



Nunavut Impact Review Board

2023 Site Visit Report

**Doris North and**

**Phase 2 Hope Bay Belt**

Agnico Eagle Mines Limited

NIRB File Nos. 05MN047 and 12MN001



September  
2023

**Full Report Title:** 2023 Site Visit Report for the Nunavut Impact Review Board's Monitoring of Agnico Eagle Mines Ltd.'s Doris North Gold Mine (NIRB File No. 05MN047) and Phase 2 Hope Bay (NIRB File No. 12MN001) Projects

**Project:** Doris North Gold Mine and Phase 2 Hope Bay Projects

**Project Location:** Kitikmeot Region, Nunavut

**Land Tenure:** Inuit Owned Land

**Project Owner:** TMAC Resources Inc.  
c/o Agnico Eagle Mines Limited  
145 King Street East Suite 400  
Toronto, ON M5C 2Y7  
Tel: (416) 628-0216

**Proponent Contact:** Guy Dufour, Environment General Supervisor  
Ryan Vanengen

**Proponent Personnel:** Brett Fairbairn, Environmental Coordinator  
William Nalley, Environmental Technician

**Visit conducted by:** Jorgen Komak, GIS Specialist  
Guillaume Daoust, Technical Advisor II

**Site visit date:** August 14, 2023

**Last site visit:** June 20-21, 2022

**Report prepared by:** Guillaume Daoust

**Photos by:** NIRB Staff

**Cover photos:** Doris North Tailings Impoundment Area looking from North Dam

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
1.1	Objectives and Purpose of Site Visit.....	4
<b>2</b>	<b>DORIS NORTH AND PHASE 2 HOPE BAY BELT PROJECTS .....</b>	<b>4</b>
<b>3</b>	<b>OBSERVATIONS BASED ON NIRB’S PROJECT CERTIFICATES NO. 003 AND NO. 009 .....</b>	<b>7</b>
<b>4</b>	<b>GENERAL OBSERVATIONS AT SITE .....</b>	<b>9</b>
4.1	Roberts’s Bay .....	9
4.1.1	Doris Quarry 2, Incinerator and Landfarm area.....	11
4.1.2	Camp Site Area .....	13
4.1.3	Doris North Tailings Impoundment Area .....	16
4.2	Phase 2 Hope Bay Belt.....	19
4.2.1	Madrid North Site, Naartok East Crown Pillar Pit .....	19
4.2.2	Madrid Waste Rock Management .....	22
4.2.3	Windy Exploration Camp .....	24
<b>5</b>	<b>CONCLUSION .....</b>	<b>25</b>

## LIST OF TABLES

Table 1: Hope Bay Projects History .....	5
Table 2: Doris North Project Certificate No. 003 Amendment 2 (2016).....	7
Table 3: Phase 2 Project Certificate No. 009 (2018) .....	7

## LIST OF FIGURES

Figure 1: Hope Bay Project.....	6
---------------------------------	---

## LIST OF PHOTOS

Photo 1: Saline Discharge and Water Recirculation.....	9
Photo 2: Culvert on the road going to the saline discharge and sedimentation control.....	9
Photo 3: Thermistors at the Robert's Bay Jetty .....	10
Photo 4: Spill Equipment in Seacans next to the Robert's Bay Jetty .....	10
Photo 5: Active Quarry 2 .....	11
Photo 6: New industrial composter being installed next to the incinerator .....	11
Photo 7: Incinerator Surrounded by Seacans .....	12
Photo 8: Landfarm for contaminated soil .....	12
Photo 9: The Inuit Cultural Centre.....	13
Photo 10: Counselor Information Poster at Doris Camp .....	13
Photo 11: Emergency Training Board at Doris Camp .....	14
Photo 12: Sedimentation Pond at Doris North which collects Runoff water from Camp site and discharge into Tailings.....	14
Photo 13: Continuous Air Quality Monitoring, next to Doris Lake .....	15
Photo 14: Weather Monitoring Station at Doris North.....	15
Photo 15: South Dam .....	16
Photo 16: Monitors at the South Dam.....	16

