



AGNICO EAGLE

HOPE BAY MINE

Quarry Management and Monitoring Plan

JANUARY 2026
VERSION 8

Revisions


Version #	Date	Section	Summary of Changes	Author
1	April 2010	Throughout	Original Plan	HBML
2	December 2014	Throughout	Inclusion of Quarries 2, 3 and 4. Update to licence requirements. TMAC as current licence for the Hope Bay region.	TMAC
3	February 2017	Throughout	Changes to document structure for operational suitability and efficiency	TMAC
4	November 2017	Throughout	Transfer to new template. Inclusion of Phase 2 quarries, quarry rock use as mine backfill and identification of quarries not suitable for use as construction (and to be used as mine backfill at Madrid North or Boston).	TMAC
5	March 2022	Throughout	Transferred to Agnico Eagle template, updates Roles and Responsibilities and inclusion of wildlife and noise monitoring during blasts.	Agnico Eagle
6	September 2022	Table 2.2	Update table name to new WL 2BE-HOP2232	Agnico Eagle
7	September 2022	Table 1.1 and Attachment A	Update to include approved Quarry E	Agnico Eagle
8	January 2026	Throughout	Changes throughout this version of the plan include minor clarifications and updates. Additions are marked in right-hand margin as follows: 	Agnico Eagle
		Table 1.1	Updated table of quarries to reflect most recent quarry updates and geochemical testing results.	
		Table 1.5	Updated roles to reflect accurate titles.	
		Section 2.1.1	Updated section to reflect most up to data characterization of quarries.	
		Section 2.2.2	Updated to reflect use of emulsion instead of ANFO during blasting.	
		Section 3.1.5	Updated to reflect revised DFO blast monitoring guidelines.	
		Attachment A	Updated maps.	

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Glossary

Term	Definition
Agnico Eagle	Agnico Eagle Mines Limited
AN	ammonium nitrate
ANFO	ammonium nitrate + fuel oil
ARD	acid rock drainage
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
DFO	Fisheries and Oceans Canada
Eh	Reduction potential
ESR	Environmental and Social Responsibility
ICP-MS	Inductively coupled plasma mass spectrometry
KitlA	Kitikmeot Inuit Association
ML	metal leaching
NIRB	Nunavut Impact Review Board
NP/AP	Neutralizing potential to acid generating potential
NWB	Nunavut Water Board
NPAG	Non-potentially acid generating
PAG	Potentially acid generating
QAQC	Quality Assurance and Quality Control
TDS	Total dissolved solids
The Mine	Hope Bay Mine
The Plan	Quarry Management and Monitoring Plan
TIA	Tailings Impoundment Area
TMAC	TMAC Resources Inc
WSCC	Workers Safety and Compensation Committee

1. Introduction

The Hope Bay Mine (the Mine) is a gold mine, owned and operated by Agnico Eagle Mines Limited (Agnico Eagle). The Mine is located 705 km northeast of Yellowknife and 153 km southwest of Cambridge Bay in Nunavut Territory and is situated east of Bathurst Inlet. The Mine comprises of three distinct areas of known mineralization plus extensive exploration potential and targets. The three areas that host mineral resources are Doris, Madrid, and Boston.

This Hope Bay *Quarry Management and Monitoring Plan* (the Plan) has been prepared by Agnico Eagle in accordance with water licenses (2AM-DOH; 2BE-HOP) and the Kitikmeot Inuit Association (KitlA) Framework Agreement held by Agnico Eagle associated with developments throughout the Hope Bay region.

The Plan is intended primarily for use by Agnico Eagle and its contractors to ensure that best practices are followed for minimizing potential environmental impacts and environmental liabilities with respect to quarry rock, and that the conditions of water licenses and KitlA agreement are met.

This Plan is structured in a manner such that one document pertaining to quarries is approved and implemented across all Agnico Eagle's Hope Bay Mine sites, while still addressing site and licence-specific needs. Subsequent updates will be included if new quarries are proposed with specific management requirements. This is intended for consistency and efficiency across operations and compliance management.

1.1. Objectives

Quarry rock for the Hope Bay Mine will be used for the construction of infrastructure and roads, and also as structural backfill in selected underground mines.

The construction of many of the facilities at the Hope Bay Mine site require rock for fill material. Material from quarries considered to have a low potential for acid rock drainage (ARD) generation and low sulphur content is suitable to be used as construction material. Quarries will also be developed for use as structural backfill once all mine rock has been exhausted. Quarry rock that is unsuitable for use as construction material will only be used as mine backfill. The quarrying, infrastructure and road construction activities consist of drilling, blasting, mucking crushing, haulage to usage locations (e.g., the waste rock stockpile), end dump and levelling.

The objective of this Plan is to outline how these activities will be managed and monitored. Furthermore, this Plan documents if rock from each quarry is geochemically suitable for use as construction material or as mine backfill. Management and material handling of quarry rock to be used as backfill is described in the *Waste Rock, Ore and Mine Backfill Management Plan*. In brief, quarry rock that will be placed as backfill will be placed on the waste rock stockpile pad before being transferred underground. The monitoring of all quarry rock used as mine backfill is documented in this Plan.

1.2. Quarry Locations

The quarries approved through the Hope Bay Mine licensing for use as construction material and their geochemical suitability as construction material are listed and briefly described in Table 1.1. Maps presenting all quarry locations are presented in Attachment 1.

