various regulatory permits and authorizations issued by the regulatory agencies with permitting authority for the Hope Bay Project.	Life of Doris Project	None
Nunavut Water Board (NWB) Type A Water Licence Amendment No.2	2AM-DOH1335	Water Licence for Doris and Madrid project that authorizes the construction, operation and reclamation of the Doris, Madrid and the all- weather road of the Hope Bay Project. Licence scope includes Amendment No.1.	22 years	March 2035
Type B Water Licence for the HBVB including a camp at Windy Lake	2BE-HOP2232	Water Licence that allows for the use of water and disposal of waste associated with regional exploration program including drilling and camp operations.	10 years	June 2032
Type B Water Licence for bulk sample exploration at Boston	2BB-BOS1727	Water Licence that allows for the use of water and the disposal of waste for the Boston Advanced Exploration Project. Licence was renewed in July 2017, was formerly 2BB-BOS1217.	10 years	July 2027
Type B Water Licence for Madrid Advanced Exploration Amendment No.2	2BB-MAE1727	Water licence that allows for the use of water and the disposal of waste for an undertaking classified as Mining and Milling as per Schedule II of the Regulations for the Madrid Advanced Exploration Project (Amended in 2018).	10 years	May 2027
Framework Agreement	-	Framework Agreement provides comprehensive land tenure governing the issuance of surface exploration licenses, advanced exploration leases, commercial leases, and compensation associated with tenure. Framework Agreement includes a beltwide Land Use Licence, an Inuit Impact and Benefits Agreement (IIBA) and a Water and Wildlife Agreement. Framework Agreement was signed in March 2015 for beltwide land tenure.	20 years	March 2035
Water and Wildlife Agreement	-	Included as a Schedule to the Framework Agreement, this Agreement details compensation to be provided to the Kitikmeot Inuit Association (KitIA) and Inuit beneficiaries for negative effects that may occur to wildlife harvesting and water as a result of mining related activities across the Belt.	20 years	March 2035

Name	Approval No.	Scope / Purpose	Term / Duration	Expiration Date
Amended and Restated Inuit Owned Lands Commercial Lease	KTCL 313D001	Commercial Lease for use of designated lands associated with the Hope Bay Volcanic Belt (HBVB) area. Currently, lands have been designated that encompass Doris. Expansion to include other areas of the HBVB is administrative in nature. Original Commercial Lease was amended and restated in March 2015 as a means to obtain surety of belt-wide land tenure.	20 years	March 2035
Inuit Impact and Benefits Agreement	-	Included as a Schedule to the Framework Agreement, this Agreement details the benefits to be provided to the KitlA and Inuit beneficiaries from the Hope Bay Project, including compensation, employment and contracting opportunities. The IIBA originally signed in association with Doris was revised in March 2015 and expanded in scope to encompass belt-wide activities.	20 years	March 2035
DFO authorization	NU-02-0117.2	Construction of the jetty in Roberts Bay.	N/A	-
DFO authorization	NU-1000-0028	Changes to the Doris jetty.	N/A	-
DFO authorization	NU-02-01117.3	Construction of the Doris TIA north dam.	Life of Mine	None
Navigable Waters Permit	8200-02-6565	Installation of the jetty in Roberts Bay	N/A	N/A
Navigable Waters Permit	2018-600028	Approval for Jetty in Roberts Bay	N/A	N/A
Navigable Waters Permit	2018-600006	Approval for Marine Outfall Berm	N/A	N/A
Jetty Lease	77A3-1-7	Foreshore lease from the Crown for construction and operation of the Roberts Bay Jetty.	30 years	June 2047
Marine Outfall Berm	77A/3-3-2	Lease from Crown for construction and operation of Roberts Bay Marine Outfall Berm.	30 years	July 2048
Amendment to Schedule 2 of the Metal and Diamond Mining Effluent Regulations (MDMER)	Registration SOR/2008-216	Designation of Tail Lake as a tailings impoundment.	Life of Mine	None
Inuit Owned Lands Mineral Production Lease	BB60-0002-PL	Hope Bay's Production Lease – Doris	10 years	July 2025
Inuit Owned Lands Mineral Production Lease (Amended and Restated)	BB60-0002-PL DORIS	Hope Bay's Mineral Production Lease	10 years	July 2025
Inuit Owned Lands Mineral Exploration Agreement	HopeBay-001 (Hope Bay)	Mineral exploration agreement with NTI	1 year for maximum of 20 years	December 2035

Table 1-2: Water Licence Requirements for Care and Maintenance

Condition	Timeframe	Requirement	Status
Part J Item 4 (Type A Water Licence 2AM-DOH1335)	At least sixty (60) days prior to, or as soon as practically possible.	Notify in writing Agnico Eagle's intention to enter into a Care and Maintenance Phase.	Completed March 30, 2022
Part J Item 5 (Type A Water Licence 2AM-DOH1335)	Within thirty (30) days of Agnico Eagle providing notice of intent to enter into Care and Maintenance.	Submit a Care and Maintenance Plan that details Agnico Eagle's plans for maintaining compliance with the Terms and Conditions of applicable water licenses.	Completed with April 2022 Plan submission
Part J Item 6 (Type A Water Licence 2AM-DOH1335)	Within twelve (12) months of Agnico Eagle providing notice of intent to enter into Care and Maintenance.	Should the Project remain, or be in Care and Maintenance, submit the NWB an updated estimate of total mine closure restoration liability, and continue to do so every three (3) years thereafter.	Ongoing. Security was updated and agreement was reached in November 2023, NWB was notified. A Security Technical Meeting with the NWB tentatively scheduled for April 2024
Part H Item 6 (Type A Water Licence 2AM-DOH1335)	Within ninety (90) days of providing notice of intent to enter into Care and Maintenance.	Agnico Eagle will submit to the NWB for approval in writing, an addendum to the Emergency Response Plans and Spill Contingency Plan, detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.	Completed June 2022
Part C Item 4 (Type B Water Licence 2BB-MAE1727)	Within six (6) months of entering into Care and Maintenance.	Upon the Project entering into or being in Care and Maintenance, the Licensee shall submit to the Board for approval in writing, an updated estimate of total mine closure restoration liability, as above, and every three (3) years thereafter.	To be completed following pending Security Technical Meeting with the NWB tentatively scheduled for April 2024

Table 1-3: Project Certificate Requirements – Care and Maintenance

Condition	Timeframe	Requirement	Status
Term and Condition No. 35	Within six (6) months of Agnico Eagle providing notice of intent to enter into Care and Maintenance.	In collaboration with the Hope Bay Socio-Economic Working Group submit an updated Hope Bay Socio-Economic Monitoring Plan to the Kitikmeot Socio-Economic Monitoring Committee that will also include detail regarding specific measures that may mitigate the potential for negative effects as a result of the Project's temporary or permanent closure.	To be completed
Term and Condition No. 36	Within six (6) months of Agnico Eagle providing notice of intent to enter into Care and Maintenance.	Agnico Eagle shall, submit an updated Human Resources Plan and Wellness Strategy for the Project that includes a Workforce Transition Strategy designed to mitigate the potential negative effects of Project closure on the affected communities of Nunavut.	To be completed

1.5 Roles and Responsibilities

Temporary Care and Maintenance activities will be managed by Agnico Eagles core team of site personnel identified in Table 1-4.

Table 1-4: Care and Maintenance Roles and Responsibilities

Role	Responsibility
Mine General Manager	<ul style="list-style-type: none"> Overall responsibility for implementation of the Doris-Madrid Care and Maintenance Plan (DMCMP) Provide the on-site resources to complete site activities, Care and Maintenance activities, and management and monitoring of mine waste and infrastructure
Geotechnical Engineer (Alternate: Mine Engineer)	<ul style="list-style-type: none"> Conduct regular inspections of the pads, stockpiles, and containment ponds to determine compliance with the plans, regarding, slopes, volumes, safety berms, snow removal etc. Facilitate Geotechnical Inspection, when required
Maintenance Manager (or designate)	<ul style="list-style-type: none"> Conduct regular inspections of the water management facilities and audits of the maintenance records Responsible for tracking water movements between the various water management facilities, including from the pollution control ponds and sumps to the TIA Maintain records of the source, disposition and volume of water transported/discharged
Environmental Superintendent	<ul style="list-style-type: none"> Responsible for updating the DMCMP Provide the necessary resources for completing environmental sampling programs Coordinate compliance reports
Environment Coordinator	<ul style="list-style-type: none"> Ensure sampling programs are completed as needed Keep records of onsite analysis, observations, photographs, and laboratory analysis Conduct or facilitate sampling program as required Conduct monthly and annual regulatory reporting as required
Mine Geologist	<ul style="list-style-type: none"> Conduct inspections on the underground to confirm geology Instruct the mucking crew regarding waste rock placement on surface
Underground Supervisor	<ul style="list-style-type: none"> Ensure waste rock is placed in the designated location defined in the management plan
Construction Supervisor	<ul style="list-style-type: none"> Ensure use of waste rock confirmed as non-PAG material for construction Provide quantities of waste rock used for construction Oversee and inspect construction projects at Doris and Madrid
Mill Lab and Metallurgy Superintendent	<ul style="list-style-type: none"> Implement temporary closure measures at Doris mill
Site Services Supervisor	<ul style="list-style-type: none"> Coordinate with Underground Supervisor for removal of waste rock and temporary placement of ore at surface Ensure placement of waste rock and removal of ore in the intended and designated location for the Madrid area Ensures snow removal at the Madrid Waste Rock Management area

1.6 Site Access

During the temporary suspension of operations, the site will continue to be accessed year-round by air for transport of goods and personnel. The all-weather airstrip at the aerodrome, located between Roberts Bay and the Doris Site, is capable of landing aircraft up to a Hercules C-130. The runway can also accommodate Bombardier Q400 aircraft.

For the duration of the Care and Maintenance period, the primary access route to the site for bulk commodities such as fuel, mechanical and mobile equipment, and sundry supplies will continue to be via a marine link through the Arctic Ocean during the open water season from approximately late July through mid-October when open water allows for passage.

1.7 Management Plans

During Care and Maintenance, environmental management plans will continue to be implemented or modified as required, to address conditions of Care and Maintenance (Table 1-5).