Photo 17: Wildlife Camera .....	17
Photo 18: Finished Aqua Dam, measure in place to compliant with the new <i>Metal and Diamond Mining Effluent Discharge Regulations</i> .....	17
Photo 19: Hydrology Monitor of the Tailing.....	18
Photo 20: Discharge point into the Tailings and newly constructed Effluent Water Treatment ..	18
Photo 21: Thermistors at the North Dam.....	19
Photo 22: Wildlife Passage under the Windy Road going to Madrid.....	20
Photo 23: Wildlife Camera next to wildlife passage. ....	20
Photo 24: Naartok East Crown Pillar Pit .....	21
Photo 25: Closed Former Madrid Portal.....	21
Photo 26: Sedimentation Control at former Madrid Portal.....	22
Photo 27: PAG Waste Rock Pond .....	23
Photo 28: Collection Sump from the PAG Waste Rock Pond leak and new mat to help redirect water .....	23
Photo 29: Windy Camp in decommission process .....	24
Photo 30: Windy Camp in decommission process .....	24



# 1 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for post environmental assessment monitoring of a Project per Part 7 of Article 12 of the *Nunavut Agreement* and s. 135(4) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14 (*NuPPAA*).

This report provides the findings that resulted from the NIRB's 2023 Site Visit of the Doris North Gold Mine and Phase 2 Hope Bay Belt Projects that took place on August 14, 2023.

TMAC Resources Inc is a wholly owned subsidiary of Agnico Eagle Mines Limited (Agnico Eagle) and on-site staff are Agnico Eagle employees; however, Project Certificates No. 003 and 009 are still held by TMAC Resources Inc.

## 1.1 Objectives and Purpose of Site Visit

The objective of the NIRB's Site Visit was to determine whether and to what extent the land or resource use in question is being carried out within the predetermined Terms and Conditions as set out in the amended Project Certificate issued for the Doris North Gold Mine (Doris North) Project Certificate No. 003 and for the Phase 2 Hope Bay Belt (Phase 2) Project Certificate No. 009 per Section 12.7.2(b) of the *Nunavut Agreement* and s. 135(3)(b) of the *Nunavut Planning and Project Assessment Act (NuPPAA)*.

The observations resulting from the 2023 Site Visit shall, wherever possible, be incorporated into the measurement of the relevant effects of both the Doris North and the Phase 2 Projects, provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals, and will further be used to assess the accuracy of the predictions contained in the impact statements for both projects per Section 12.7.2 of the *Nunavut Agreement* and s. 135(3) of the *NuPPAA*.