Table 1.1: Location and Status of Hope Bay Quarries

Quarry Name	Location	Geochemistry Results	Confirmatory Geochemical Test Required	Info of Note	Geochemical Program Reference
Quarry 1	Located on the eastern side of the Roberts Bay waste management facility. Site is currently used for the Fuel Tank Farm.	Non-potentially acid generating (NPAG) and low ML/ARD potential based on geochemical testing.		Quarry Depleted	AMEC 2005; SRK 2007
Quarry 2	Located west of the Doris Camp.	NPAG and low ML/ARD potential based on geochemical testing.		Quarry nearly depleted	
Quarry 3	Located east of Tail Lake. Quarry approved for saline water storage.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical drilling was completed to a depth of 11 meters. Additional testing would be required if quarry rock is to be extracted below this depth.	
Quarry 4	Doris Camp is located on the former quarry site.	NPAG and low ML/ARD potential		Quarry Depleted	AMEC 2005; SRK 2007; SRK 2010
Quarry 5	Located at the south apron of the Doris North Airstrip Expansion.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	SRK 2010
Quarry A	Located at the northern end of the Doris Windy Road.	NPAG and low ML/ARD potential		Quarry Depleted	SRK 2008
Quarry B	Located on the Doris Windy Road.	NPAG and low ML/ARD potential		Quarry Depleted	
Quarry C	Located on the Doris Windy Road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical drilling was completed to a depth of 10 meters. Additional testing would be required if quarry rock is to be extracted below this depth.	
Quarry D	Located on the Doris-Windy Road. Quarry approved for saline water storage.	NPAG and low ML/ARD potential based on geochemical testing.			
Quarry E	Located between Doris Camp and Windy Camp.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical drilling was completed to a depth of 19 meters. Additional testing would be required if quarry rock is to be extracted below this depth.	SRK 2008

Quarry Name	Location	Geochemistry Results	Confirmatory Geochemical Test Required	Info of Note	Geochemical Program Reference
G	Located on the proposed Madrid South All-weather Road.		✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	SRK 2014
H	Located on the proposed Madrid South All-weather Road at the Madrid South Portal.		✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
I	Located at Proposed Doris Central Vent Raise.		✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
J	Located east of Patch Lake.	NPAG and low ML/ARD potential based on geochemical testing.			SRK 2011
L	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.			
M	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.			
N	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.			
O	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
P	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.			
Q	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
R	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.			

Quarry Name	Location	Geochemistry Results	Confirmatory Geochemical Test Required	Info of Note	Geochemical Program Reference
S	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
T	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
U	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
V	Along Madrid-Boston all-weather road.	NPAG and low ML/ARD potential based on geochemical testing.	✓	Historical geochemical testing was not completed for all types of rock potentially present in the quarry. Confirmatory testing is required.	
W	Along Madrid-Boston all-weather road.	Suitable as mine backfill based on the regional geology of the quarry rock.	✓	If Quarry W is to be considered as construction rock, mineralogical characterization is required.	
X	Along Madrid-Boston all-weather road.	Low potential for ARD based on the regional geology of the quarry rock.	✓		SRK 2017
Z	Along Madrid-Boston all-weather road.	Suitable as mine backfill based on the regional geology of the quarry rock.	✓		
AA	Along Madrid-Boston all-weather road.	Low potential for ARD based on the regional geology of the quarry rock.	✓		
AB	Along Madrid-Boston all-weather road.	Low potential for ARD based on the regional geology of the quarry rock.	✓		
AD	Located on the Boston processing plant pad.	Quarry AD is located in a mineralized area based on a desktop geological assessment.	✓	Quarry AD is located in a mineralized area; therefore, it is recommended for use as mine backfill only.	
AE	Located on the Roberts Bay cargo dock.	Low potential for ARD based on the regional geology of the quarry rock.	✓		SRK 2017, SRK 2025
AF	Located on the Roberts Bay tank farm.	NPAG and low ML/ARD potential based on geochemical testing.			
AG	Along all-weather road between Madrid and Tailings Impoundment Area (TIA) South	Low potential for ARD based on the regional geology of the quarry rock.	✓		SRK 2017

Quarry Name	Location	Geochemistry Results	Confirmatory Geochemical Test Required	Info of Note	Geochemical Program Reference
	Dam.				
AH	Located on the Madrid North portal.	NPAG and low ML/ARD potential based on geochemical testing.			SRK 2017, SRK 2025
AI	Located on the Madrid North vent raise.	Low potential for ARD based on the regional geology of the quarry rock	✓		SRK 2017
AJ	Along Madrid-Boston all-weather road.	Low potential for ARD based on the regional geology of the quarry rock	✓		SRK 2017

1.3. Relevant Legislation and Guidance

Worker health and safety, and operational components of the Plan are part of Agnico Eagle's mine plan and come under the jurisdiction of the Nunavut Mines Inspector. Environmental elements of the Plan come under the jurisdiction of the Nunavut Water Board (NWB), the Nunavut Impact Review Board (NIRB) and other regulatory agencies.

Implementation of the Plan in part should be considered alongside the relevant legislation listed in Table 1.3.

