



Project Certificate Inspection Report

☒ Original
☐ Follow-Up Report

Organization	Representative
Agnico Eagle Gold Mines	Eric Haley
Authorization No. / Expiry	Representative's Title
Project Certificate 4 & 8	Environment and Critical Infrastructures Superintendent
Inspection Date	Inspector
Nov 2-8, 2023	RMO Kyle Amsel
Other Authorization/s	
66H/08-01, 66H/08-02, 66A-8-71, 66A-8-72, 2AM-WTP1830, 2AM-MEA1530.	
Activities Inspected	
<input checked="" type="checkbox"/> Camp, Commercial <input type="checkbox"/> Drilling <input checked="" type="checkbox"/> Mining <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Fuel Storage <input type="checkbox"/> Roads/Hauling <input type="checkbox"/> Winter Hauling <input type="checkbox"/> Camp, Private <input type="checkbox"/> Other Click or tap here to enter text.	

Section 1 Comments

Between November 2nd and 8th 2023 Resource Management Officer Kyle Amsel (Inspector) of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) conducted an inspection of Project Certificate 4 Condition 54 and Project Certificate 8 Condition 28 to ensure compliance and make observations for the Terrestrial Ecosystem Management Plan (TEMP). These Project Certificates are issued to Agnico Eagle Mines Limited (Proponent) for the operation of the Meadowbank Mining Complex.

Preliminary Information

The focus of this inspection was the Proponents application of the TEMP in relation to Caribou. This inspection was prompted by the issuance of an Order under the *Nunavut Planning and Project assessment Act* on May 26, 2023.

Throughout this report several abbreviations will be used. They are included at the beginning of this report for ease of reference to the reader.

TEMP- Terrestrial Ecosystem Management Plan

AWAR-All Weather Access Road

WTHR-Whale Tail Haul Road

HTO-Baker Lake Hunters and Trappers Organization

KIA-Kivalliq Inuit Association

QA/QC-Quality Assurance and Quality Control

GST-Group Size Threshold (a term from the TEMP which specifies a number of Caribou in a herd or group which trigger management thresholds, there are different numbers of Caribou for each season)

Observations

1. Site Wildlife Data Collection.
 - a. Data on site is collected using an iPad connected to an internal data collection system called EQUIS.
 - b. The iPad is connected to a Garmin InReach satellite communicator which provides active GPS coordinates to the data collection system. All survey types, or incidental observations use a simple selection menu to ensure that any necessary data points are collected.
 - c. Road Survey data collection
 - i. Both the AWAR and the WTHR use similar surveys.

- ii. The surveyor collecting the data selects the form for the correct road, enters the beginning location of the survey, and some basic weather data including visibility.
 - iii. Individual observations of wildlife prompt the following pieces of information: habitat type, direction of travel, closest km marker (both roads have markers for each km starting in Baker Lake), GPS coordinate, nearest distance to road, crossing or not, side of road (East or West), and project tolerant. (Project Tolerant is defined in the TEMP as “an animal or group of animals (i) observed within a mitigation distance buffer for greater than 72 hours during the winter or 48 hours during other seasons; and (ii) not visibly disturbed by the Project.”
 - iv. Upon completion of a road survey if no wildlife were observed a button is pressed for “No wildlife observed”
 - d. Viewshed survey data collection
 - i. Viewshed surveys require similar generic data to be collected as road surveys.
 - ii. Viewshed surveys also take similar data as road survey observations with the exception of not including road marker of observation and distance from road. Observations are recorded as distance from observer at the survey station and cardinal direction.
 - e. There were several other forms available to environment staff which were not reviewed. However some examples included incidental observations (those wildlife observations not observed during a survey) pit and mine surveys, etc.
 - f. Wildlife observations are also communicated using the Garmin InReach satellite communication feature to a standalone email address receiving these notifications. This allows real time sharing of observations as they occur by environment staff.
 - g. The data collection does generally fall within the requirements of the TEMP
- 2. Data sharing with other organizations and within the Proponent.
 - a. Road status and Caribou observation emails
 - i. Daily at approximately 6pm environment staff send out an email notifying parties to wildlife management of road closures, planned activities (such as surveys) and road observations. Items included: road status for AWAR and WTHR throughout the day, who conducted wildlife monitoring (this includes AEM and other organizations including KIA, HTO, and Government of Nunavut Wildlife Officers), observations of Caribou above GST and below GST with general description of herd/group composition (cows, calves, bulls), and location.
 - ii. The emails circulated include when any consultation occurs and what the consultation results were (such as road maintenance, a convoy for busses, work up to a certain km etc.)
 - iii. A google maps screenshot is included which provides more information as to where caribou are being observed.
 - iv. A fuel status gauge is presented at the bottom showing fuel supply at both mine sites.
 - v. Included in the distribution is KIA, HTO, Wildlife Officers from Baker Lake, and other Government of Nunavut staff.
 - vi. The emails are a good method of showing up to date information and presenting it to parties involved with Caribou management.
 - b. Daily site Caribou meetings
 - i. Daily at 5:15pm a meeting is hosted by Environment staff through Microsoft Teams to inform other site departments of the current status of road closures.
 - ii. The demonstrated example on November 4th, was very short. Environment Lead Technician Felix Quessy-Savard advised the other departments that the AWAR was closed that day and is anticipated to be closed the next day.
 - iii. On these meetings unique situations were discussed, such as a staff member needing semi-urgent transportation which has in the past been arranged by that person riding with Environment on road monitoring.
 - c. Recurrent Meadowbank Caribou meetings
 - i. These meetings are held at 8am and are held on Microsoft Teams to discuss current mitigation and the Caribou collar data.
 - ii. Participants include the Government of Nunavut, HTO, and KIA. Since the inspection CIRNAC has participated in these daily meetings.
 - iii. Discussion points include any observations from the previous week, mitigation implemented, and what the Caribou collar data is indicating will approach the site in the next few days. During these meetings permission to conduct such things as convoys outside the TEMP is sought.
 - iv. Eric Haley, Environment and Critical Infrastructure Superintendent lead the meeting. In attendance was