Table 1-5: Hope Bay Project Management Plans

Management Plan	Current Revision Date	Temporary Closure Updates or Commitment(s)
Hope Bay Project Emergency Response Plan	March 2024	Update as required in accordance with Part H item 6 of the Water Licence.
Hope Bay Project Spill Contingency Plan	March 2024	Update as required in accordance with Part H item 6 of the Water Licence.
Hope Bay Project Hazardous Waste Management Plan	March 2020	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Incinerator and Composter Waste Management Plan	March 2023	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Aircraft De-icing Management Plan	March 2019	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Quality Assurance Quality Control Plan	March 2024	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Doris-Madrid Water Management Plan	March 2024	Update to water management at Madrid associated with the portal development and potential updates to water management associated with TIA modifications.
Hope Bay Project Boston Water Management Plan	December 2017	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Water and Ore/Waste Rock Management Plan for Boston Site	January 2017	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Waste Rock, Ore and Mine Backfill Management Plan	March 2024	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Hydrocarbon Contaminated Material Management Plan	December 2017	No updates based on proposed Care and Maintenance activities.
Air Quality Management Plan, Hope Bay Project	April 2019	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Domestic Wastewater Treatment Management Plan	March 2022	No updates based on proposed Care and Maintenance activities.
Boston Sewage Treatment Operations and Maintenance Management Plan	September 2017	No updates at Boston site.
Wildlife Mitigation and Monitoring Plan	January 2023	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Aquatic Effects Monitoring Plan	April 2018	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Ground Water Management Plan	March 2022	No updates based on proposed Care and Maintenance activities.
Hope Bay Project, Phase2 Doris Tailings Impoundment Area – Operations, Maintenance, and Surveillance Manual	March 2024	Updates based on proposed changes to Tailings Impoundment Area.
Tailings Area Dust Control Strategy for Doris TIA	December 2016	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Boston Tailings Management Area -Operations, Maintenance, and Surveillance Manual	December 2017	No updates based on proposed Care and Maintenance activities.

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Management Plan	Current Revision Date	Temporary Closure Updates or Commitment(s)
Hope Bay Project Human Resources Plan	To be completed	Update within 6 months following notice of an unanticipated temporary closure.
Oil Pollution Prevention Plan and Oil Pollution Emergency Plan	March 2024	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Heritage Resource Protection Plan	December 2017	No updates based on proposed Care and Maintenance activities.
Health and Safety Management Plan	December 2017	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Non-hazardous Waste Management Plan	December 2017	No updates based on proposed Care and Maintenance activities.
Hope Bay Project Community Involvement Plan	December 2016	No updates based on proposed Care and Maintenance activities. Updated Human Resources Plan and Wellness Strategy for the Project that includes a Workforce Transition Strategy designed to mitigate the potential negative effects of Project closure on the affected communities of Nunavut.
Hope Bay Project Explosives Management Plan	December 2017	Update to the plan associated with Care and Maintenance activities.
Hope Bay Project Quarry Management Plan	March 2022	No updates based on proposed Care and Maintenance activities.

SECTION 2. CARE AND MAINTENANCE ACTIVITIES

This section summarizes the main Care and Maintenance activities that Agnico Eagle will implement at the Doris-Madrid site.

2.1 Underground Mine Workings

All work at the approved Madrid North portal was stopped in 2021 due to the challenging ground conditions at this location. The Madrid North portal was barricaded and water diversion berms and a water collection sump have been installed to limit water from entering the underground workings (Agnico Eagle 2022d).

In 2022, construction for infrastructure associated with the development at Naartok commenced and will continue in 2024. These infrastructures include the Naartok Pad, Non-Contact Water Culvert, Diversion Berm, and Fuel Storage. The Naartok Pad will be the site for the future office trailers and maintenance shop, generator sets, laydown and parking areas, fuel tank farm and cold storage shed and other containers and are presented in Figure 2-1. The infrastructure will support the development of the Madrid East underground workings via the existing approved crown pillar for Madrid.

This notice of construction and design report was submitted to the NWB on September 8, 2022 and is available at: <ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH1335%20AEM/3%20TECH/D%20CONST%20&%20OPER/D1%20Naartok%20Portal%20Notice%20of%20Construction/>

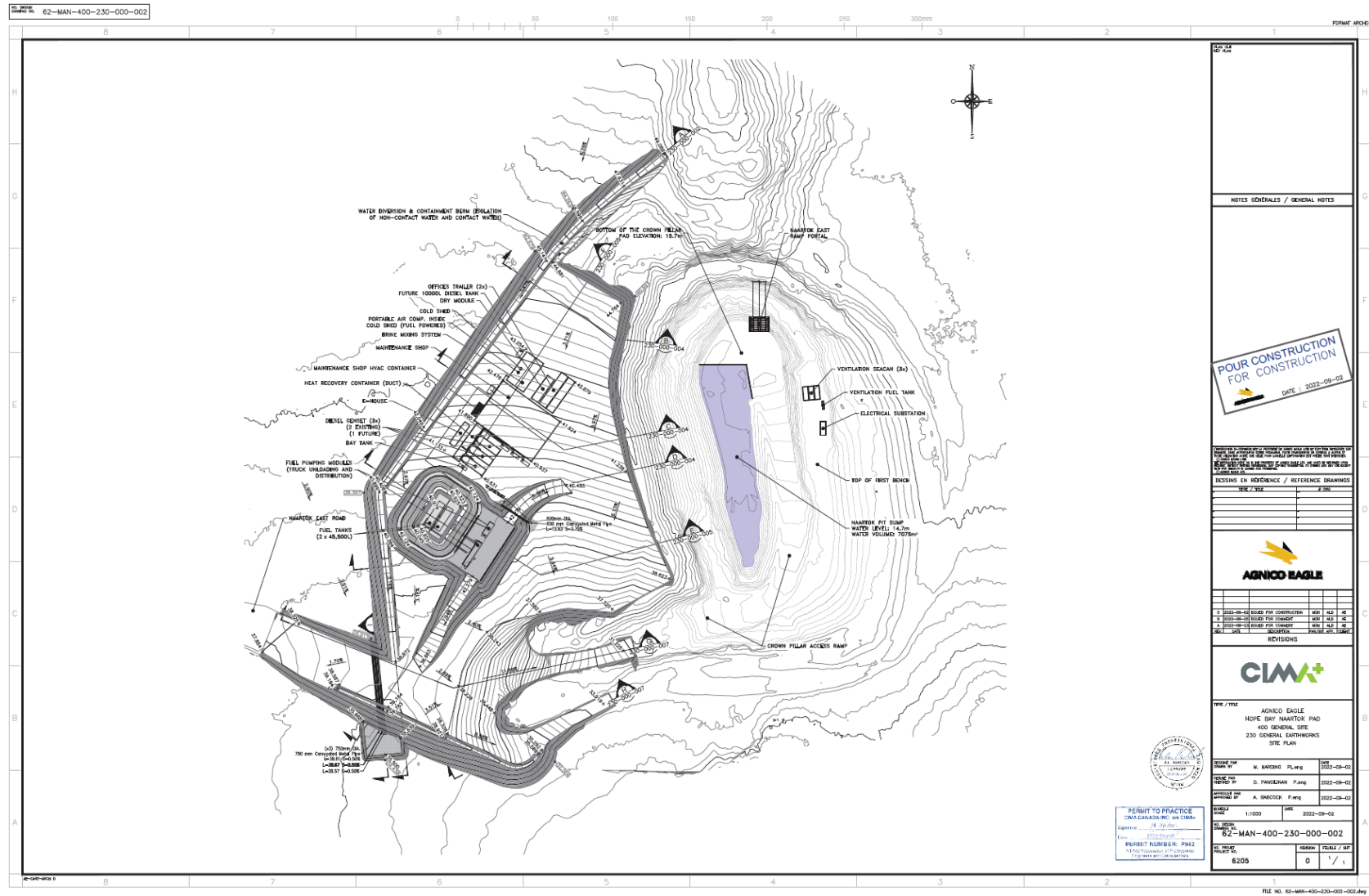
All work completed at Madrid Naartok East will be completed within the approved PDA. Material required to build laydown areas/pads for the maintenance of access roads will be geochemically suitable and obtained from permitted quarries as well as crushed materials from the previous pads built at the Madrid North Portal location.

Water management activities at the relocated portal location at Madrid Naartok East Crown Pillar location will include the following:

- Non-contact water will be diverted from the pit area with a berm and conveyed south to Patch Lake through existing culverts. Approved mitigation measures will be implemented to limit erosion.
- Surface contact water for the pad area will be directed to a sump at the bottom of the pit. Water will eventually be conveyed by truck or via the approved waterline to the TIA at Doris.
- Surface contact water from the portal area will be collected into a CWP. Water is discharged to the tundra if water quality is lower than permit limits or conveyed by truck or via the approved waterline to the TIA at Doris, when water quality does not meet permit limits.

Management of mine water is described in both the Doris-Madrid Water Management Plan (Section 3.2.6 and Section 4.1.3) and Groundwater Management Plan (Section 2.2.1 and Section 5).

Figure 2-1: Naartok Pad General Layout



2.2 Waste Rock Stockpiles, Ore Stockpiles, and Overburden Piles

The *Waste Rock, Ore, and Mine Backfill Management Plan* (Agnico Eagle 2024a) details the geochemical monitoring of waste rock, tracking of volumes and storage locations of waste rock and ore to be continued through Care and Maintenance.

Waste Rock Stockpile

Waste rock stockpiles are designed with slopes of 2H:1V and constructed in lifts to provide a high degree of geotechnical stability (Agnico Eagle 2024a). Waste rock has been stored in stockpiles at Doris within the footprint of the Temporary Waste Rock Pads (Pads I and T). Pad I was previously used as a waste rock stockpile which is now used as an ore stockpile at Doris. Pad T was constructed in 2015 and is currently the main Temporary Waste Rock pad at Doris. All Pads are located within the Pollution Containment System, which drains to a Pollution Control Pond (PCP) at the southern edge of the pad complex and collection sumps located at the south east corner of the pad areas. Water collected at the PCPs and collections sumps is discharged to the TIA at Doris.

During Care and Maintenance, underground exploration activities will continue at Doris and stope development will be postponed as no rock fill will be required. A new surface waste rock stockpile within the approved project footprint at Doris, which will not impact any Nunavut waters, is required for temporary storage of rock fill associated with underground activities at Doris.

All seepage and runoff from the waste rock stockpile pad will be directed to a downstream lined PCP and be managed in accordance with the *Groundwater Management Plan* (Agnico Eagle 2022a).

At the Madrid North Waste Rock Pad, leveling and compaction of the waste rock stockpile (generated from Naartok Trench and Madrid underground mining) has been completed. The CWP, perimeter berm, runoff collection ditch and seepage collection sumps were constructed, and water collected in the sumps will be pumped to the CWP water and will be trucked or conveyed via the waterline to the TIA at Doris. A new downstream collection sump as outlined in the March 24, 2022 written notification to the NWB "Water License 2AM-DOH1335 – Conditions Applying to Construction and Operation – Development of Sump (Sump 1) at Madrid North Contact Water Pond" was constructed in 2023 to capture the bypass from the CWP. Additional details on the sump management is provided in the *Doris-Madrid Water Management Plan* (Agnico Eagle 2024b).

Ore Stockpiles and Overburden

At Doris, ore is temporarily stockpiled on surface on Pad I and on west side of Pad T prior to being processed in the mill to extract the gold. During Care and Maintenance, ore from exploration at Doris will be stockpiled at surface at the approved ore stockpile location on the west side of Pad T. Development of Pad U may initiate in 2024 to function as a general laydown area. The ore hauled from the underground mining activities at the relocated Madrid Naartok East Crown Pillar portal will be temporarily stored on the existing ore transit stockpile on the adjacent industrial pad until being transferred to the ore stockpile

at Doris. The CWP at Madrid North will capture contact water from the Madrid North ore stockpile and will be dewatered to the TIA at Doris.

2.3 Tailings Impoundment Area

The *Doris-Madrid Tailings Management Area Operations, Maintenance, and Surveillance Manual* (Agnico Eagle 2024c) details the management and monitoring of tailings and wastes deposited in the Doris TIA.