## 2 DORIS NORTH AND PHASE 2 HOPE BAY BELT PROJECTS

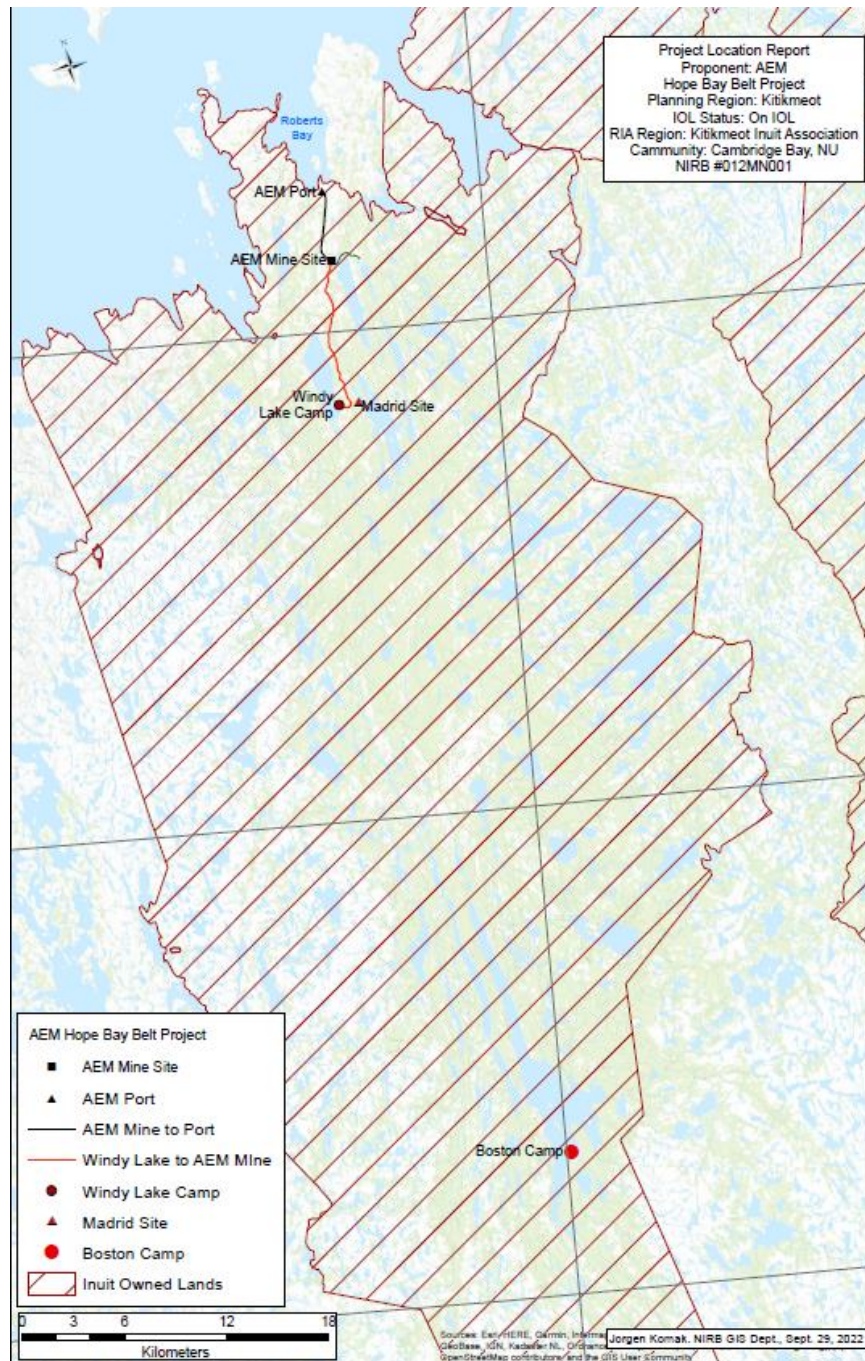
The Hope Bay Belt properties are located 110 kilometres (km) south of Cambridge Bay and 65 km east of Omingmaktok (Bay Chimo) near Melville Sound in the Kitikmeot region of Nunavut. Doris North is located at the north end of the Hope Bay Belt deposit while the Phase 2 Hope Bay Belt is divided into the Madrid sites (North and South) located approximately eight (8) km south of Doris North, and the Boston site 80 km further south ([Figure 1](#)). Both Projects are for the construction, operation, and eventual decommissioning of underground gold mines and small open pits for crown pillar removal located on Inuit-owned lands involving both Inuit and Crown-owned minerals. The Project sites are accessed by sealift for fuel and supplies, and by air for select freight and all personnel movements.

For further information on the Doris North Project and the 2016 Amendment, please see the Project Dashboard on the NIRB's Public Registry at [www.nirb.ca/project/124632](http://www.nirb.ca/project/124632).

For further information on the Phase 2: Hope Bay Belt Project, please refer to the Project Dashboard on the NIRB's Public Registry at [www.nirb.ca/project/124148](http://www.nirb.ca/project/124148).

**Table 1: Hope Bay Projects History**

<b>2006</b>	Issuance of Project Certificate No. 003 (Doris North) to Miramar Hope Bay Limited
<b>2008</b>	Doris North and the Hope Bay Belt properties were acquired by Newmont Mining Corporation
<b>2012</b>	The Doris North Project was placed in care and maintenance
<b>2013</b>	TMAC Resources Inc. (TMAC) acquires Hope Bay Belt properties.
<b>2015</b>	Doris North operations resumed, and mine construction started
<b>2016</b>	Amendment of Project Certificate No. 003 and Project Certificate No. 003 amended to indicate TMAC as the holder
<b>2017</b>	Start of commercial production at Doris North
<b>2018</b>	<ul style="list-style-type: none"> <li>• Trenching and reclamation of Doris Crown Pillar</li> <li>• Issuance of Project Certificate No. 009 for Phase 2 Hope Bay Project including the Madrid North/South and Boston deposits</li> </ul>
<b>2019</b>	Start of construction at Madrid North (Portal and Naartok East Crown Pillar Pit)
<b>2020</b>	<ul style="list-style-type: none"> <li>• Discharge through the waterline to Roberts Bay begin.</li> <li>• Agnico Eagle Mines Limited purchases TMAC and assumes operations at Hope Bay</li> </ul>
<b>2021</b>	Naartok East Crown Pillar pit mined out, portal temporarily closed, operations at Madrid suspended and plans for the development of Madrid re-evaluated
<b>2022</b>	Agnico Eagle paused commercial gold production to focus on exploration and planning for future development and operations of the Doris North and Phase 2 Hope Bay Belt Projects.
<b>2023</b>	Agnico Eagle continues to focus on exploration and future planning for the Projects