Brad Pirie, Felix Quessy-Savard and Jessica Waldinger.

3. Pit and Mine Surveys/Blast Surveys
 - a. The surveys involve driving throughout the site, and utilizing some vantage points to examine if any wildlife is present. Any observations are entered into the data system. Pit and Mine surveys are separate from blast survey which are specifically conducted prior to blasting.
 - b. Figure 9 and Figure 10 of the TEMP specify restrictions on blasting and mine activities for Caribou and Muskox.
 - c. For blasts above ground all vehicles must be removed within 350m and no personal or wildlife within 600m. If the GST is present within 4km or 5km during calving for Caribou and 1000m for Muskox all blasting is postponed. When blasts occur below ground no vehicles or personal within 75m.
4. Road Surveys
 - a. The Inspector accompanied environment staff on road surveys for both the WTHR and the AWAR on November 4th and November 6th respectively.
 - b. Caribou were observed on the November 6th AWAR survey only.
 - c. These surveys are conducted by having two staff drive down the road at low speeds while looking for wildlife. Where wildlife is observed or suspected to be observed (something in distance not clearly visible as Caribou but suspected) the vehicle is stopped and optics such as binoculars are used to make the determination.
 - d. Data collected using the iPad as described earlier in the report.
 - e. The location of the wildlife is estimated from the best vantage point and where possible the vehicle is driven to the closest point from the road and a range finder is used to measure the exact distance from the road. The Inspector noted that a range finder was only carried during the WTHR survey and not the AWAR survey.
 - f. No Caribou in excess of GST were observed during AEM road surveys.
 - g. These surveys are not biased to any side of the road and all wildlife observed are recorded.
5. Caribou behaviour study
 - a. The proponent conducts Caribou behaviour studies on the WTHR and AWAR. The study consists of monitoring a group of Caribou for 30 minutes, making an observation of the Caribou's behaviour every 3 minutes.
 - b. The Caribou behaviour study was not observed during this inspection.
6. Viewshed Surveys
 - a. There have been several variants of Viewshed Surveys including Height-of-Land Surveys, Roadside Surveys, Road Survey and previous variants of Viewsheds. All survey types are similar though have variations in location of survey, viewable area and time spent at each location. The current version of Viewshed Surveys was issued on February 4, 2020 and is not included in the current version of the TEMP.
 - b. The Inspector accompanied a Viewshed survey on the WTHR on November 5th. Viewshed surveys are only conducted on the WTHR.
 - c. These surveys are conducted by two staff who drive down the WTHR and stop at pre determined locations to observe any wildlife.
 - d. The Inspector notes several concerns with the current Viewshed Surveys.
 - i. The effectiveness of the survey is subject to being able to view Caribou at 4km distances. This is further discussed in point 10 of the report.
 - ii. The current Viewshed surveys explained in the February 4, 2020 document "WHALE TAIL VIEWSHED ANALYSIS – ROADSIDE SURVEY POINTS (KIVIA-TERRESTRIAL-02)" do not form part of the TEMP.
 - iii. The current Viewshed surveys are designed to be conducted from a central point at a geographically advantageous position, however the methods used by staff are to park on the crest of the Viewshed survey point/hill for the survey creating errors in observable area not accounted for. In practice the use of the center point on the hill does not provide the best viewable area as indicated in the document. Proponent staff stated that you can see the next vantage point and therefore won't miss any caribou. (Photo 1-9 offer 360 view from utilized Viewshed survey point)
 - iv. The methodology noted in the TEMP for Height-of-Land surveys and in the new Viewshed surveys both utilize the Vault Waste Rock Storage Facility as a geographically advantageous location to observe Caribou. In practice staff do not use this point, in breach of both the TEMP's Height-of-Land survey and the currently employed survey.
7. Government of Nunavut Wildlife Officer AWAR road monitoring
 - a. On November 7th the Inspector accompanied department of wildlife officers Brad McInnis and Russel Toolooktook on a day of road monitoring. Several groups of Caribou were observed on the trip.
 - b. As HTO was present that day driving shortly ahead providing Caribou observations to the Proponent no observations were communicated by the Wildlife Officers.
 - c. The Wildlife Officers have noted a positive difference in road closures and Caribou management by the Proponent since the issuance of the order on May 26, 2023.