The TIA at Doris is located approximately 1.5 km east of Doris mine within the basin of the former Tail Lake. The TIA is in use and listed on Schedule 2 of the Metal and Diamond Mining Effluent Regulations (MDMER). The North Dam was constructed in 2012 to contain reclaim water in the TIA. No tailings have been placed against the North Dam. The South Dam was constructed in 2018 to contain tailings solids. A raise to the South Dam and the construction of the West Dam will be required when operations resume to attain the permitted capacity of 18 Million tonnes.

During Care and Maintenance there will be no active deposition of tailings in the Doris TIA thus activities will be limited to water management for discharge to the receiving environment. Water management will require a new spillway and internal berm(s) at the TIA to address an alternative water management strategy for mine water and for the TIA water to remain in regulatory compliance for discharge to the receiving environment.

Work was initiated in 2022 to build a new effluent water treatment plant (EWTP) at the TIA to address the exceedance of authorized discharge criteria prior to discharge. In 2023, an interim dike was constructed, allowing the segregation of saline and non-saline water. Saline water (mine water) is stored between the interim dike and the South Dam of the TIA; non-saline (contact water) is stored between the interim dike and North Dam. Dewatering of the TIA will continue during Care and Maintenance to maintain the lowest possible levels.

The annual geotechnical inspection will be conducted during the summer months by a Geotechnical Engineer of Record. Any deficiencies noted in the annual Geotechnical Inspection Report will be addressed by Agnico Eagle and documented in the annual reports to the NWB and NIRB.

2.4 Buildings and Equipment

The following building security and maintenance activities will be implemented during Care and Maintenance:

- Secure and restrict access to unused buildings and structures;
- Lockout and secure mechanical, hydraulic and electrical systems and equipment that are not required to operate during the temporary closure period;
- Park mobile equipment in a no-load condition; and
- Guard or block all underground openings that are not being used and place warning signs around the site;

- Development of quarries for future construction use.

2.5 Waste Management

The way in which hazardous, non-hazardous, incinerator waste and hydrocarbon contaminated material is managed on site is not expected to change during Care and Maintenance although the volumes of waste are expected to be substantially less.

Management of non-hazardous waste includes recycling, treatment, and disposal of waste streams based on their specific characteristics. Non-hazardous waste management during Care and Maintenance will be in accordance with *Non-hazardous Waste Management Plan*.

Management of Hazardous waste will be in accordance with the *Hazardous Waste Management Plan*. Agnico Eagle will collect and inventory hazardous waste (processing chemicals, reagents, and petroleum products) and properly store or remove from site. Hazardous waste collection, segregation, handling, storage, transport and disposal procedures will be carried out to minimize the risk to site workforce and the environment.

Management of incinerator waste will be in accordance with the *Incinerator and Composter Waste Management Plan* (Agnico Eagle 2023). Domestic waste streams will be segregated to operate the domestic waste incinerators in a safe, efficient, and environmentally compliant manner. The Water Licence requires Agnico Eagle to demonstrate that the incinerators are in compliance with the Canadian Council of Ministers of the Environment (CCME) Canada-wide Standards (CWS) for air emissions of dioxin, furan, and mercury. The testing will be conducted when the thresholds for monitoring are met and in accordance with the *Air Quality Management Plan*. Stack test on incinerators will be conducted after a significant change to site activities with the potential to change the waste stream or every three years, whatever is more frequent.

As a measure to reduce fuel consumption, Agnico Eagle submitted an application to add in-vessel composting of organic waste generated at Hope Bay as an alternative to incineration to reduce fuel consumption and overall greenhouse gas emissions. This was approved by the NWB in July 2023 and will be commissioned in 2024.

Management of hydrocarbon contaminated materials, including snow and soil, generated at the site and associated facilities will be in accordance with the *Hydrocarbon Contaminated Material Management Plan*. Hydrocarbon contaminated water, snow and soils can be treated on site, or can be permanently stored underground in closed areas of the mine voids. Management of hydrocarbon contaminated soils will include relocation to the Doris landfarm located approximately 0.6 km north of the existing Doris Camp where it will be treated or temporarily stored or relocated to an underground mine for permanent storage.

2.6 Mine Infrastructure

2.6.1 Roads and Airstrip

Roads will continue to be used during the Care and Maintenance as site activities continue at Doris and Madrid. Ongoing maintenance of access roads (including repairing culverts and employing sediment and erosion control measures) will be completed along with physical inspections in accordance with the Water Licence conditions. Appropriate dust management will be implemented with approved dust management protocols for the Project. Site Services heavy equipment operators will be on site maintaining roads and laydowns to ensure access to all critical areas for purposes of inspection, emergency egress, or equipment repair for the duration of Care and Maintenance.

The Doris aerodrome will continue to operate and be maintained. Tower operators will continue to provide weather reports to any scheduled inbound flights. Dust suppression is managed through the use of water as authorized under the Water Licence as required. An extension to the existing airstrip at Doris may also be completed during the temporary suspension period. The airstrip extension will be within the approved PDA.

The site services will continue to perform routine inspections of the lights, communication systems, and grading of the airstrip to ensure uninterrupted airplane access to Hope Bay to support emergency requirements.

2.6.2 Doris Mill

Shutdown procedures for the mill have been underway since the announcement to place the Doris Mill into Care and Maintenance. The mechanical decommissioning of the crusher and main conveyor belts has occurred and was completed such that periodic cycling is not required to prevent seizing of bearings, conveyor rollers and belting. The bulk of the material has been removed from the reclaim apron feeders, however a small amount of material remains to maintain the draft barrier. The Primary Jaw crusher plates were lifted, and cribbing was placed to reduce the loading on the shaft.

The reclaim shed has been cleaned and open holes above the two apron feeders will be covered and barricaded to prevent unauthorized personnel from accessing. The reclaim shed will be barricaded to prevent wildlife or unauthorized people from entering. A minimal bed of ore remains as required to maintain the draft barrier.

Ball mills have been emptied and lifted into saddles or cribbed to prevent bearing damage while inactive. The gravity concentrator units have been emptied. All grinding media has been bagged and hauled underground with the detoxified tailings. The flotation cells and pump boxes have been flushed and drained, with water reporting to the TIA at Doris.

Newly installed leach tanks were never wet commissioned and are still in new condition. All other leach and resin circuits have been drained and flushed, and the resin has been removed.

Detoxification

The detoxification circuit has been cleaned and all detox contact material has been hauled underground. All materials have been disposed of in accordance with best practices for cyanide management and within the discharge limits. The solutions, meeting discharge quality, were deposited into the TIA at Doris.

Reagents

All reagent tanks have been drained and flushed. The flotation reagent mix and day tanks were cleaned after the shutdown of the flotation circuits. The cyanide mix tank has been cleaned and flushed. Solid reagents used for mixing have been placed back into their respective shipping containers and the containers sealed by warehouse and mill personnel.

Refinery

The refinery has been shut down and the cells have been rinsed drained. All unused equipment has been removed and equipment decommissioned per manufacturer recommendations. The fuel line to the furnace was disconnected by a qualified plumber/gasfitter and the vacuum pump has been drained.

Potable and emergency shower water tanks have been drained and sent to the tailings berm. The bulk of this was pumped through the tails line before the tailings system was shutdown. After the tailings and reclaim pumping systems were shut down, all water that back flowed to the tailings berm was removed using the vacuum truck and transported to TIA for disposal. The tailings and reclaim pipelines were cleared using a portable compressor, while monitoring the pressure to confirm completion. Further line pigging will occur in the future.

2.6.3 Camp Infrastructure

Camp staffing levels during Care and Maintenance will be reduced and unused camp facilities will be secured and isolated to restrict access. Camp management staffing levels during Care and Maintenance will align with that required to provide sufficient service to on-site personnel.

Weekly inspections will continue to be performed on life safety systems (including power generation), water treatment, sewage treatment, and electrical equipment and systems.

2.6.4 Power Generation

The powerhouse will continue 24/7 operation to produce sufficient electricity to support Care and Maintenance activities and critical services to maintain the Project. Generators will provide minimal spinning reserve to accommodate routine starting and stopping of equipment. Generators will be cycled and maintained per operating manual guidelines. In the event of a major generator failure, the unit will be shut down, isolated and one of the remaining spares will be brought online to support the required electrical demand.

2.6.5 Fuel Storage and Distribution

Diesel fuel will continue to be transported from the Roberts Bay bulk fuel storage facility as required with the consumption expected to drop significantly. Site services personnel will be responsible for transferring the fuel. Fuel tracking and reporting by the site services lead will be consistent with operations. Construction of the Roberts Bay fuel distribution line between the jetty and Roberts Bay fuel tanks is planned for 2024.

Determination of fuel needs during Care and Maintenance will be made in sufficient time to allow for delivery of additional fuel by sealift or other means as required to execute the DMCMP and any subsequently defined steps.

2.7 Water Management Systems

2.7.1 Pipelines, Ponds, and Collection Sumps

The water management system at Doris-Madrid consists of pipelines, ponds, and collection sumps. Water Management to be completed during Care and Maintenance is detailed in the *Doris-Madrid Water Management Plan* (Agnico Eagle 2024b).

Tailings and reclaim water pipelines have been constructed between the TIA and the Doris Process Plant. The Doris Mine will continue to be dewatered during Care and Maintenance to preserve underground infrastructure. Mining operations will be responsible for the dewatering of the mine and will have check sheets to monitor the conditions of the sumps and engineering will track the water levels. This will continue throughout the period of the temporary suspension and will be aligned with the *Doris-Madrid Tailings Management Area Operations, Maintenance, and Surveillance Manual* (Agnico Eagle 2024c).

The Roberts Bay discharge system (RBDS) was designed to convey the combined or alternate between groundwater inflow from the underground mine (mine/saline water) and excess reclaim water from the TIA Reclaim Pond to the undersea diffuser located at approximately the 20 m bathymetric contour line in Roberts Bay. In 2024, the discharge of water through the RBDS will continue. In addition, as an outcome of the diffuser detaching Agnico Eagle will add concrete blocks along the discharge pipe and re-attachment of the diffuser during the summer of 2024.

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The RBDS is comprised of the following sub-systems:

- Underground pumping system – pumps untreated mine effluent to the water treatment facility;
- 710 Pump House – pumps water from the TIA to the 720 pump house;
- 720 Pump House – combines treated mine water and TIA effluent for discharge of compliant effluent to Roberts Bay;
- 730 Pump House – acts as a booster pump for final discharge into Roberts Bay via the effluent diffuser pipeline; and
- 740 Pump house – mine/saline water treatment facility.

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Routine inspections and maintenance of each sub-system will be conducted by on-site Care and Maintenance staff.

During Care and Maintenance underground mine water will be pumped to the surface and sent to the saline section of the TIA at Doris. Mine water (saline water) is stored between the interim dike and the South Dam of the TIA; non-saline (contact water) is stored between the interim dike and North Dam. Compliant TIA water, in excess of operational needs, is discharged to Roberts Bay, via the RBDS Pumphouse, and through the water treatment plant, as required, located at the TIA. Based on inflow volumes, the TIA effluent and mine water may be co-disposed in Roberts Bay in compliance with the effluent quality limits outlined in License 2AM-DOH1335, Part I, Item 14, and the MDMER limits. Mine water treatment and ocean discharge processes will continue to maintain safe and acceptable water storage levels in both locations.