Table 1.2: List of federal and territorial regulations governing the Quarry Management and Monitoring Plan

Regulation	Year	Governing Body	Relevance
Workers Safety and Compensation Commission (WSCC) Chief Mines Inspector as per Mine Health and Safety Act, and its associated Regulations	1995	Government of Nunavut	Includes underground disposal management

1.4. Related Documents

Table 1.3: List of documents related to the Quarry Management and Monitoring Plan

Document Title	Relevance
Groundwater Management Plan	Includes underground disposal management
Waste Rock, Ore and Mine Backfill Management Plan	Includes monitoring of waste rock, ore and mine backfill, including quarry rock backfill management. Geochemical characterization program for using waste rock for construction is outlined.
Quality Assurance and Quality Control Plan	Detailed quality assurance and quality control (QAQC) procedures
Doris-Madrid Interim Closure and Reclamation Plan Boston Conceptual Closure and Reclamation Plan	Includes closure activities

1.5. Plan Management

Revisions to the Plan can be triggered by activities such as changes in the mine plan, operational performance, personnel, or organizational structure, mine ownership, regulatory or social considerations, and life cycle or design philosophy. The Plan is reviewed annually and is revised or updated as necessary in accordance with changing circumstances.

Overall responsibility for the Plan implementation lies with the Maintenance Superintendent. The functional site-based lead for assigning and applying appropriate resources to execute the Plan rests with the Surface Superintendent. The Environmental Manager and Coordinator are responsible for day-to-day execution of activities associated with the Plan.

1.6. Roles and Responsibilities

Table 1.5 shows the roles and responsibilities for the *Quarry Management and Monitoring Plan*.

Table 1.4: Roles and Responsibilities

Role	Responsibilities
Mine General Manager	<ul style="list-style-type: none"> Responsible for the management and operations of the quarries and for providing the necessary resources to manage the quarries.
Energy & Infrastructure	<ul style="list-style-type: none"> Implementing the Plan; Providing onsite resources to operate the quarries; Conducting and documenting regular inspections; and Ensuring that water treatment and discharge activities take place as requested by Environment and Social Responsibility (ESR) and logs of discharge quantities and locations are provided to ESR.
Civil & Earthworks (Construction)	<ul style="list-style-type: none"> Providing the drill and blast designs; and Providing input on the modifications in the design and the operation of the quarries.
Environmental Superintendent	<ul style="list-style-type: none"> Updating the Plan; Providing the necessary resources for completing the water sampling programs; Liaise with Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) inspector prior to allow water discharge; and Coordinate: <ul style="list-style-type: none"> Construction Monitoring Report; Waste Rock and Quarry Monitoring Report; Construction Summary Report; Monthly Monitoring Report; and Annual Geotechnical Inspection Report.
Environmental Supervisor	<ul style="list-style-type: none"> Ensuring water sampling programs are completed as needed; Ensuring internal records are kept of the quantities of rock excavated from the quarries; Weekly visual inspections of active quarries; Conduct or facilitate seep and operational quarry sampling programs; Keeping records of onsite analysis, observations, photographs, water discharge activities and laboratory analysis; and Conducting monthly and annual regulatory reporting as required.
Geologist	<ul style="list-style-type: none"> Weekly visual inspections of the quarry face; Keeping records of inspection data sheets and photographs; Providing onsite resources to conduct geological/geochemical inspections; and Conduct quarry sampling programs.

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2. Management Issues

2.1. Pre-Development

2.1.1. Quarry Material Characterization

Geochemical characterization studies of all quarry sites for the Hope Bay Mine (Table 1.1) have been presented in AMEC (2005), and SRK (2007, 2008, 2010, 2011, 2014, 2017 and 2025). Based on these geochemical characterization programs, the material from the approved quarries is considered to have a low potential for ARD generation based on neutralizing potential to acid generating potential (NP/AP) ratios and low sulphur content. Accordingly, material from these quarries is suitable to be used as construction material.

Table 1.1 summarizes the geochemical testing results based on the quarry geochemical characterization programs and/or a comparison to the existing quarry rock data set in the context of regional belt-wide geology. The results of the assessment are summarized as follows:

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- Nine quarries (Quarry D, J, L, M, N, P, R, AF and AH) are considered to have a low potential for ARD generation based on NP/AP ratios and low sulphur content. Accordingly, material from these quarries is suitable to be used as construction material.
- Thirteen quarries (Quarry 3, 5, C, G, H, I, E, O, Q, S, T, U and V) are considered to have a low potential for ARD based on geochemical characterization tests. The rock tested from these holes ranged from a depth of 0 to 22 meters. Additional geochemical characterization is recommended if the quarry rock is to be extracted from a depth deeper than the rock tested.
- Seven quarries (Quarry X, AA, AB, AE, AG, AI, AJ) are considered to have a low potential for ARD based on the regional geology of the quarry rock in comparison to the belt-wide quarry rock geochemical database. These quarries are suitable for use as construction rock but a confirmatory sampling program is required prior to development.
- Based on the existing data, two quarries (Quarry W and Z) are currently suitable as mine backfill material only, however additional test work may demonstrate that the quarry rock is suitable for construction.
- Quarry AD (denoted by red dashed lines in Attachment 1) contains material that is not suitable for construction due to high risk of ARD and has been designated for use as mine backfill only. The management of quarry rock not suitable for use as construction material is discussed in Section 2.2.1.

2.1.2. Archaeology Survey

Archaeological surveys of the quarries and the all-weather road routes were conducted. Based on the results of the survey, buffers were established to ensure that the development of quarries and all-weather roads do not impact any archaeological sites.