8. Kivalliq Inuit Association AWAR road monitoring
 - a. On November 3rd the Inspector accompanied KIA lands staff Jamie Kataluk on road monitoring. Several groups of caribou were observed during the trip which was communicated to HTO and the Proponent.
 - b. KIA has noted a positive difference in road closures and Caribou management by the Proponent since the issuance of the order on May 26, 2023
9. Baker Lake Hunters and Trappers Organization AWAR road monitoring
 - a. On November 8th the Inspector accompanied HTO road monitor Felix Tutunuaq on road monitoring. Several groups of Caribou were observed during the trip which was communicated to the Proponent.
 - b. It was noted that during the day of road monitoring the Proponent's staff called several times over the radio to discuss Caribou observations, if the road will remain closed or open, and if road maintenance can proceed to a certain location on the AWAR.
 - c. HTO staff noted the Proponent has had a significant change after the issuance of the order on May 26th, 2023. It was explained the Proponent consistently calls the HTO and has not conducted any operations during this migration without prior consultation. HTO is also engaged to provide escort to graders, fuel trucks, bus service where Caribou is present to ensure impacts do not occur and is empowered to turn around the convoy, direct slow speeds etc. when necessary to prevent impacts.
10. Quality Assurance and Quality Control
 - a. There are several concerns related to QA/QC by the Inspector as it relates to the Caribou monitoring and wildlife monitoring in general.
 - b. Ability to observe wildlife
 - i. The quality of optics used is a strong consideration. With low grade optics an observers ability to spot, and accurately count Caribou is compromised.
 - ii. The general method of observing wildlife is vehicle based observation. It was noted by the inspector that the windows were not cleaned prior to proceeding on monitoring activities.
 - iii. Experience spotting wildlife is also noted by the Inspector to be un-quantified. Some staff members conducting monitoring activities have little experience living and working in an Arctic environment. A hunter who has spent a lifetime looking for, observing, and hunting wildlife such as Caribou is more adept at spotting Caribou than an Environment Technician hired from the South on their first year working in Nunavut.
 - iv. During the Inspectors time at site it was noted by staff that observing Caribou at 5km is nearly impossible. This makes it impossible for the Proponent to comply with TEMP Figures 6-9 for engaging in level 2 mitigation for Caribou.
11. Proponent Operational Considerations during Caribou migration
 - a. The Proponent's Meadowbank site has an estimated 30 days of autonomy independent from road systems, and Whale Tale has 13-14 days of autonomy.
 - b. While operating vehicles in the vicinity of Caribou beacons are shut off to prevent disturbance to Caribou.
 - c. During closures, when permitted by HTO, van service will proceed at low speed led by the HTO. On occasion due to heavy migration activities it has taken several hours longer to drive to Meadowbank from Baker Lake than normal. In such situations a bus was sent from Meadowbank South to meet the bus convoy just on the other side of the main herds and staff are transferred on the road.