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The Sedimentation Pond, Pollution Control Pond, CWP and groundwater interceptor sumps will continue to operate during Care and Maintenance. These water management features collect runoff and groundwater that may have come in contact with the waste rock and ore stockpiles. The water collected will continue to be dewatered to the non-saline section of the TIA at Doris.

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Various containment sumps that capture runoff or accumulation in containment berms will continue to be dewatered during Care and Maintenance. Water that meets the authorized discharge criteria will be discharged to tundra at an approved location. Water that does not meet discharge criteria will be transported to the non-saline section of the TIA at Doris.

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Quarry water accumulation in any of the quarries will be managed the same as in operations. Sampling will be conducted and if water from the quarry meets the authorized discharge criteria it will be dewatered to the tundra. Care will be taken during dewatering to not disturb settled solids in the bottom of the sump and pumping of the sump will only take place when conditions are suitable. Water will not be discharged to fish frequented waters and the pump discharge will be positioned in a manner that minimizes erosion and siltation of the area downstream of the discharge. Water that does not meet the authorized discharge criteria will be transported to the non-saline section of the TIA at Doris. During Care and Maintenance activities will be in accordance with the *Quarry Management Plan* (Agnico Eagle 2022b).

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Excess brine water that is used as a lubricant for drilling, as a means of cleaning off the face and walls for geological mapping, and for dust suppression in the underground mine will be pumped to a settling sump and recycled as per the *Groundwater Management Plan* (Agnico Eagle 2022a).

2.7.2 Domestic Wastewater Treatment

Wastewater treatment at the Project during Care and Maintenance is detailed in the *Domestic Wastewater Treatment Management Plan* (Agnico Eagle 2022c).

The Doris Wastewater Treatment Plant will continue to treat domestic sewage and grey water generated by site personnel during Care and Maintenance. A qualified operator will maintain the system to confirm

it is operating within an acceptable range. Treated effluent will continue to be monitored, as required, in accordance with the Water License (see Section 3).

The potable water system will continue to be operated and maintained at Doris. Potable water treatment consists of ultraviolet purification as well as microfiltration to remove any suspended material from the water. Windy Lake will continue to be the source of potable water for the Doris camp. Potable water will continue to be sampled in accordance to the Type A Water Licence (2AM-DOH1335) to ensure both the water source and system are not contaminated and is safe for human consumption (see Section 3).

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Freshwater required for fire suppression, dust suppression or industrial use will continue to be sourced from Doris Lake for use at Doris as authorized under the Water Licence and from Patch and Windy Lakes for use at Madrid as authorized under the Type B Water Licence (2BB-MAE1727).

2.8 Sealift

Quantities of fuel, materials, equipment required will be reduced during Care and Maintenance. Any sealift will be managed consistent with the required and established protocols at the Hope Bay Site. Fuel transfer activities during sealift will be conducted as detailed in the *Oil Pollution Prevention & Oil Pollution Emergency Plan* (Agnico Eagle 2024d).

2.9 Progressive Reclamation

Progressive reclamation as outlined by the Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada (MVLWB and AANDC 2013) is defined as:

“Progressive reclamation takes place prior to permanent closure to reclaim components and/or decommission facilities that no longer serve a purpose. These activities can be completed during operations with the available resources to reduce future reclamation costs, minimize the duration of environmental exposure, and enhance environmental protection. Progressive reclamation may shorten the time for achieving closure objectives and may provide valuable experience on the effectiveness of certain mitigation measures that might be implemented during closure.”

Progressive reclamation will continue at the Project site during Care and Maintenance including:

- Immediate cleanup of materials (e.g., soil, snow, ice) that may become contaminated during construction and operations due to fuel or other spills.
- Removal and reclamation of buildings and infrastructure that become unnecessary over the life of the mine.
- Periodic shipment of hazardous waste off-site to minimize the amount of waste requiring removal at final closure.
- Upon completion of diamond drilling, drill equipment is demobilized from site, all drill casings are removed, if the casing is stuck due to permafrost it will be cut off at ground level. Cuttings are

either used to fill the depression left by other drill operations in the vicinity or collected and removed. The land is leveled with bentonite if required and covered using overburden.

- Following drilling operations on ice, equipment and soiled and/or oily snow and ice are removed from the surface of the ice and deposited in active sumps.

Other progressive reclamation opportunities that may occur during Care and Maintenance include:

- Regrading and/or cover placement over any area of the TIA at Doris that will not be disturbed by future tailings placement.
- Placement of waste rock in the mine underground for backfill and the reclamation of the waste rock pile footprint, if additional on-surface storage is no longer required.
- In areas backfilled with suitable overburden soils, revegetation works may consist of application of seeds collected from the surrounding vegetation. Active revegetation of barren rock fill pads is not practical because the rock fill cannot support vegetation; however, it is expected that lichens will colonise the rock surface in time, likely decades.

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2.10 Drilling

Advanced exploration activities will continue at Doris and Madrid during Care and Maintenance.

SECTION 3. MONITORING AND REPORTING

During Care and Maintenance, the physical stability of all Project components will be monitored. Environmental, compliance, and reclamation monitoring programs will be continued in accordance with conditions outlined in the Water Licence in addition to the Type B Water Licence 2BB-MAE1727, and Project Certificates No. 003 and No. 009. Results of monitoring programs will be presented in the annual reports that are issued to the NWB, NIRB, KitlA, and Nunavut Tunngavik Incorporated (NTI) as detailed in Section 3.5 of this report. Table 3-1 summarizes the Environmental Management Plans and associated monitoring programs that will continue for the duration of Care and Maintenance.

Table 3-1: Environmental Management and Monitoring Programs

Program	Monitoring Summary
<i>Biophysical Environment</i>	
Spill Contingency	Post-incident monitoring as required following a spill event as outlined in the Spill Contingency Plan.
Oil Pollution Emergency	Post-incident monitoring as required following a spill event to the marine environment as outlined in the Oil Pollution Emergency Plan.
Surface Water Management	Water quality monitoring as required in water licences and MDMER, erosion and sedimentation, tracking of water movement and water use volumes, inspections of water management infrastructure and discharges to tundra as outlined in the Doris-Madrid Water Management Plan.
Groundwater Management	Mine inflow quality monitoring, and tracking of water movement and volumes as outlined in the Groundwater Management Plan
Domestic Wastewater Treatment	Monitoring of the Sewage Treatment Plant performance indicators by operators, effluent quality sampling, tracking of effluent discharge and sludge volumes produced as outlined in the Domestic Wastewater Treatment Management Plan
Tailings Management	Instrumentation monitoring, data collection and physical inspections of the TIA North and South Dams, tailings surface, Emergency Dump Catch Basins, pipelines, intake structure and pumps as outlined in the Phase 2 Tailings Impoundment Area Operations, Maintenance and Surveillance Manual, including water quality and water level monitoring of the Reclaim Pond. Complete annual updates to the Water and Load Balance Model.
Quality Assurance Quality Control	Implementation of quality assurance and quality control protocols, including the collection of field blanks, travel blanks and duplicates, and data management as outlined in the Quality Assurance and Quality Control Plan.
Waste Rock, Ore and Mine Backfill Management	Geochemical monitoring of waste rock, tracking of volumes and storage locations of waste rock and ore produced as outlined in the Waste Rock, Ore and Mine Backfill Management Plan.
Non-hazardous Waste Management	Conduct routine inspections of waste management facilities, maintain inventory of all domestic that was produced, including volumes of waste open burned or transported offsite for disposal as outlined in the Non-Hazardous Waste Management Plan. Sampling of bottom ash generated through open burning and incineration.
Hydrocarbon Contaminated Material Management	Soil and water quality sampling of the landfarm facility as outlined in the Hydrocarbon Contaminated Material Management Plan.
Hazardous Waste Management	Conduct routine inspections of waste management facilities, maintain inventory of all hazardous was produced and transported offsite for disposal as outlined in the Hazardous Waste Management Plan.

Program	Monitoring Summary
Incinerator and Composter Waste Management	Conduct routine inspections of waste management facilities, complete Incinerator stack testing as required, tracking of volumes of waste incinerated and sampling of bottom ash generated as outlined in the Incinerator and Composter Waste Management Plan.
Quarry Management	Water quality monitoring, quarry rock sampling, and tracking of volumes produced and used as per the Quarry Management and Monitoring Plan
Explosives	Tracking of volumes stored and used as outlined in the Explosives Management Plan.
Air Quality	Collection of meteorological data, dustfall monitoring, and particulate monitoring as outlined in the Air Quality Management Plan.
Aquatic Effects Monitoring Program	Hydrological data collection and water quality monitoring of the receiving aquatic environment as outlined in the Aquatic Effects Monitoring Plan.
Environmental Effects Monitoring	Water quality monitoring and biological studies in Roberts Bay as required under MDMER.
Wildlife Mitigation and Monitoring	Monitoring programs including: wildlife camera program, habitat loss calculations, noise monitoring, incident and mortality monitoring, and documentation of general wildlife observations as outlined in the Wildlife Mitigation and Monitoring Plan.
Fisheries Authorization Monitoring	Monitoring of fish and fish habitat at Roberts Outflow as required by the Roberts Lake Fish Enhancement Monitoring Program commitment under the Doris North No Net Loss Plan.
Annual Geotechnical Inspections	Inspection to be completed by a registered Geotechnical Engineer as outlined in the Phase 2 Tailings Impoundment Area Operations, Maintenance and Surveillance Manual.
Invasive Plant Surveys	Monitoring for invasive plants as outlined in the Wildlife Mitigation and Monitoring Plan.
Seepage Sampling	Waste rock storage area seepage surveys and sampling as outlined in the Waste Rock, Ore and Mine Backfill Management Plan. Construction rock seepage surveys and sampling as outlined in the Hope Bay Project Quarry Management Plan.
Socio-economic Environment	
Socio-Economic Monitoring	Monitoring to be completed as outlined in the SEMP to support compliance with the Nunavut Agreement and Project Certificate requirements.

MDMER = Metal and Diamond Mining Effluent Regulations; TIA = Tailings Impoundment Area; SEMP = Socio-Economic Monitoring Plan

3.1 Physical Structures

Physical inspections will be conducted to ensure that all infrastructure is performing as designed. All inspections will be formally recorded and available for review upon request of an Inspector. Generally, this will include monitoring and reporting of the following:

- Physical inspections of TIA North and South dams, Emergency Dump Catch Basins, access roads, pipelines, intake structures and pumps, and tailings surface;
- Data collection and monitoring as outlined in the Phase 2 Tailings Impoundment Area Operations, Maintenance and Surveillance Manual;
- Physical inspections of the Madrid North CWP as outlined in the Madrid North CWP Operations, Maintenance and Surveillance Manual;
- Annual geotechnical inspections by a qualified geotechnical engineer;
- Recording fuel levels in all fuel tanks and weekly monitoring for leaks or hazards;

- Monthly site inspections by the Environmental Superintendent or designate;
- Detailed inspections by the Environmental Superintendent or designate following extreme events, including freshet, to identify and assess any damage;
- Regular inspections of surface diamond drilling activities and sumps used to support drilling; and
- Data collection from ground temperature cables as required by the Water Licence and Project Certificate No. 003.