Management Action

Agnico Eagle provides training on “chance-find” procedures to relevant field staff to ensure that any archaeological sites that were not identified during pre-development surveys are recognized and treated in an appropriate manner i.e., in accordance with the *Heritage Resources Protection Plan*.

2.1.3. Setback Distance Requirements

Shock waves from blasting in close proximity to fish bearing water have the potential to cause detrimental shock wave effects on fish. Guidelines for the use of explosives in or near Canadian fisheries waters (Wright and Hopky 1998) provide specific methods for calculating the setback distance required to stay below this threshold based on different amounts of explosive and the type of substrate.

Management Action

To ensure that there are no detrimental effects on fish from quarry activities, these guidelines will be used to establish final setback distances for each of the quarries.

2.2. Operations

2.2.1. Quarries Classified as High Risk for ARD

The construction of mine infrastructure may necessitate the development of quarries with quarry rock that is unsuitable for use as construction material. Table 2-1 lists all quarries that are currently designated as not geochemically suitable as construction material. Material from quarries listed in Table 2.1 is to be managed as mine backfill, which entails placing the rock on designated waste rock stockpiles. For Quarry W and Z, these quarries can potentially be used for construction, subject to further geochemical characterization as outlined in SRK (2017). Monitoring of quarry rock that would be used as structural backfill is outlined in Section 3.1 and is support of the objectives of the mine backfill monitoring program.

Table 2.1: Quarries designated for use as mine backfill

Quarry	Description	Potential for Use as Construction Material
AD	In location of the Boston processing plant; located in mineralized area	None
W	Along Madrid-Boston all-weather road	Could potentially be used as construction material, subject to additional characterization. Silicate mineralogical characterization recommended.

Quarry	Description	Potential for Use as Construction Material
Z	Along Madrid-Boston all-weather road	Could potentially be used as construction material, subject to additional characterization.

2.2.2. Residual Explosives

The majority of the explosives used on site would be Blastgel1070 (packaged emulsion/Ammonium Nitrate (AN) and fuel oil mixture (ANFO) blend explosives). Mainly during winter months when no water is observed in drill holes, ANFO or water resistant ANFO is used.

The potential for wet-holes in the quarries is considered to be low due to the land-based nature of the quarry sites and the presence of permafrost below the outcrops. The potential for wet holes will be assessed at the time of drilling and again at the time of loading each blast hole.

During summer months, Agnico Eagle witnesses water in drill holes the majority of the time. During winter months, drill holes are usually dry, with a few exceptions.

Management Action

The blaster responsible for loading and firing the drilled pattern begins the loading process by walking the entire pattern and checking the actual drilled depth of each hole versus the plan and noting any conditions such as water in each hole. This information is recorded on the blast pattern record sheet required by regulation to determine the amount and type of explosive and delay detonators required in each hole.

The presence of water in any drill hole requires one of several approaches to be taken to ensure proper and complete explosive detonation. ANFO designed for proper detonation in wet holes is available and can be used. Alternatively, dewatering the hole using a down hole dewatering pump and truck so that a poly borehole liner can be lowered into the hole and ANFO poured inside the bag is another approach which can be implemented. Usually, if water is observed, Blastgel1070 is the preferred option for blasting.

In the event that an incomplete detonation of the product occurs, it is likely that an orange colour smoke plume would be observed rising from the affected area. The blaster is required by the regulations to inspect the blasted area, make note of blast holes that may have experienced incomplete detonation and mark those locations with flagging.

Information from the blaster's inspection will be noted in the blast pattern log and the daily operations shift log communicated to all field supervision personnel. The flagged off area will remain until the excavation equipment advances to within half the hole spacing distance at which time the suspect material would be more closely inspected for the presence of ANFO.

2.2.3. Blast Management

The quarry sites have been deemed suitable for use provided that the archaeological site buffer zone is kept intact; therefore, due care will be taken to maintain the integrity of these sites.

Management Action

The blasts will be designed to shoot away from the potentially impacted archaeological sites. Prior to any blast, the rock face will be cleaned to minimize the potential of fly rock.

Single hole delays will also be used for maximum shot placement away from any identified archaeological sites and row timing will be increased to prevent back break and ensure all rock is moving in a forward motion away from the archaeological sites.

As an additional precaution, the blast limits will be set 60 m from the recommended 30 m buffers zones located in the quarries. This extra buffer will offer further protection from any possible disturbance to archaeological sites.

2.2.4. Precipitation / Snow Melt Water Management

The development of each quarry will proceed in a manner that, to the extent possible, ensures that all water entering the quarry as a result of precipitation or snow melt is retained within the quarry boundaries. Generally, this will be accomplished by ensuring that the quarry floors are sloped toward a natural low area of the quarry and, if required, the creation of a quarry sump to collect the waters and settle out suspended solids.

In the event that the quarry sump requires pumping, a sample of the ponded water will be collected, preserved in the appropriate manner, and submitted to an accredited laboratory for the analysis of specified parameters. These parameters are outlined in the relevant Water Licenses. Table 2-2 presents the quarry effluent quality limits as stated in Part D Item 17 of Water Licence 2BE-HOP2232. In addition to the parameters listed in Table 2-2, the following parameters shall be analyzed as per Part J Item 6b of Water Licence 2BE-HOP2232; Total Sulphate, Nitrate, Alkalinity, inductively coupled plasma (ICP) Metals analysis and Reduction potential (Eh).