**Figure 1: Hope Bay Project**

### 3 OBSERVATIONS BASED ON NIRB'S PROJECT CERTIFICATES NO. 003 AND NO. 009

The following tables summarize observations made on-site concerning the Project Certificate No. 003 Amendment 2 and Project Certificate No. 009.

**Table 2: Doris North Project Certificate No. 003 Amendment 2 (2016)**

TC#	Subject	Observation
6	New TIA or modification of the existing TIA	To comply with the <i>Metal and Diamond Mining Effluent Regulations</i> (MDMER) Agnico Eagle built an Aqua Dam in its Tailings Area <a href="#">Photo 18</a> . Agnico Eagle has also completed construction of a water treatment plant at the TIA to process the tailings impoundment water to meet MDMER for discharge to Roberts Bay.
8	Weather station	The Weather Station is on site and operational <a href="#">Photo 14</a> .
14	Monitoring on both Doris Creek and effluent in the TIA	The TIA is being discharged into Roberts Bay.
19	Thermistor Cables and Temperature loggers in jetties	Thermistors are installed at the jetty <a href="#">Photo 3</a> .
20, 33	To prevent ecosystemic effects in the event of fuel or waste spills.	In place and visible throughout the mine site and next to the Roberts Bay Jetty, <a href="#">Photo 4</a> .
22	Ongoing wildlife monitoring.	Visible wildlife cameras at site, <a href="#">Photo 23</a> .
25 & 26	Wildlife-TIA interaction and recording of wildlife at Doris site	Wildlife camera are installed around tailings <a href="#">Photo 17</a> .
30	Air Quality	Dust monitors were visible at multiple location around the site and a continuous air monitor for NO <sub>2</sub> <a href="#">Photo 13</a> .
33	Spill kits at Roberts Bay	Spill equipment were visible around the site <a href="#">Photo 4</a> and a board with upcoming training at the in the main camp <a href="#">Photo 11</a> .

**Table 3: Phase 2 Project Certificate No. 009 (2018)**

TC#	Subject	Observation
1	Air Quality Monitoring	Dust monitors were observed along Windy Lake Road but as the Madrid North Site is not active, air quality monitoring is limited.
2	Green House Gas (GHG) Reduction	Agnico Eagle built a composter which will help reduce GHG by diverting organic waste from the incinerator <a href="#">Photo 6</a> .

TC#	Subject	Observation
5	Acid Rock Drainage and Metal Leaching Management	Possible bedrock fracture potentially allowing runoff water from Waste Rock Pile to escape contact water holding pond <a href="#">Photo 27</a> . Agnico Eagle constructed multiple sumps around the pond to collect leaking water, <a href="#">Photo 28</a> .
6	Monitor the integrity of infrastructures.	For the infrastructure in place related to the Phase 2 project, monitoring is being conducted. Monitors are currently installed at the South and North Dam, Photo 16 & <a href="#">Photo 21</a> .
7	Erosion Management	Silt fencing and coconut mats are in place to reduce erosion at Madrid portal, <a href="#">Photo 26</a> .
8	Progressive Reclamation	Agnico Eagle started the decommission of Windy Camp, <a href="#">Photo 29</a> & <a href="#">Photo 30</a> .
10	Monitor Surface Water quality	Adjacent to the former Madrid Portal at the Waste Rock Management Area water is monitored to ensure no impact to the surrounding area. A coconut mat was installed in the area to redirect water into the sump. The area around the former Madrid Portal is also observed due to the changing of the rock in the area due to salinity in the previous materials placed on the pad.
11	Mitigate potential impacts to groundwater, surface water and freshwater.	Windy Lake is monitored as it is the drinking water source for the Doris North Camp.
12	Setback on quarries	The Quarries along Windy Lake Road were observed to have appropriate setbacks to waterbodies.
13 & 16	Watercourses maintain movement of water and/or fish	The bridge and other infrastructure along Windy Road were positioned to maintain the movement of water and/or fish.
19 & 20	Minimize impacts to terrestrial wildlife from road traffic.	There is a wildlife passage under Windy Road going to Madrid to facilitate the passage of wildlife, <a href="#">Photo 22</a> .
47	Health and Wellness	A poster about mental wellness was within the cultural centre with contact information, <a href="#">Photo 10</a> .