Section 2 Non-Compliance with Project Certificate

No items of non-compliance

Section 3 Action Required

The Proponent is reminded that demonstrating compliance and due diligence is the responsibility of the Proponent. The Inspector has noted that the following items do not sufficiently demonstrate due diligence:

- Where consultation occurs for the reopening of roads or infrastructure specific information as to who was consulted and from which organization needs to be provided. Generally the Inspector would like to see that person providing the direction write an email to the Proponent and CC the Inspector. This may be prohibitive considering the field work nature of those providing the advice.
- Where as part of consultation it is determined that activities may occur on a closed road to a certain point where Caribou are not present, AEM is obligated to demonstrate and report this to the Inspector and as part of annual reporting process.
- Any incidences where a vehicle travels upon a closed road must be adequately justified in annual reporting and any use of the road beyond regular road wildlife monitoring during closure must be included in the daily email distributions.
- Helicopter transit data has not demonstrated due diligence with minimum cruising altitudes in past renditions of annual reporting by the Proponent.



- It should be made clear that GST are a continuously updated figure and not static. New GST's must be directly communicated to concerned parties and regulators as they become available.

The Inspector remains open to discuss means to demonstrate due diligence to the Inspector and through the annual reporting process.

Section 4 Other

The Inspector has made the following observations regarding the TEMP, the Proponent's monitoring, the interaction between other organizations and the Proponent and other items which the Inspector is bringing to the attention of the Terrestrial Advisory Group.

- An appropriate chain of command or delegated authority should be established between the HTO, KIA and the Government of Nunavut to provide direction of opening of roads, permit convoys or other activities during road closures. During the recent inspection, KIA and HTO were both conducting road monitoring, HTO stated the road should be opened and KIA stated the road should remain closed. (this was likely caused by both organizations observing migrating Caribou at different times rather than an actual disagreement of procedure). Having an appropriate procedure will simplify compliance and prevent impacts to wildlife.
- Consideration for Quality Assurance and Quality Control as identified in section 10 of the report should be discussed.
- Figure 9 of the TEMP for Whale Tale Pit Blasting Activities does not differentiate between above ground and below ground blasting. Consideration should be given for this.
- Current monitoring methods make it difficult to meet the thresholds identified in Figure 9 of the TEMP. Without being able to observe Caribou 25km away level 2 mitigation is mute.
- Consideration should be made for the 5km threshold, either methods to practically observe Caribou at these distances or a revision to include more realistic distances.
- The Viewshed Survey's currently conducted would have an increase effectiveness if staff did them from outside of the vehicle so the vehicle does not pose an obstruction of view.
- Modification to the methods or means of surveys must be adequately communicated and appropriately reflected in the TEMP.

Licensee or Representative	Inspector's Name
Eric Haley Signed only to demonstrate reception	RMO Kyle Amsel
Signature	Signature
Date	Date
2024/01/11	January 2, 2024

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☐ No



PHOTO LOG

Date:	Authorization Number:	Camera/Model:	Inspector
Sunday, November 5, 2023	PC 4 & 6	Samsung SM-G973W	RMO Kyle Amsel

Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 1	N65° 20' 46" W96° 32' 55"



Description:
1 of 9 360° View from viewpoint at km 169

Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 2	N65° 20' 46" W96° 32' 55"



Description:
2 of 9 360° View from viewpoint at km 169




Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 3	N65° 20' 46" W96° 32' 55"
	
Description: 3 of 9 360° View from viewpoint at km 169	


Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 4	N65° 20' 46" W96° 32' 55"
	
Description: 4 of 9 360° View from viewpoint at km 169	



Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 5	N65° 20' 46" W96° 32' 55"
	
Description: 5 of 9 360° View from viewpoint at km 169	

Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 6	N65° 20' 46" W96° 32' 55"
	
Description: 6 of 9 360° View from viewpoint at km 169	



Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 7	N65° 20' 46" W96° 32' 55"
	
Description: 7 of 9 360° View from viewpoint at km 169	

Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 8	N65° 20' 46" W96° 32' 55"
	
Description: 8 of 9 360° View from viewpoint at km 169	



Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo 9	N65° 20' 46" W96° 32' 55"
	
Description: 9 of 9 360° View from viewpoint at km 169	