Additionally, notification will be provided to the Inspector, at least ten (10) days prior to the planned pumping (as per Part D, Item 15 of 2BE-HOP2232). The notification will include the volume proposed for discharge and the discharge location.

Management Action

Following receipt of the laboratory results, water meeting the discharge requirements (Table 2-2) will be discharged. Section 5.1.5 describes the management action if water does not meet the discharge limits.

Care will be taken not to disturb settled solids in the bottom of the sump and pumping of the sump will only take place when conditions are suitable. Care will also be taken to ensure that discharged water does not enter fish bearing waters and that the pump discharge is positioned in a manner that minimizes erosion and siltation of the area downstream of the discharge.

Table 2.2: Quarry Effluent Quality Limits (Part D Item 17 of Water Licence 2BE-HOP2232)

Parameter	Maximum Average Concentration	Maximum Concentration in Any Grab Sample
pH	6.0 to 9.0	9.0
Electrical Conductivity	500 µS/cm	500 µS/cm
Total Ammonia	2 mg/L	4 mg/L
Total Suspended Solids	15 mg/L	30 mg/L
Oil and Grease	5 mg/L and no visible sheen	10 mg/L and no visible sheen
Total Aluminum	1.0 mg/L	2.0 mg/L
Total Arsenic	0.05 mg/L	0.10 mg/L
Total Copper	0.02 mg/L	0.04 mg/L
Total Iron	0.30 mg/L	0.60 mg/L
Total Lead	0.01 mg/L	0.02 mg/L
Total Nickel	0.05 mg/L	0.10 mg/L
Total Zinc	0.01 mg/L	0.02 mg/L

2.2.5. Dust Management

The major source of dust generation during the operations of the quarries will be in the vicinity of the crusher while it is operating.

Management Action

Dust suppression, where required, will consist of using water as permitted by the relevant Water Licence. A record of the volume of water used for this purpose will be maintained.

2.2.6. Equipment Re-fueling

Re-fueling of equipment operating in one of the active quarries will be conducted in a manner that will ensure that any spill of fuel or lubricants is effectively contained within the quarry area and clean-up is easily accomplished. During this activity, all re-fueling equipment will be equipped with a spill kit suitable for the materials being handled and a functioning fire extinguisher suitable for the materials being transferred.

Management Action

In the unlikely event that a spill does occur during re-fuelling activities, clean-up of the spilled material will be initiated immediately and all activities within the quarry suspended until the clean-up is complete.

The material will be disposed of in an appropriate manner as per the requirements specified in the *Spill Contingency Plan*.

2.3. Quarry Closure

The quarries will be decommissioned at mine closure upon full utilization of the available materials, when the quarry is deemed no longer required, or re-purposed for a different land use by Agnico Eagle. The quarries will be decommissioned and reclaimed in accordance with the *Closure and Reclamation Plans*.

3. Monitoring and Evaluation

The monitoring and evaluation programs outlined below applies to all quarries and quarry rock regardless of intended use or geochemical characteristics, and includes quarry rock used for construction or mine backfill. The rationale for monitoring of quarry rock that will be used as backfill is presented in the *Waste Rock, Ore and Mine Backfill Management Plan*.

3.1. Quarry Operations

3.1.1. Quarry Visual Inspection

During quarrying operations, a visual inspection of the quarry face to verify the geological characteristics of the rock will be conducted by a qualified field geologist or geochemist at least once per week. The purpose of the inspection will be to confirm the presence of the expected rock types and that disseminated sulphides only (e.g., not veins) are being exposed and therefore used in construction. A secondary objective of the inspection will be to confirm the absence of any fibrous forms of actinolite in the quarry material.

Prior to the inspection, site personnel will ensure that it is safe to work within the quarry and will inform any vehicle operators as to the location and timing of the inspection work.

The inspector will walk from one side of the quarry around to the other side examining both the surface and the exposed bedding material along the side of the quarry for any anomalous rock types or significant amounts of sulphide. If present, these materials will be examined, described, and located on a map. In addition, at regular 100 metre intervals, the inspector will stop and complete a close inspection of the rocks, breaking open several rock clasts and describing what they see.

3.1.2. Quarry Material Tracking

For each quarry, volumes of material and the intended purpose (construction or backfill) will be recorded.

3.1.3. Quarry Rock Sampling

During quarrying activities, blast material from each active quarry will be collected at two different stages of quarry development per year. During each collection event, a whole rock sample and a sample of the same material sieved to pass a less than 2 mm screen will be submitted to an accredited external lab for sulphur analysis. This sampling method and frequency will result in up to four samples from each active quarry per year. The sample locations will be pre-determined to ensure that they reflect a random selection of the rock fill material used in road construction. In the event that the results return a sulphur

value of greater than (>) 0.1 % sulphur, the samples will be subjected to ABA¹ and other confirmatory test work including shake flask extraction tests² on a representative subset of sieved samples (-2 mm).

The objective of this program will be to confirm previous rock characterization results and to assess the ARD potential of the fine fraction, which tends to concentrate sulphide minerals. In the case of quarries that will be developed as mine backfill material, a secondary objective is to confirm the geochemical characteristics of the mine backfill.

The results of the analysis will be reported in the Waste Rock and Quarry Monitoring Report (which is referenced in the Construction Monitoring Report) and submitted by March 31 of the year following construction. The report will include a discussion and interpretation of the geochemical data collected.