## 4 GENERAL OBSERVATIONS AT SITE

The following are general observations made during the Site Visit. The visit was conducted on August 14, 2023.

### 4.1 Roberts's Bay

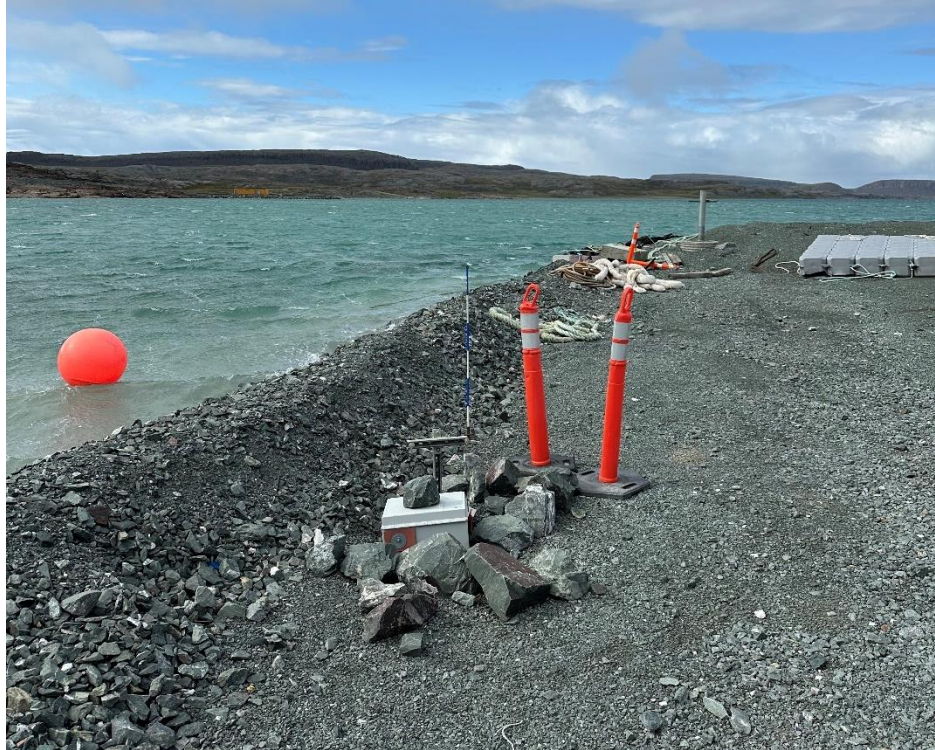


**Photo 1: Saline Discharge and Water Recirculation**



**Photo 2: Culvert on the road going to the saline discharge and sedimentation control**





**Photo 3: Thermistors at the Robert's Bay Jetty**



**Photo 4: Spill Equipment in Seacans next to the Robert's Bay Jetty**



#### 4.1.1 Doris Quarry 2, Incinerator and Landfarm area

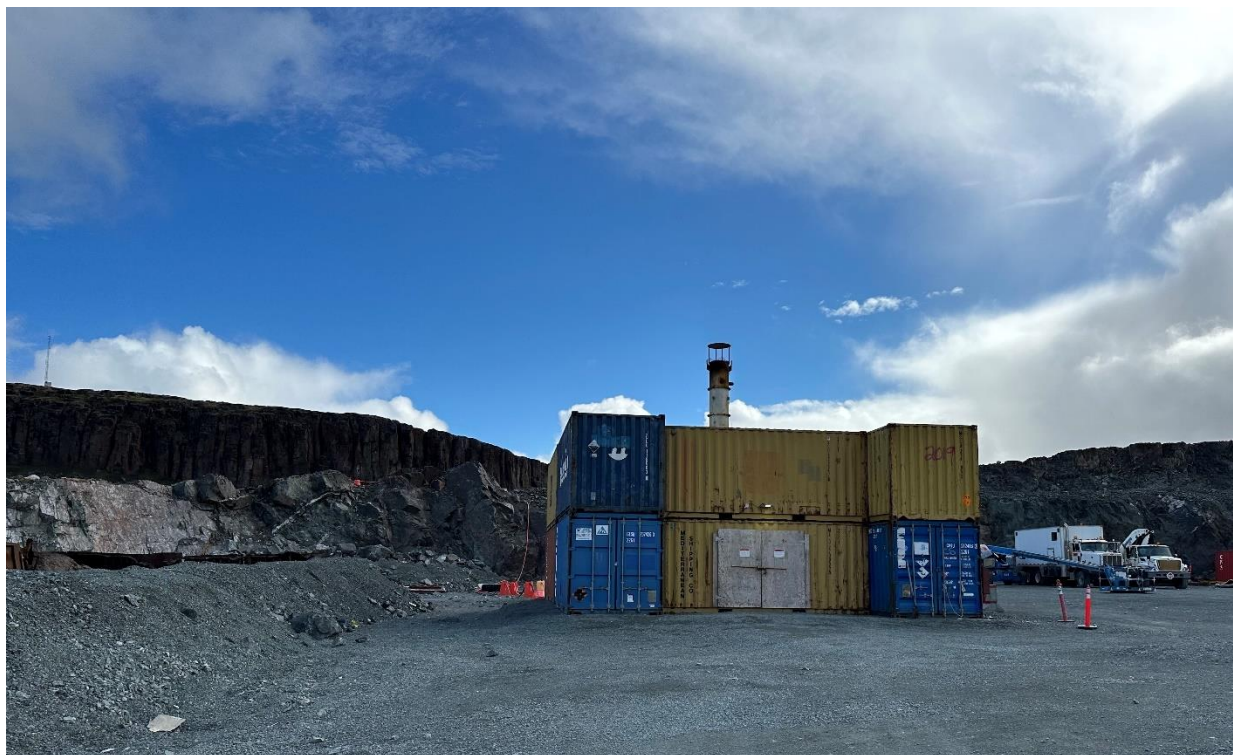


**Photo 5: Active Quarry 2**



**Photo 6: New industrial composter being installed next to the incinerator**





**Photo 7: Incinerator Surrounded by Seacans**



**Photo 8: Landfarm for contaminated soil**



#### 4.1.2 Camp Site Area



Photo 9: The Inuit Cultural Centre



Photo 10: Counselor Information Poster at Doris Camp





**Photo 11: Emergency Training Board at Doris Camp**



**Photo 12: Sedimentation Pond at Doris North which collects Runoff water from Camp site and discharge into Tailings**





**Photo 13: Continuous Air Quality Monitoring, next to Doris Lake**



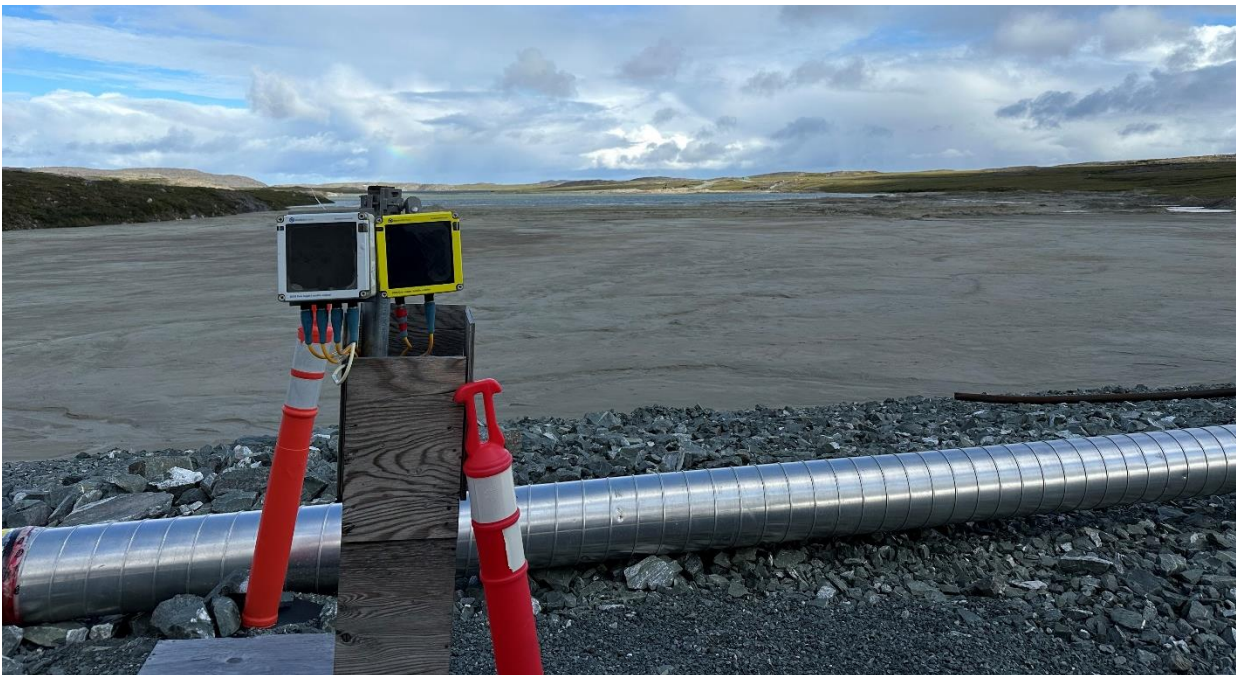