3.2 Water and Waste

Water and waste management and monitoring will continue throughout Care and Maintenance in accordance with conditions outlined in the Water Licence and Type B Water Licence 2BB-MAE1727. This will include monitoring and reporting of the following:

- Record Reclaim Pond water levels;
- Record of pumping volumes when pumping of CWP, sumps and TIA Reclaim Pond as described in the Doris-Madrid Water Management Plan;
- Visual inspections of discharge to tundra from CWP and sumps;
- Record volumes of water used for domestic, drilling, dust suppression, and other purposes;
- Monthly monitoring of the potable water quality at Doris camp;
- Record volumes of groundwater dewatered from the underground mine and conduct monitoring as outlined in the Groundwater Management Plan;
- Annual updates to the Water and Load Balance model and compare predicted water quality and water elevation of the TIA at Doris to measured water quality and elevation;
- Track and record of all domestic and hazardous waste produced, including volumes of waste incinerated, open burned, or transported offsite for disposal as described in the Project Hazardous Waste Management Plan and the Project Non-Hazardous Waste Management Plan;
- Complete incinerator stack testing when required as outlined in the Project Incinerator and Composter Waste Management Plan;
- Conducting weekly inspections of all water management and waste management facilities; and
- Record volumes of effluent discharge and sludge produced from operations of the Sewage Treatment Plant and conduct monitoring outlined in the Domestic Wastewater Treatment Management Plan.

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3.3 Environmental and Geotechnical

Environmental and geotechnical monitoring programs including:

- Water quality monitoring as required under Type A and Type B water licenses;
- Water quality and Environmental Effects Monitoring as required under the MDMER;
- Implement monitoring of the aquatic environment as described in the Aquatic Effects Monitoring Plan;

- Monitoring of wildlife and recording of all wildlife incidents, interactions and sightings, and monitoring for invasive plants as described in the Wildlife Mitigation and Monitoring Plan;
- Monitoring of fish and fish habitat at Roberts Outflow as required by the Roberts Lake Fish Enhancement Monitoring Program commitment under the Doris North No Net Loss Plan;
- Monitoring of air quality as described in the Hope Bay Project Air Quality Management Plan;
- Annual geotechnical inspections by a qualified geotechnical engineer;
- Monthly site inspections by the Environmental Superintendent or designate;
- Collection of meteorological and hydrological data;
- Conduct geochemical monitoring as outlined in the Hope Bay Project Waste Rock, Ore and Mine Backfill Management Plan, the Hope Bay Project Water and Ore/Waste Rock Management Plan for Boston Site, and the Hope Bay Project Quarry Management Plan;
- Recording volume of waste rock produced and volume of waste rock stored on the waste rock storage pads;
- Implement protocols described in the Quality Assurance and Quality Control Plan for all sampling; and
- Assess for potential archaeological sites during surface diamond drilling activities in consultation with the Project Archaeologist as described in the Heritage Resource Protection Plan.

3.4 Socio-Economic

The Hope Bay Socio-Economic Monitoring Plan (SEMP) is designed to support compliance with the Nunavut Agreement and Project Certificate requirements. The SEMP supports Agnico Eagle's commitments to fulfil best practices for social responsibility, and to provide relevant and timely information to support community development and management of socio-economic effects.

3.5 Reporting

Reporting requirements that will continue under Care and Maintenance are summarized in Table 3.2.

Table 3.2: Hope Bay Reporting Requirements

Reporting Requirement	Submission Date
NWB Monthly Report	30 days after end of each calendar month
NWB Annual Report	March 31
NIRB Annual Report	April 30
NIRB Development Plan Update	January 1
KitIA Annual Report	March 31
NTI Annual Report	March 31
National Pollutant Release Inventory (NPRI) Report	June 1
Greenhouse Gas Reporting Program (GHGRP) Report	June 1
Output-Based Pricing System (OBPS) Report	June 1
MDMER Quarterly Effluent Monitoring Report	45 days after end of each calendar quarter
MDMER Annual Monitoring Report	March 31
MDMER Annual Effluent and Water Quality Monitoring Report	March 31
MDMER First Biological Monitoring Interpretative Report	36 months after subject to Section 7 of MDMER

SECTION 4. SCHEDULE

The proposed Doris-Madrid Care and Maintenance activities schedule is presented in Figure 4.1 based on the current state of the Project. This Schedule will be reviewed and updated on an annual basis to capture any changes to the proposed timing of activities.

Monitoring and reporting will continue during Care and Maintenance as outlined in Section 3 and summarized in Table 3.2.

Figure 4.1: Doris-Madrid Care and Maintenance Planned Activities

		2024				
		Q1	Q2	Q3	Q4	
Site Activities						
Doris	Discharge of water through Roberts Bay Discharge System	←	→	→	→	
	Addition of weight on Roberts Bay discharge pipe and re-attachment of diffuser		←	→		
	Construction of Roberts Bay fuel distribution line between jetty and Roberts Bay Fuel Tanks		←	→		
	Construction of Diversion Berm and/or Diversion Ditch at Doris CPRT		←	→		
	Development of quarries	←	→	→	→	
	Commissioning of composter	←	→	→		
	Use of camp, roads, airstrip, laydown areas, water intakes, treatment plants, TIA, and associated infrastructures to allow advanced exploration activities	←	→	→	→	
Madrid	General earthworks (e.g., pad, culverts, diversion berm) at Naartok		←	→	→	
Care and Maintenance Activities						
Tailings						
Impoundment Area	- management of water and infrastructure	←	→	→	→	
Waste Management	- storage and disposal of non-hazardous waste onsite					
	- periodic shipment of hazardous waste off-site to minimize the amount of waste requiring removal at final closure	←	→	→	→	
	- clean-up of materials(e.g., soil, snow, ice) that may become contaminated during construction and operations due to fuel or other spills					
Progressive Reclamation	- Removal and reclamation of buildings and infrastructure that become unnecessary over the life of the mine					
	- Upon completion of diamond drilling, drill equipment is demobilized from site and the disturbed area is reclaimed	←	→	→	→	
	- Dismantle Windy Camp					

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REFERENCES

Nunavut Land Claims Agreement Act. S.C. 1993, c. 29.

Territorial Lands Act. R.S.C., 1985, c. T-7.

Fisheries Act. R.S.C., 1985, c. F-14.

Arctic Waters Pollution Prevention Act. R.S.C., 1985, c. A-12.

Transportation of Dangerous Goods Act, 1992. S.C. 1992, c. 34.

Transportation of Dangerous Goods Regulations. SOR/2001-286.

Nunavut Waters and Nunavut Surface Rights Tribunal Act. S.C. 2002, c. 10.

Nunavut Waters Regulations. SOR/2013-69.

Arctic Waters Pollution Prevention Regulations. C.R.C., c. 354.

Territorial Lands Regulations. C.R.C., c. 1525.

Environmental Protection Act. RSNWT (Nu) 1988, c E-7.

Environmental Rights Act. RSNWT (Nu) 1988, c 83.

Mine Health and Safety Act. SNWT (Nu) 1994, c 25.

Mine Health and Safety Regulations. NWT Reg. (Nu) 125-95.

Agnico Eagle (Agnico Eagle Mines Limited). 2022a. Hope Bay Project Groundwater Management and Monitoring Plan. March 2022.

Agnico Eagle. 2022b. Hope Bay Project Quarry Management Plan. March 2022.

Agnico Eagle. 2022c. Hope Bay Project Domestic Wastewater Treatment Management Plan. March 2022.

Agnico Eagle. 2022d. Type A Water Licence 2AM-DOH1335 Modification – Madrid East Naartok Portal. Submitted to NWB June 10, 2022.

Agnico Eagle. 2023. Hope Bay Project, Incinerator and Composter Waste Management Plan. March 2023.

Agnico Eagle. 2024a. Hope Bay Project Waste Rock, Ore, and Mine Backfill Management Plan. March 2024.

Agnico Eagle. 2024b. Hope Bay Project Doris Madrid Water Management Plan. March 2024.

Agnico Eagle. 2024c. Hope Bay Project, Phase 2, Doris Tailings Impoundment Area – Operations, Maintenance, and Surveillance Manual. March 2024.

Agnico Eagle. 2024d. Hope Bay Project Oil Pollution Prevention & Oil Pollution Emergency Plan. March 2024.

MVLWB / AANDC (Mackenzie Valley Land and Water Board, Aboriginal Affairs and Northern Development Canada). 2013. Guidelines for the Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories. November 2013.

TMAC. 2017. Madrid—Boston of the Hope Bay Project, Final Environmental Impact Statement, Volume 3, Project Description and Alternatives. December 2017.

APPENDIX D: Map of 2023 Brine Spills Surrounding Patch Lake



Brine Spill Areas and Distance to Water

Hope Bay

6/24/2024

Coordinate System: NAD 1983 UTM Zone 13N



AGNICO EAGLE
HOPE BAY

APPENDIX E: Updated 2023 Hydrology Compliance Monitoring Summary

APPENDIX B 2023 HYDROLOGY COMPLIANCE MONITORING SUMMARY

MEMO

TO	Agnico Eagle Mines Limited – Hope Bay
FROM	Michael Willcock (ERM), Daniel Aguilar (ERM), Cameron Evans (ERM)
CC	Madison Jerhoff (ERM), Rochelle Maitripala (ERM)
DATE	21 June 2024
REFERENCE	0685812-02
SUBJECT	Hope Bay Project 2023 Hydrology Compliance Monitoring Summary

1. INTRODUCTION

The Hope Bay Project (the Project) is a gold mining development in the West Kitikmeot region of mainland Nunavut. The Project property is approximately 153 km southwest of Cambridge Bay on the southern shore of Melville Sound and contains a greenstone belt (the Belt) that runs 80 km in a north-south direction varying in width between 7 km and 20 km. The Project is operated by Agnico Eagle Mines Ltd. (Agnico) who acquired it through the purchase of TMAC Resources Inc. (TMAC) on February 2, 2021.

This memorandum provides a summary of the hydrology compliance monitoring program performed for the Project in 2023. Compliance requirements for hydrometric monitoring, listed below, are set out in the Project Certificate (NIRB No. 003, amended September 23, 2016), the Type A and B Water License (NWB License No. 2AMDOH1335 Type A, amended December 7, 2018, and NWB License No. 2BE-HOP2232 Type B, renewed 2022), and the Hope Bay Project Aquatic Effects Monitoring Plan (the Plan).

The *Fisheries Act* Authorization (FAA) NU-02-0117.3 also has compliance requirements. Although the FAA does not explicitly state a monitoring requirement of Roberts Lake outflow, monitoring outflows of this lake is necessary, as it is considered a critical component for evaluating the success of the Roberts Lake Outflow Fish Habitat Compensation Monitoring Program. Monitoring of Roberts Lake also provides a control with which to compare the AEMP monitored lakes.

The Type A Water License (No. 2AM DOH1335) sets out the following requirements applying to aquatic effects monitoring:

- Part I. Item 3: The Licensee shall undertake the Monitoring Program provided in Tables 1, 2, and 3 of Schedule I. Table 3 outlines the requirement for monitoring Doris Outflow (TL-2) during Operations upon commencement of mining in or beneath the Doris Lake Talik and monitoring Doris Lake (ST-12) water levels during Operations and Closure.

The Type B Water License (No. 2BE-HOP2232) sets out the following requirements:

- Part J. Item 9: The Licensee shall monitor water levels in Windy Lake during open-water, in order to verify that additional water withdrawal for dust suppression activities does not result in drawdown beyond naturally occurring levels.

The New Project Certificate (NIRB No. 009) sets out the following requirements:

- New Term and Condition 10: the Proponent shall:
 - a. monitor the effects of Project activities and infrastructure on surface water quality conditions;
 - b. ensure the monitoring data is sufficient to compare the impact predictions made for the Project with actual monitoring results;
 - c. ensure that the sampling locations and frequency of monitoring is consistent with and reflects the requirements of the Plan, and Water Management Plan; and
 - d. on an annual basis, compare monitoring results with the impact assessment predictions in the FEIS and will identify any significant discrepancies between impact predictions and monitoring results.

The Plan prescribes monitoring requirements based on Project development phases. In February 2022, the Project went into care and maintenance. In April 2022, the Doris-Madrid Care and Maintenance Plan was submitted to the Nunavut Water Board (NWB) and Nunavut Impact Review Board (NIRB) as per compliance with the Type A Water Licence 2AM-DOH1335 and the Project Certificate No. 009. Prior to entering care and maintenance, the Doris development was in the operations phase and Madrid North was in the construction and operations phase, though operations at Madrid North were suspended in February 2021 to allow for a thorough review of the proposed work plan.

These construction and operations phases triggered water level monitoring at Glenn and Imniagut lakes, as well as water level and outflow monitoring at Doris, Little Roberts, Ogama, Patch, PO, and Windy lakes. Tables 3.11 and 3.2-1 of the Plan (TMAC 2018) outline these requirements.

The following sections consist of 2023 monitoring data and results. These results are based on the comparison of 2023 monitoring data with past monitoring data and the predicted Project effects from the Madrid-Boston Project Final Environmental Impact Statement (FEIS; TMAC 2017).

2. MONITORING STATIONS

The 2023 compliance monitoring program consisted of 10 hydrometric monitoring stations, as presented in Tables 2-1 and 2-2. Water level surveys and manual discharge measurements are typically conducted at these stations throughout the open-water season, after the installation of the pressure transducers in June. Pressure transducers were pulled from stations in late September.

TABLE 2-1 STATION TYPES

Station	Station Type	Monitoring Period
Windy Outflow	Discharge and Water Level	Seasonal
Glenn Lake	Lake Level Only	Seasonal
Imniagut Lake	Lake Level Only	Seasonal
Patch Outflow	Discharge and Water Level	Seasonal
PO Outflow	Discharge and Water Level	Seasonal
Ogama Outflow	Discharge and Water Level	Seasonal
Doris Lake-2	Lake Level Only	Year Round
Doris Creek TL-2	Discharge Only	Seasonal
Roberts Hydro-2	Discharge and Water Level	Seasonal ¹
Little Roberts Outflow	Discharge and Water Level	Seasonal

¹ Roberts Hydro-2 was previously operated as a year-round station but was destroyed by ice and was operated as a seasonal station in 2021 through 2023.

TABLE 2-2 2023 STATION LOCATIONS

Station	UTM Zone 13W		Watershed Area (km ²)	Lake Coverage (%)
	Easting	Northing		
Windy Outflow	431404	7554948	13.73	41
Glenn Lake	430410	7562001	20.59	13
Imniagut Lake	433403	7551421	1.31	12
Patch Outflow	436248	7548973	32.16	23
PO Outflow	436749	7550055	35.30	23
Ogama Outflow	435595	7555262	74.93	18
Doris Lake-2	433547	7558601	90.29	19
Doris Creek TL-2	434059	7559504	90.29	19
Roberts Hydro-2	435231	7562674	97.83	18
Little Roberts Outflow	434548	7562652	194.15	18

Hydrometric stations monitored either Lake level, Lake outflow (discharge) or both. Most hydrometric stations are operated seasonally (during the open-water season); however, Doris Lake-2 is operated year-round. Roberts Hydro-2 had previously been operated year-round; however, the station was destroyed by ice and was operated seasonally in 2021 through 2023.

Seasonal hydrometric stations consist of an INW PT2X vented pressure transducer placed on the lake or streambed in a weighted assembly, recording water level readings every 15 minutes. The Doris Lake-2 station consists of two Solinst Levelloggers, unvented pressure transducers, installed at depths of approximately 7 m to monitor lake level year-round. The Levelloggers are coupled with a Solinst Barologger, located at Doris Camp, to compensate for changes in atmospheric pressure.

Water level surveys were performed using an engineer's level and stadia rod using a minimum of three local benchmarks at each station. All benchmarks are tied to geodetic elevation. Manual discharge measurements were performed using the velocity area method with an OTT MF Pro electromagnetic current meter. The Doris North Project 2013 Hydrology Compliance Monitoring Report (ERM 2014) describes the details of the standard methods used for installation of hydrometric stations, development of stage-discharge rating equations, and daily flow hydrographs for the Project.

3. 2023 ANALYSIS AND RESULTS

Tables 3-1 to 3-8 present the 2023 compliance monitoring results that include stage discharge measurements, observed lake levels, rating equations, annual runoff, peak and low flows, and monthly runoff. Appendix A and Appendix B present the lake level graphs and the daily flow hydrographs, respectively. Appendix C and Appendix D present the mean daily lake level and the mean daily discharges, respectively.

3.1 STAGE DISCHARGE MEASUREMENTS

ERM, assisted by Agnico personnel, performed water level and discharge measurements during station remobilization in June and station demobilization in September. Agnico personnel conducted open-water season water level and discharge measurements in July, August and September. Seasonal stations were monitored throughout the open-water season from June to September, and lake level station Doris Lake-2 was monitored year-round, consistent with previous years. Manual measurements are presented in Table 3-1.

TABLE 3-1 SUMMARY OF 2023 STAGE AND DISCHARGE MEASUREMENTS

Station	Date	Stage (m)	Discharge (m ³ /s)	Measurement Made By
Windy Outflow	6/15/2023	18.374	0.344	ERM
	6/19/2023	18.365	0.314	ERM
	7/22/2023	18.234	0.051	Agnico
	8/24/2023	18.147	-0.012	Agnico
	9/10/2023	18.176	0.000	Agnico
	9/29/2023	18.187	n/a ¹	ERM
Glenn Lake	6/12/2023	9.910	n/a ²	ERM
	7/22/2023	9.605	n/a ²	Agnico
	8/20/2023	9.564	n/a ²	Agnico
	9/12/2023	9.535	n/a ²	Agnico
	9/29/2023	9.606	n/a ²	ERM
Imniagut Lake	6/12/2023	27.455	n/a ²	ERM
	7/24/2023	27.253	n/a ²	Agnico
	8/20/2023	27.274	n/a ²	Agnico
	9/10/2023	27.323	n/a ²	Agnico
	9/29/2023	27.345	n/a ²	ERM
Patch Outflow	6/12/2023	26.476	0.624	ERM
	6/19/2023	26.460	0.717	ERM
	7/23/2023	26.217	0.139	Agnico
	8/28/2023	26.112	0.063	Agnico
	9/10/2023	26.139	0.068	Agnico
	9/29/2023	26.181	n/a ¹	ERM
PO Outflow	6/13/2023	26.407	0.593	ERM
	6/14/2023	26.403	n/a ¹	ERM
	6/18/2023	26.386	0.444	Agnico
	7/24/2023	26.109	0.159	Agnico
	8/20/2023	26.056	0.074	Agnico
	9/7/2023	26.096	0.094	Agnico
	9/29/2023	26.129	n/a ¹	ERM

Station	Date	Stage (m)	Discharge (m ³ /s)	Measurement Made By
Ogama Outflow	6/11/2023	24.447	1.826	ERM
	6/18/2023	24.386	1.449	ERM
	7/24/2023	24.070	0.192	Agnico
	8/26/2023	24.115	0.203	Agnico
	9/10/2023	24.172	0.301	Agnico
	9/29/2023	24.201	n/a ¹	ERM
Doris Lake-2	6/15/2023	22.143	n/a ²	ERM
	7/20/2023	21.799	n/a ²	Agnico
	8/17/2023	21.712	n/a ²	Agnico
	9/11/2023	21.763	n/a ²	Agnico
	9/28/2023	21.823	n/a ²	ERM
Doris Creek (TL-2)	6/10/2023	22.057	2.219	ERM
	6/20/2023	22.019	1.854	ERM
	7/20/2023	21.702	0.416	Agnico
	8/17/2023	21.656	0.155	Agnico
	9/11/2023	21.678	0.354	Agnico
	9/28/2023	21.746	n/a ¹	ERM
Roberts Hydro-2	6/16/2023	6.670	1.896	ERM
	6/20/2023	6.645	1.832	ERM
	7/27/2023	6.311	0.193	Agnico
	8/28/2023	6.338	0.353	Agnico
	9/12/2023	n/a ¹	0.679	Agnico
	9/28/2023	6.461	n/a ¹	ERM
Little Roberts Outflow	6/17/2023	5.095	3.448	ERM
	6/20/2023	5.067	3.021	ERM
	7/27/2023	4.547	0.447	Agnico
	8/28/2023	4.587	0.568	Agnico
	9/28/2023	4.763	n/a ¹	ERM

¹ Not measured due to time constraints, access limitations, or staffing limitations.

² Lake Level measured only.

3.2 HYDROGRAPHS

Seasonal stations were re-installed in June and were demobilized in late September. Discharge at TL-2 was modelled using linear regression with the Doris Lake-2 year-round monitoring station for open-water periods that were not recorded by the seasonal station. Discharge during the open-water season that was not monitored at the other stations was modelled using a linear regression with TL-2. For the periods where ice was known or suspected to have impacted flow, discharge was estimated using exponential growth/decay curves.

For the open-water period outside of the observed data, lake levels were back-calculated using the station rating curves for the periods when discharge had been modelled. For stations with no discharge monitoring, lake level was modelled using a linear regression with Doris Lake-2. For the periods where ice was known or suspected to have impacted flow, lake level was estimated using exponential growth/decay curves, stabilizing at the level surveyed during the April water level survey. In cases where the winter water level was not surveyed (Roberts Hydro-2), lake level was assumed to stabilize on the last day of modelled data.

Tables 3-2 and 3-3 present the estimated discharge and the lake level, respectively. Table 3-4 presents monthly mean, maximum and minimum lake levels, along with the maximum water level fluctuation during the open-water season, and over the full calendar year. These monthly statistics include observed, modelled and estimated data. Appendix A and B provide the Lake Level Graphs and Hydrographs for each monitored station in 2023. Appendix C and D provide the Mean Daily Lake Level Tables and the Mean Daily Discharge Tables. Appendix E and F provide historical lake level graphs and hydrographs for comparing 2023 with previous years.