3.1.4. Quarry Sump Monitoring

After significant precipitation events, the quarry area will be inspected and the water level in the quarry sump assessed. In the event that the quarry sump requires pumping, the procedures or contingencies outlined in Sections 2.2.4 and 5.1.5 of this Plan will be followed.

3.1.5. Blast Vibration Monitoring

Guidelines for the use of explosives in or near Canadian fisheries waters (Wright and Hopky 1998) indicate that *“No explosive shall be detonated in or near fish habitat that produces, or is likely to produce, an instantaneous pressure change (i.e., overpressure) greater than 100 kPa (14.5 psi) in the swimbladder of a fish”*, and that *“No explosive is to be detonated that produces, or is likely to produce, a peak particle velocity greater than 13 mm/s in a spawning bed during the period of egg incubation”*. Of note, Fisheries and Oceans Canada (DFO) has additionally recommended that instantaneous pressure change should be limited to 50kPa in order to be effectively protective of fish. Blast vibration monitoring will be undertaken to avoid potential effects when detonation distances approach the recommended setbacks to ensure appropriate vibration thresholds that are protective of fish and vulnerable life stages of fish are maintained.

3.1.6. Wildlife Monitoring

Prior to all blasts, a visual inspection of the quarry and of the surrounding tundra will be carried out by trained environmental personnel to verify that no caribou or muskox are within line of sight, up to 2.8 km, of the quarry high point, as per the *Wildlife Mitigation and Monitoring Plan*.

If a caribou or muskox is found within the limits established by Agnico Eagle, the blast shall be postponed until the caribou or muskox has moved to a distance that is greater than 2.8 km from the quarry or out of the line of sight from the quarry high point.

¹ Paste pH, sulphate by HCl leach, total inorganic carbon, Modified NP and elemental content by aqua regia digestion followed by ICP finish.

² MEND (2009) method. Leachate analysis to include pH, EC, SO₄, acidity, alkalinity, chloride, ammonia, and low level dissolved metals.

Should caribou be observed at a distance that is greater than 2.8 km from the blast site, the environment personnel shall conduct behaviour monitoring of the animal during the blast to evaluate how the caribou responds to the blast. Any behaviour monitoring conducted will be reported in the annual *Wildlife Mitigation and Monitoring Plan* Report, submitted by March 31 of the following year.

The inspector shall inform the blast lead of the all-clear prior to the blast. If the all clear is not given by the environmental personnel, the blast shall be postponed.

3.1.7. Noise Monitoring

During quarry blasts, noise monitoring measurements will be carried out by the environment department or other qualified personnel following methods of the Quarry Blasting Noise Monitoring Standard Operating Procedure. Monitoring will initially be conducted at a distance of 2.8 km from the blast site. The aim of these tests being to confirm model prediction and that an overpressure value of 96 L_{peak} dBZ will not be exceeded at 2.8 km from the blast site This monitoring will end once the validity of the model has been confirmed, in consultation with regulators.

3.2. Construction

3.2.1. Infrastructure and All-Weather Roads

Visual Inspections

During all construction activities, a visual inspection by environment personnel will be conducted of the quarries, equipment storage and re-fuelling areas, construction areas and the advancing area of road construction activity at least once per week. The inspection will focus on identification and removal of foreign and/or spilled materials, assessing the extent of erosion and sedimentation resulting from rock placement (particularly during periods of precipitation), the extent of dusting and the transport of dust onto the surrounding tundra.

In addition, an inspection of each watercourse crossing along the all-weather roads throughout the annual ice-free period will be conducted to confirm structural integrity, confirm soil and permafrost stability in the immediate area and to confirm that the crossings have been located adequately with respect to the watercourses.

A record of the date, place and results of each inspection will be maintained as will a photographic record of “items of interest” (i.e., dusting, wildlife encounters, spilled material, etc.) identified during the inspection.

3.3. Post-Construction Inspections and Monitoring

3.3.1. Quarry

Visual Inspection

A visual inspection of each mined-out quarry will be completed at least once per year to ensure that the site remains safe and no environmental or public health and safety concerns have developed. In the event that potentially acid generating waste rock has been placed in one or more of the mined-out quarries, the area will be inspected to ensure that the 2 meter cover remains intact and that seeps from the material are not in evidence.

In the event that the inspection identifies ponded water within the mined-out quarry in sufficient volume to require pumping, the procedures or contingencies outlined in Section 2.2.3 of this Plan will be followed.

Records of the inspections and findings of each will be maintained and reported in the appropriate manner.

3.3.2. Infrastructure and All-Weather Roads

Following completion of the construction of the road and pad areas, an inspection will be conducted by a qualified field geologist or geochemist to characterize the rock used in construction and to identify and sample ephemeral seeps occurring through the road construction material. The objective of this program will be to confirm that an environmentally-significant level of metal leaching (ML) is not occurring from the road materials.

In the event that quarry rock from any of the quarries is used in the construction of additional infrastructure, the area in which the rock is used will be incorporated in the ongoing seep and rock sampling program. The monitoring and sampling will be completed in order to ensure that the highest regulated requirement for the management of construction rock is uniformly applied throughout the Hope Bay Belt.

3.3.3. Seep Survey and Sampling

Seep surveys will be conducted during the spring freshet in the year following completion of construction using quarry rock. Details of seep survey monitoring following completion of construction using waste rock are outlined in the *Waste Rock, Ore and Mine Backfill Management Plan*.

Seeps will be located by walking along the downstream side of the roads and infrastructure, looking, and listening for signs of flowing water. In low-lying areas where the direction of surface water flow is not evident, both sides of the structure will be inspected. Where surface flows are identified, the upstream side will be inspected to determine whether the flow originates from the upstream side or whether it is likely to originate from within the rock fill material. Most samples will target the latter, more ideal type of seep. However, a selected number (maximum of one location for every 2 km of road) will be collected at

locations where there is moderate upstream flow component. In these cases, samples will be collected from both upstream and downstream of the roads.

At a minimum, a water sample will be collected from 10% of the identified ephemeral seeps (regardless of the field measurement values) appropriately preserved and submitted for laboratory analysis.

All the samples collected will be preserved in an appropriate manner, labelled and submitted to an accredited laboratory for analysis of pH, total dissolved solids (TDS), acidity and/or alkalinity, sulphate, total ammonia, nitrate, and a full suite of dissolved metals by inductively coupled plasma mass spectrometry (ICP-MS).

3.3.4. Infrastructure Inspection and Material Sampling

Rock characterization and sampling will be conducted once construction of the road and pad areas is completed by a qualified field geologist or geochemist to characterize the rock used in construction. The objective of this program is to confirm the geology and geochemistry of the quarry rock, and assess the ARD potential of the fine fraction, which tends to concentrate sulphide minerals.

All infrastructure areas will be visually examined to confirm the geology of the construction material, with an emphasis on rock type and sulphide content. Samples of *in situ* rock fill will be collected from pre-determined points of the infrastructure (approximately 1 sample per 0.5 kilometres of road, and five samples from each of the pad areas). At each sample location, a rock sample (<1" fraction) will be collected as well as a -2 mm sieved sample when available. The sample locations will be pre-determined to ensure that the samples reflect a random selection of a representative material of the *in situ* rock fill from each quarry used for construction.

All the samples will be submitted to an accredited external lab for sulphur analysis. In the event that the results return a sulphur value of greater than (>) 0.1 % sulphur, the samples will be subject to ABA and shake flask extraction tests on a representative subset of samples, as described in Section 3.1.3. Testing will be completed on both the fines and the bulk sample.

3.3.5. QAQC Procedures for Water Sampling

QAQC is a set of operating principles that, if strictly followed during sample collection and analysis, will produce data of known and legally defensible quality.

Sampling procedures include:

- Using clean sampling gloves for each composite sample;
- Cleaning sampling equipment between each composite sample;
- Collecting samples using bottles and jars provided by the laboratory following the instructions provided by the laboratory for each parameter type;

- Labelling sample containers clearly with the sample station, date, time, and analysis requested;
- Keeping samples cool and dark during storage and shipment to the laboratory; and
- Checking field notes for accuracy and completeness at the end of each sampling session.

Detailed QAQC procedures are available in the *Quality Assurance and Quality Control Plan*.

4. Documentation and Reporting

Agnico Eagle will submit the Annual Report and the Annual Geotechnical Inspection Report no later than March 31 each year. In addition, in accordance with the relevant water licenses and the KitIA Framework Agreement, Agnico Eagle will submit Monthly Monitoring Reports on a monthly basis, and Construction Summary Reports (including a Waste Rock and Quarry Monitoring Report) as needed post-construction.

5. Contingencies

5.1. Identification of Inappropriate Quarry Rock

In the unlikely event that the visual inspection identifies potentially acid generating (PAG) rock in a quarry with material designated as suitable for construction, the geologist will “tag” the material for avoidance or removal. If the material is excavated, it will be transported to a waste rock storage area for disposal underground. If this is not possible at the time, the PAG rock will be buried in an active or previously mined-out quarry. If the PAG material is buried, it will be covered with a minimum of 2 metres of rock material that is approved for construction and will be clearly marked as inappropriate for use as construction material. In the quarry stored rock, permafrost is expected to slowly aggrade into the rock fill, slowing the rates of sulphide oxidation substantially, and eventually shutting off seepage pathways. The clean rock cover would act as a thermal blanket to keep the active freeze/thaw zone away from the more reactive rock.

In the unlikely event that the visual inspection identifies fibrous actinolite, the geologist will “tag” the material for avoidance or removal. If the material is excavated, it will be transported to a waste rock storage area for disposal underground. If this is not possible at the time, the material will be buried in one of the previously mined-out quarries and covered with a 1.0 m layer of benign rock and a record of the location maintained.

5.2. Inappropriate Construction Material Identified

In the unlikely event that the results of the seep monitoring/sampling program or the road material sampling program indicate the presence of potential ML or ARD further investigations will be undertaken to define the extent and assess the potential impacts of the material. If warranted, and after discussion with the appropriate regulatory agencies, the material will be excavated and hauled to a waste rock storage area or temporarily stored in one of the previously mined-out quarries prior to eventual disposal underground. The quarry stored rock fill will be placed within the quarry and covered with a minimum of 2 m of rock material that is approved for construction and will be clearly marked as inappropriate for use as construction material. Permafrost is expected to slowly aggrade into the rock fill, slowing the rates of sulphide oxidation substantially, and eventually shutting off seepage pathways. The clean rock cover will also act as a thermal blanket to keep the active freeze/thaw zone away from the more reactive rock.

5.3. Identification of Un-detonated or High ANFO Residue Areas

Material considered un-detonated or high in ANFO residue, which will contain potentially elevated levels of nutrients (primarily ammonia) will be selectively excavated and hauled to an established waste rock management area with any runoff from the area reporting to Contact Water Ponds for ultimate disposal in the Tailings Impoundment Area (TIA).

5.4. Spill of ANFO

In the unlikely event that a spill of the ANFO occurs during the charging of the holes for blasting, all activities within the quarry will be suspended until the clean-up is complete in accordance with the *Spill Contingency Plan*. The clean-up of the spilled material will be initiated immediately and the material disposed of in accordance with the *Explosives Management Plan*.

5.5. Sump Water Required Special Handling

In the event that the quarry water does not meet the discharge criteria, an inquiry of the cause of the noted exceedance will be conducted, and appropriate mitigation developed. Any non-compliant water that needs to be discharged would be transported to Contact Water Ponds for management and/or transported directly to the Doris North TIA for disposal or the Boston surge pond.

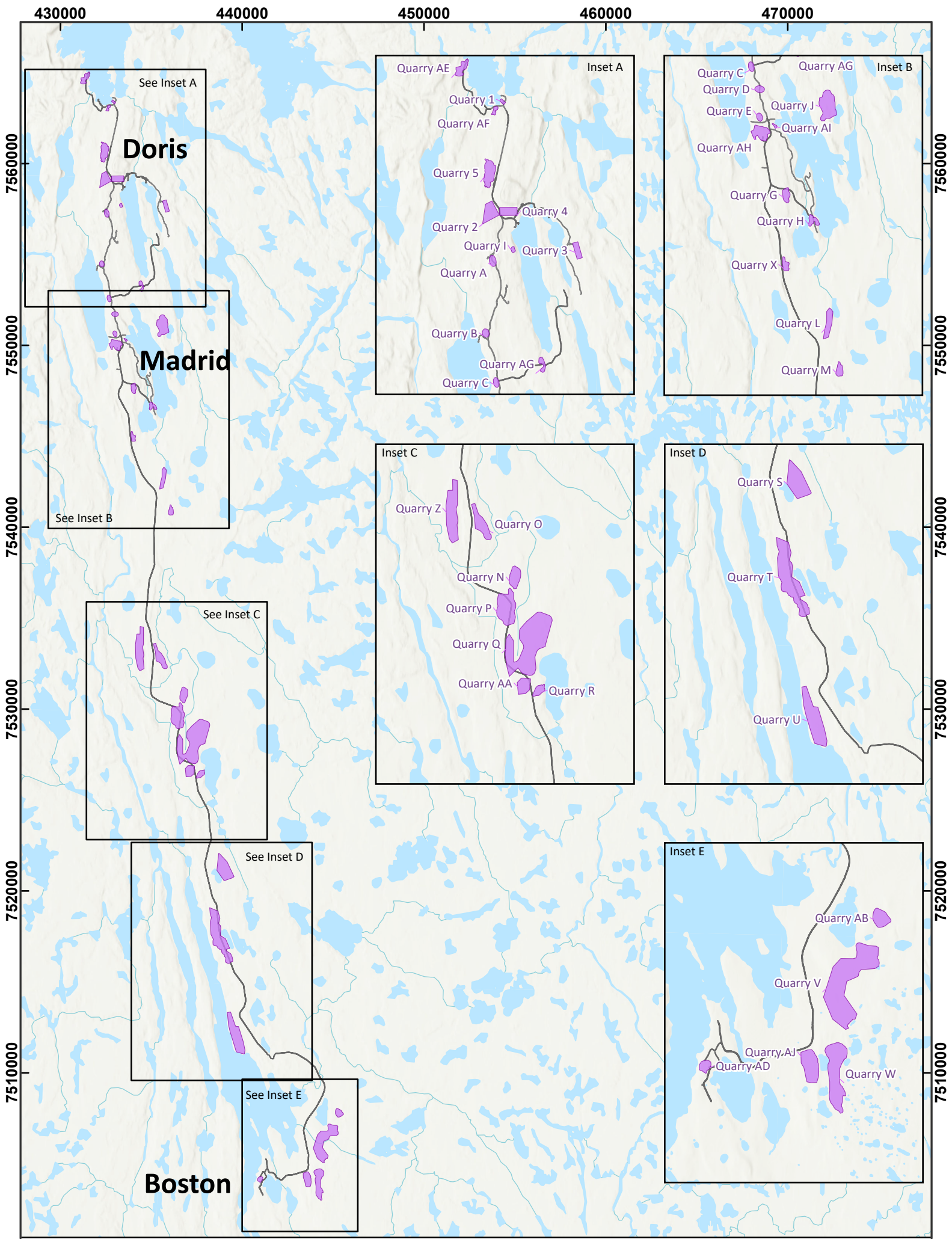
All compliant and non-compliant monitoring results are summarized in the monthly Surveillance Network Program reports to the NWB and a copy is provided to the Inspector. This monthly report would include details of the disposal of any non-complaint water.

6. References

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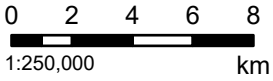
Attachment 1: Maps





Hope Bay Mine

2025 Quarry Management and Monitoring Plan



Date: 2025-12-17
Map Number: HOB-020

Coordinate System: NAD 1983 UTM Zone 13N
Projection: Transverse Mercator
Datum: North American 1983



Permitted Quarries
Mine Roads