**Photo 14: Weather Monitoring Station at Doris North**



#### 4.1.3 Doris North Tailings Impoundment Area



**Photo 15: South Dam**



**Photo 16: Monitors at the South Dam**





**Photo 17: Wildlife Camera**



**Photo 18: Finished Aqua Dam, measure in place to compliant with the new *Metal and Diamond Mining Effluent Discharge Regulations***





**Photo 19: Hydrology Monitor of the Tailing**



**Photo 20: Discharge point into the Tailings and newly constructed Effluent Water Treatment**





**Photo 21: Thermistors at the North Dam**

## **4.2 Phase 2 Hope Bay Belt**

At the Madrid North site, no operational activities were being carried out and the area has not been active since 2020. The Proponent continues to monitor the area.

### **4.2.1 Madrid North Site, Naartok East Crown Pillar Pit**





**Photo 22: Wildlife Passage under the Windy Road going to Madrid**



**Photo 23: Wildlife Camera next to wildlife passage.**





**Photo 24: Naartok East Crown Pillar Pit**



**Photo 25: Closed Former Madrid Portal**





**Photo 26: Sedimentation Control at former Madrid Portal**

#### **4.2.2 Madrid Waste Rock Management**

Located next to the Madrid Portal, the Potential Acid Generating (PAG) Waste Rock Storage Pile was constructed. This area is monitored with several water monitoring stations and all the water in