TABLE 3-2 2023 OBSERVED, MODELLED AND ESTIMATED DISCHARGE

Station	Observed	Modelled	Estimated
Windy Outflow	Jul 21 ¹ – Sep 29	May 20 – Jul 20 Sep 30 – Nov 1	May 17 – May 19 Nov 1 – Nov 21
Patch Outflow	Jun 12 – Sep 29	May 20 – Jun 11 Sep 30 – Nov 1	May 17 – May 19 Nov 2 – Nov 21
PO Outflow	Jun 14 – Sep 29	May 20 – Jun 13 Sep 30 – Nov 1	May 17 – May 19 Nov 2 – Nov 21
Ogama Outflow	Jun 11 – Sep 29	May 20 – Jun 10 Sep 30 – Nov 1	May 17 – May 19 Nov 1 – Nov 21
Doris Creek TL-2	Jul 19 ¹ – Sep 28	May 20 – Jul 20 Sep 29 – Nov 1	May 17 – May 19 Nov 1 – Nov 21
Roberts Hydro-2	Jun 16 – Sep 28	May 20 – Jun 15 Sep 29 – Nov 1	May 17 – May 19 Nov 1 – Nov 21

Station	Observed	Modelled	Estimated
Little Roberts Outflow	Jun 17 – Sep 28	May 20 – Jun 16 Sep 29 – Nov 1	May 17 – May 19 Nov 1 – Nov 21

¹ There were issues downloading stage data from June and it could not be recovered.

TABLE 3-3 2023 OBSERVED, MODELLED AND ESTIMATED LAKE LEVELS

Station	Observed	Modelled	Estimated
Windy Outflow	Jul 21 ¹ – Sep 29	May 20 – Jul 20 Sep 30 – Nov 1	Jan 1 – May 19 Nov 2 – Dec 31
Glenn Lake	Jun 12 – Sep 29	May 18 – Jun 11 Sep 30 – Nov 20	Jan 1- May17 Nov 21 – Dec 31
Imniagut Lake	Jun 12 – Sep 29	May 18 – Jun11 Sep 30 – Nov 20	Jan 1 – May 17 Nov 21 – Dec 31
Patch Outflow	Jun 12 – Sep 29	May 20 – Jun 11 Sep 30 – Nov1	Jan 1 – May 19 Nov 2 – Dec 31
PO Outflow	Jun14 – Sep 29	May 20 – Jun 13 Sep 30 – Nov 1	Jan 1 – May 19 Nov 2 – Dec 31
Ogama Outflow	Jun 11 – Sep 29	May 20 – Jun 10 Sep 30 – Nov 1	Jan 1 – May19 Nov 2 – Jan 31
Doris Lake-2	Jan 1 – Dec 31	n/a	n/a
Roberts Hydro-2	Jun 16 – Sep 28	May 20 – Jun 15 Sep 29 – Nov 1	Jan 1 – May 19 Nov 2 – Dec 31
Little Roberts Outflow	Jun 17 - Sep 28	May 20 – Jun 16 Sep 29 – Nov 1	Jan 1 – May 19 Nov 2 – Dec 31

¹ There were issues downloading stage data from June and it could not be recovered.

Flow was predicted to have started on May 18, based on site photos taken at Doris Creek every 3 to 5 days, and ended on November 20, based on the Doris Lake water level no longer dropping and a significant cold snap. Freshet occurred relatively early compared to other years, which resulted in a relatively low peak but a prolonged freshet period.

Table 3-4 presents monthly mean, maximum and minimum lake levels, along with the maximum water level fluctuation during the open-water season, and over the full calendar year. These monthly statistics include observed, modelled and estimated data.

TABLE 3-4 SUMMARY OF 2023 LAKE LEVELS

Station	Parameter	2022 Monthly Lake Level ¹ (m)												Lake Level Fluctuation ²	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jun-Sep	Annual
Windy Outflow	Mean	18.350	18.350	18.350	18.350	18.369	18.361	18.259	18.177	18.171	18.178	18.178	18.178	0.249	0.249
	Max	18.350	18.350	18.350	18.350	18.407	18.376	18.326	18.192	18.183	18.182	18.178	18.178		
	Min	18.350	18.350	18.350	18.350	18.350	18.329	18.196	18.160	18.158	18.175	18.178	18.178		
Glenn Lake	Mean	9.549	9.549	9.549	9.549	9.743	9.864	9.647	9.527	9.570	9.615	9.565	9.537	0.515	0.515
	Max	9.549	9.549	9.549	9.549	10.007	9.908	9.766	9.552	9.619	9.644	9.620	9.537		
	Min	9.549	9.549	9.549	9.549	9.549	9.775	9.545	9.492	9.528	9.591	9.537	9.537		
Imniagut Lake	Mean	27.101	27.101	27.101	27.101	27.312	27.436	27.323	27.271	27.309	27.306	27.279	27.263	0.290	0.416
	Max	27.101	27.101	27.101	27.101	27.517	27.464	27.398	27.321	27.346	27.322	27.309	27.263		
	Min	27.101	27.101	27.101	27.101	27.101	27.398	27.248	27.227	27.282	27.293	27.263	27.263		
Patch Outflow	Mean	26.111	26.111	26.111	26.111	26.294	26.450	26.278	26.141	26.140	26.158	26.157	26.157	0.409	0.409
	Max	26.111	26.111	26.111	26.111	26.514	26.477	26.386	26.181	26.170	26.176	26.157	26.157		
	Min	26.111	26.111	26.111	26.111	26.111	26.395	26.185	26.106	26.105	26.142	26.157	26.157		
PO Outflow	Mean	26.142	26.142	26.142	26.142	26.281	26.369	26.184	26.056	26.067	26.082	26.080	26.080	0.438	0.438
	Max	26.142	26.142	26.142	26.142	26.465	26.400	26.280	26.090	26.104	26.128	26.080	26.080		
	Min	26.142	26.142	26.142	26.142	26.142	26.289	26.095	26.027	26.027	26.039	26.080	26.080		
Ogama Outflow	Mean	24.008	24.008	24.008	24.008	24.230	24.378	24.179	24.103	24.168	24.189	24.068	24.008	0.450	0.510
	Max	24.008	24.008	24.008	24.008	24.518	24.444	24.277	24.133	24.201	24.225	24.188	24.008		
	Min	24.008	24.008	24.008	24.008	24.008	24.287	24.105	24.068	24.126	24.158	24.008	24.008		
Doris Lake-2	Mean	22.020	22.013	21.992	21.979	22.098	22.141	21.870	21.728	21.799	21.840	21.783	21.765	0.626	0.680
	Max	22.036	22.042	22.016	22.005	22.317	22.196	22.027	21.757	21.848	21.876	21.847	21.948		
	Min	22.000	21.985	21.971	21.954	21.922	22.038	21.746	21.691	21.722	21.811	21.653	21.637		
Roberts Hydro – 2	Mean	6.370	6.370	6.370	6.370	6.523	6.629	6.402	6.323	6.414	6.457	6.398	6.370	0.447	0.447
	Max	6.370	6.370	6.370	6.370	6.713	6.669	6.513	6.372	6.464	6.497	6.455	6.370		
	Min	6.370	6.370	6.370	6.370	6.370	6.525	6.317	6.265	6.358	6.421	6.370	6.370		
Little Roberts Outflow	Mean	4.862	4.862	4.862	4.862	4.987	5.043	4.667	4.546	4.684	4.740	4.737	4.737	0.699	0.699
	Max	4.862	4.862	4.862	4.862	5.154	5.096	4.858	4.621	4.767	4.800	4.737	4.737		
	Min	4.862	4.862	4.862	4.862	4.862	4.874	4.525	4.454	4.585	4.687	4.737	4.737		

¹ Water levels include observed, modelled and estimated data.² Change in lake level refers to the difference between the highest June and lowest July to September lake levels.

3.3 RATING CURVES

Rating curves are empirical equations unique to each monitoring station that convert stage data recorded by the monitoring station to discharge and are developed using concurrent manual measurements of stage (water level) and discharge.

Measurements from previous years are used in the development of rating curves. Older measurements are excluded from the rating curves when they no longer align with recent measurements. This adjustment is common as erosion and aggradation of the channel changes the stage-discharge relationship over time.

Minor updates to rating curves were made where appropriate based on the data collected in 2023. Stage data collected in 2023 was converted to discharge using the equations listed in Table 3-5.

TABLE 3-5 STAGE-DISCHARGE RATING EQUATIONS FOR MADRID HYDROMETRIC STATIONS IN 2023

Station	Rating Equation ¹ $Q = C (h - a)^b$	Number of Measurements Used ²	Root Mean Square – Error (m ³ /s)
Windy Outflow	$Q = 5.322 (h - 18.147)^{1.869}$	4	5.09
Patch Outflow	$Q = 2.261 (h - 25.998)^{1.765}$; $h < 26.391$ $Q = 4.489 (h - 26.028)^{2.304}$; $h > 26.391$	15	10.72
PO Outflow	$Q = 1.847 (h - 25.89)^{1.83}$;	6	19.22
Ogama Outflow	$Q = 7.027 (h - 23.994)^{1.725}$; $h < 24.233$ $Q = 5.396 (h - 23.795)^{2.640}$; $h > 24.233$	26	10.44
Doris Creek TL-2	$Q = 4.714 (h - 21.442)^{1.798}$; $h < 21.98$ $Q = 7.331 (h - 21.531)^{1.943}$; $h > 21.98$	5	21.36
Roberts Outflow-2	$Q = 6.239 (h - 6.150)^{1.828}$; $h < 6.641$ $Q = 29.612 (h - 6.370)^{2.189}$; $h > 6.641$	5	11.14
Little Roberts Outflow	$Q = 4.354 (h - 4.260)^{1.801}$; $h < 5.056$ $Q = 29.850 (h - 4.760)^{1.918}$; $h > 5.056$	14	16.9

¹ Equation $Q = C(h - a)^b$: Q is the discharge (m³/s), C and b are dimensionless coefficients, h is the stage (m), and a is the approximate stage at zero flow (m).

² The 2023 stage-discharge rating equations were developed using measurements from 2017 to 2023, where available.

3.4 HYDROLOGIC INDICES

Table 3-6 presents the 2023 hydrologic indices such as runoff, peak flows and 7-day low flows. Table 3-7 presents the monthly runoff distributions from the seven hydrometric stations that record discharges.

Annual runoff is the volume of streamflow over the year normalized by drainage area and reported as depth and is useful index for comparing the hydrologic responses of basins of different sizes. Estimates of annual runoff were calculated from the available data and interpolated using the equation:

$$Ro = \frac{(Q * t)}{A}$$

where: runoff (Ro; units = mm) is calculated as streamflow (Q; units = m³/s) multiplied by time (t; units = seconds) divided by basin area (A; units = km²).

Peak daily flows are the highest mean daily flow during the year and typically occur during freshet. The lowest 7-day averaged flow during the open-water season typically occurs during late summer or early fall. Annual low flows are zero and are not reported as the streams freeze solid in winter. Breaking runoff down by month shows that the majority of flow occurs during and shortly after freshet, with much less water flowing during late summer and fall. This flow distribution is typical of arctic streams.

TABLE 3-6 SUMMARY OF 2023 ANNUAL RUNOFF, PEAK FLOWS AND LOW FLOWS

Station	Annual Runoff (mm)	Annual Peak Daily Flows ¹		7-day Low Flows ²	
		Peak Flow (m ³ /s)	Date	7-day Low Flow (m ³ /s)	Date
Windy Outflow	111	0.43	22-May	0.004	14-Aug
Patch Outflow	117	0.85	22-May	0.05	2-Sep
PO Outflow	89	0.67	22-May	0.05	2-Sep
Ogama Outflow	122	2.29	22-May	0.09	14-Aug
Doris Creek TL-2	130	2.49	22-May	0.12	14-Aug
Roberts Outflow-2	130	2.84	22-May	0.14	14-Aug
Little Roberts Outflow	113	5.00	22-May	0.27	14-Aug

¹ Peak flows refer to peak daily discharges in 2023 and are based on estimated and observed data.

² 7-day low flows are June peak to September 30 data only.

TABLE 3-7 SUMMARY OF 2023 MONTHLY RUNOFF DISTRIBUTIONS

Station	2023 Monthly Runoff (mm)							
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Windy Outflow	30	56	19	2	1	2	1	0
Patch Outflow	21	43	18	5	5	6	2	0
PO Outflow	20	40	17	6	7	8	2	0
Ogama Outflow	26	45	15	6	12	15	3	0
Doris Creek TL-2	25	51	19	5	11	15	3	0
Roberts Outflow-2	25	45	14	7	15	20	3	0
Little Roberts Outflow	22	41	12	6	13	16	2	0

3.5 ICE MEASUREMENTS

Agnico conducted ice thickness measurements in April at the same time as the under-ice aquatic sampling. Under-ice water level surveying occurred from April 19 to April 26, 2023. Table 3-8 presents surveyed water level, ice thickness, and water gap for each monitored lake. As the hydrometric station benchmarks are buried in snow and not necessarily close to the under-ice water level survey location, surveys were performed using a Real Time Kenmatic (RTK) system. Benchmarks at Windy Lake, Little Roberts Outflow and Doris Lake were able to be accessed during the survey and showed a level of accuracy within 10 cm at those locations. The RTK system has a lower accuracy than the water level surveys made during the open-water season. The lower accuracy could lead to some discrepancies in the results.

The under-ice volume determined using subsurface contours for the lakes created from bathymetric survey information collected in 2006 and 2008. The bathymetric survey elevations were not referenced to a geodetic elevation, so the lake surface of the bathymetric data for each lake was estimated from the average August water elevation for all years for which geodetic water levels were available from 2016-2020.

This provides a means to relate bathymetric data, with no elevation reference, with surveyed water levels tied to a geodetic datum. The value used remains constant and does not impact the comparison of water levels from year to year.

TABLE 3-8 SUMMARY OF 2023 UNDER-ICE LAKE LEVEL SURVEYS WITH UNDER-ICE VOLUMES OF MONITORED LAKES WITH BATHYMETRY INFORMATION

Station	2023				
	Water Surface Elevation ¹ (masl)	Ice Thickness (m)	Water Gap (m)	Ice Bottom Elevation (masl)	Under-Ice Volume (Mm ³)
Windy Outflow	18.35	1.85	0.11	16.61	50.44
Glenn Lake	9.55	1.69	0.05	7.91	N/A
Wolverine Lake	32.33	1.85	0.15	30.63	N/A
Imniagut Lake	27.10	1.82	0.07	25.35	0.11
Patch Outflow	26.11	1.79	0.09	24.41	13.44
PO Outflow	26.14	1.91	0.11	24.34	11.09
Ogama Outflow	24.01	1.80	0.08	22.29	1.26
Doris Lake-2	22.00	1.67	0.08	20.41	22.27
Little Roberts Outflow	4.86	1.93	0.14	3.07	0.08

¹ UTM Zone 13W.

² No bathymetric data available.

4. DISCUSSION AND COMPARISON WITH FEIS PREDICTIONS

4.1 PRECIPITATION INFLUENCE

Table 4.1-1 presents the precipitation at the Hope Bay meteorological station for the 2023 hydrologic year. The hydrologic year is the period where precipitation will contribute to the runoff of that year. It generally spans October of the prior year (2022) to September of the current reporting year (2023), starting at the beginning of freeze up when precipitation that falls will be stored until the spring and ends at the start of freeze up the following year.

Due to weather issues, the precipitation gauge at the meteorology station was not functioning properly for a substantial portion of the year (October 2022 – June 2023). Therefore, the total observed precipitation of 86.2 mm does not accurately represent precipitation totals for the 2023 hydrologic year.

TABLE 4.1-1 DORIS HYDROMETRIC STATION PRECIPITATION OCTOBER 2022 – SEPTEMBER 2023

Month	Total Rainfall (mm)	Total Snowfall (SWE; mm)	Total Precipitation (mm)	Expected Mean Monthly Precipitation ¹ (mm)
Oct-22	INV ³	INV ³	INV ³	24
Nov-22	M ²	M ²	M ²	16
Dec-22	M ²	M ²	M ²	11
Jan-23	M ²	M ²	M ²	10
Feb-23	M ²	M ²	M ²	9
Mar-23	M ²	M ²	M ²	11
Apr-23	M ²	M ²	M ²	11
May-23	M ²	M ²	M ²	14
Jun-23	M ²	M ²	M ²	18
Jul-23	3.5	0.0	3.5	29
Aug-23	43.3	0.0	43.3	31
Sep-23	37.4	2.0	39.4	26

¹ Package P5-2 (Table 5) of the Hope Bay FEIS (SRK 2017).

² Missing data

³ Incomplete data, intermittent data for the month of October

Table 4-2 presents the precipitation return periods using the Climate and Hydrological Parameters Summary Report, Package P5-2 of the Hope Bay FEIS (SRK 2017).

TABLE 4-2 HOPE BAY EXTREME PRECIPITATION DEPTHS

Return Period	Annual Precipitation (mm)
200 Wet	324
100 Wet	311
50 Wet	297
25 Wet	282
20 Wet	277
10 Wet	261
5 Wet	243
Average (MAP)	210
2 Wet	210

Return Period	Annual Precipitation (mm)
3 Dry	195
5 Dry	182
10 Dry	168
20 Dry	158
25 Dry	155
50 Dry	147
100 Dry	140
200 Dry	134

Source: Package P5-2 (Table 6) of the Hope Bay FEIS (SRK 2017)

Note: Annual precipitation values are based on calendar year totals. While the hydrologic year is October to September, total precipitation statistics will be comparable when using a large data set.

Due to the missing precipitation data for 2023, no comparison can be made between observed precipitation and the annual return period for 2023. An estimation of the annual runoff relative to historic runoff data is presented in Section 4.2.

4.2 RUNOFF

A portion of the precipitation is converted to runoff, which enters the lakes and streams, resulting in streamflow. Table 4-3 presents the comparison of the 2023 runoff with historical baseline data collected between 2004 and 2015, as well as the 2019 through 2023 monitoring data. Runoff in 2023 was similar and slightly above the 2004-2015 average, with the exception of Windy and PO.

Windy was slightly below average, likely due to uncertainty in discharge measurements as the outflow has substantial weed growth and deep mud. Additionally, the freshet portion of the Windy Outflow hydrograph was estimated as data collected prior to the July site visit were accidentally deleted during the July data download.

PO is below the observed average, likely due to backwatering from the downstream un-named lake occurring during spring discharge measurements which cause discrepancies in the relationship between stage and discharge. PO has historically had issues with backwatering and has greater uncertainty in results than other stations.

TABLE 4-3 COMPARISON OF 2023 RUNOFF WITH HISTORICAL AVERAGES AND PREDICTED VALUES

Station	Monitored Runoff (mm)						FEIS Predicted Runoff ¹		
	2019	2020	2021	2022	2023	2004-2015 Average ¹	Predicted Average Runoff	Predicted 20-y Dry Runoff	Predicted 20-y Wet Runoff
Windy Outflow	174	107	166	86	111	130	58	21	119
Patch Outflow	189	82	105	118	117	112	77	40	137
PO Outflow	222	102	157	117	89	153	80	41	143
Ogama Outflow	167	58	128	95	122	117	100	46	199
Doris Creek TL-2	191	75	153	121	130	110	101	48	213
Roberts Outflow-2	156	N/A	141	127	130	112	n/a	n/a	n/a
Little Roberts Outflow	175	83	144	100	113	93	161	64	347

¹ Data Source: V5-S1 (Table 1.2-7, 1.5-7 to 1.5-12) of the Hope Bay FEIS (TMAC 2017).

Table 4-4 presents model results from the FEIS Hope Bay Project Water and Load Balance Report (SRK 2017). Effects to Doris Lake were predicted due to water withdrawal and mine dewatering activities. A Doris Lake water level drawdown could result in downstream effects to Little Roberts Outflow. Effects to Windy Lake were predicted due to the withdrawal of water from Windy Lake.

TABLE 4-4 PREDICTED IMPACT DUE TO ANNUAL OUTFLOW FROM MONITORED LAKES

Station	FEIS Predicted Impact ¹ to Annual Flow in 2023 under Average Climate Conditions (% Change)
Windy Outflow	-6.7
Patch Outflow	0
PO Outflow	0
Ogama Outflow	0
Doris Creek TL-2	-13.4
Little Roberts Outflow	-7.8
Glenn Outflow	-2.0

Source: V5-S1 (Table 1.2-7, 1.5-7 to 1.5-12) of the Hope Bay FEIS (TMAC 2017).

¹ Project Phase "Existing and Permitted Projects".

Drawdown to the Doris Lake water level was not detected in 2023 (Table 3-4 and Figure A8). An estimation of the annual runoff (Table 4-3) indicates average to slightly above average year. However, freshet started earlier than previous years.

Water withdrawal from Windy Lake did not cause a detectable impact in 2023. Total withdrawal for the year was 13,255 m³, which represents 0.87% of the total volumetric discharge for the year.

In 2023, no detectable impact caused by the Project were observed to lake levels or lake outflow rates as part of the compliance monitoring.

5. CLOSING

We trust that the monitoring summaries and recommendations for improvement are sufficient for your needs. Please contact us if you have any questions.

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6. REFERENCES

ERM Rescan. 2014. *Doris North Project: 2013 Hydrology Compliance Monitoring Report*. Prepared for TMAC Resources Inc. by ERM Rescan: Yellowknife, NT.

Golder Associates Ltd. 2007. *Doris North Project Aquatic Studies 2006*. Prepared for Miramar Hope Bay Ltd. by Golder Associates Ltd. Report No. 06-1373-026.

SRK. 2017. *Climate and Hydrological Parameters Summary Report, Hope Bay Project*. Prepared for TMAC Resources Inc. November 2017.

TMAC. 2017. *Madrid-Boston Project Final Environmental Impact Statement*. TMAC Resources Inc.: Toronto, ON.

TMAC. 2018. *Hope Bay Project: Aquatic Effects Monitoring Plan*. Prepared by TMAC Resources Inc.: Toronto, ON.