contact with the PAG waste rock is collected in the waste rock pond. Agnico Eagle discussed a leak that was discovered in 2020 which is still under review to determine the next plans as the liner is compromised. To address the leak, Agnico Eagle constructed a water capture area where the leaked water is collected and pumped back into the pond.





**Photo 27: PAG Waste Rock Pond**



**Photo 28: Collection Sump from the PAG Waste Rock Pond leak and new mat to help redirect water**



### 4.2.3 Windy Exploration Camp



**Photo 29: Windy Camp in decommission process**



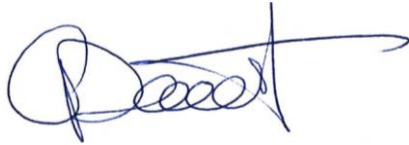
**Photo 30: Windy Camp in decommission process**

## 5 CONCLUSION

The Monitoring Officers note that overall Agnico Eagle has generally complied with the Terms and Conditions of the amended Project Certificate No. 003 and Project Certificate No. 009 and has been responsive in addressing any questions raised by the Monitoring Officers. Even with the site being in care and maintenance with ongoing exploration, Agnico Eagle keeps the site organized.

Prepared by: Guillaume Daoust  
Title: Technical Advisor II  
Date: September 14, 2023

Signature:



Reviewed by: Kelli Gillard PAg, CTAJ  
Title: Manager, Project Monitoring  
Date: September 14, 2023

Signature:

