

July 8<sup>th</sup>, 2024

Nunavut Impact Review Board  
P.O. Box 1360 Cambridge Bay  
Nunavut NU X0B 0C0

**RE: Opportunity to Address Comments Received for Agnico Eagle Mines Limited's Meliadine Gold Mine Project 2023 Annual Report**

Agnico Eagle Mines Limited thanks the Nunavut Impact Review Board (NIRB) for the opportunity to address comments received for Agnico Eagle Mines Limited's Meliadine Gold Mine Project 2023 Annual Report.

The following information and comments are intended to address comments outlined in the below referenced letters.

240528-11MN034-TC Comments Re 2023 Annual Report-IA1E  
240603-11MN034-HC Comments Re 2023 Annual Report-IA2E  
240603-11MN034-NDFN SDFN Comments Re 2023 Annual Report-IA2E  
240603-11MN034-Revised CIRNAC Comments Re 2023 Annual Report-IA2E  
240605-11MN034-GN Comments Re 2023 Annual Report-IA2E  
240605-11MN034-ECCC Comments Re 2023 Annual Report-IA2E  
240611-11MN034-KivIA Comments Re 2023 Annual Report-IMRE

As agreed by the NIRB, answers to comments received from Fisheries and Oceans Canada (DFO) in *240620-11MN034-Revised DFO Comments Re 2023 Annual Report-IMRE* will be submitted to the NIRB by July 15<sup>th</sup>, 2024.

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

With my best regards,



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**Environment and Climate Change Canada (ECCC)**

**ECCC-1: Arsenic In Peninsula Lakes**

Comment

Section 4.2 of the Annual Report states “Arsenic exceeded the AEMP Action Level in Lake B7 in August 2023. Follow-up monitoring was completed in October, and concentrations had decreased from roughly 20 µg/L to 10 µg/L.” Section 4.5 of the Annual Report concludes: “Based on the annual mean, there were no exceedances of the AEMP Action Levels in any of the lakes in 2023.”

Action Levels are defined in the Aquatic Effect Monitoring Program Design Plan (AEMP). For arsenic, a site-specific water quality objective of 25 µg/L was developed and is used as a benchmark, along with an Action Level at 75% of the value or 18.8 µg/L.

The 2023 measurements bring to light the different possible interpretations. As reported, more samples were collected in Lake B7 at a later date, so the annual mean concentration of arsenic was below 18.8 µg/L. A conclusion of no Action Level exceedances based on annual mean concentrations was determined as a result.

Section 4.4.2 of the Annual Report proposes “The substantial decrease in arsenic observed in Lake B7 between August and October was likely due to co-precipitation with iron oxy-hydroxides.” The Design Plan does not specify if the Action Level concentrations are for individual samples, monthly averages or annual averages. Specifying what concentrations will be compared against Action Levels and Benchmarks will help bring clarity to all parties.

Continuing more frequent monitoring of Lake B7 would help further understanding of elevated arsenic concentrations, including of the co-precipitation hypothesis and if sediments in downwind ponds will need to be considered as a potential source of arsenic. Increased monitoring is an example response for Low Action Level and would be appropriate given that arsenic concentrations measured in August 2023 were above the Action Level.

Recommendation

ECCC recommends the Proponent:

- clarify in the AEMP design plan what concentrations (individual measurements, averages (monthly or annual), annual median) will be compared to Action Levels for each parameter and justify choice; and
- begin more frequent monitoring in Lake B7.

Agnico Eagle Answer

Regarding the first recommendation, the following approach is used when comparing the annual water quality (WQ) data to AEMP Action Levels and Benchmarks:



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- Step 1: Individual samples are screened against Action Levels and Benchmarks. If individual samples exceed the AEMP Action Level for a given parameter, step 2 is completed.
- Step 2: The annual mean concentration is compared to the AEMP Action Level and Benchmark (see Table 5-2 in the AEMP Design Plan). The annual median concentration is also compared to the AEMP Action Level as both measures of central tendency provide information about the distribution of the data. One or two samples with high concentrations can skew the mean concentration to the right (positive skew) and bias the results. The same is true for low concentrations or non-detects (negative skew).

Regarding the second recommendation, pending the 2024 Water Licence Amendment application is approved, Lake B7 would be dewatered in 2025 to convert this lake to a saline pond. During the Water Licence Amendment process, Agnico Eagle committed to monitoring in Lake B7 during operations (commitment number WLA-03 in response to KivIA-TC-04):

*Agnico Eagle commits to monitor Lake B7 during operations to assess the potential requirement to remediate Lake B7 at closure. Based on monitoring during operations of Lake B7 and in review of predictions, this data will support the development of an appropriate path forward with respect to the closure of Lake B7. This will enable the development of a comprehensive Final Closure and Reclamation Plan, with assumptions that have been validated by the site data.*

For 2024, water quality monitoring in Lake B7 will be conducted in July and August as in previous years. A third sampling event in late September/early October may be completed if arsenic concentrations in July and August exceed the AEMP Action Level.

### **ECCC-2: CP1 Nutrients Predictions**

#### Comment

Appendix 5 discusses causes for the discrepancy between measured and modelled concentrations of phosphorous and ammonia in the principal containment pond, CP1. The report concludes “*The investigation into the nutrient dynamics in CP1 highlights the intricate relationship between nutrients and algae in aquatic ecosystems, and while the ammonia removal mechanism is still unclear in CP1, data shows that natural attenuation by algal growth plays a dominant role in this process.*” No follow-up actions are discussed so it is not clear if this information can be used to improve modelled concentrations of nutrients in CP1.

#### Recommendation

ECCC recommends the Proponent discuss if and how findings of the CP1 Nutrient Predictions Report can be used to improve predicted concentrations of phosphorous and ammonia in CP1.

### Agnico Eagle Answer

Natural attenuation of ammonia and phosphorous by algal growth plays a dominant role in the discrepancy observed between predicted and measured nutrient concentrations in CP1. Agnico Eagle would like to note that the current model is conservative and relies on a calibration of source terms water quality values and flow volumes generated by specific components of the mine site. Keeping these predictions is important in case the actual algae assimilation process is not happening for any reason.

However, Agnico Eagle will investigate the possibility implementing a second prediction for ammonia and phosphorous within the Water Quality Model (WQM) that will include a limited calibration that will better reflect the actual concentrations observed during the past three years.

### **ECCC-3: Alternative sludge management strategies scenario analysis**

#### Comment

Section 7.3.3. of the Annual Report reports a Scenario Analysis on alternative sludge management strategies was completed in Q1 of 2024. Some possibilities and results are briefly discussed and an alternate disposal location is suggested. The revisions of the Water Management Plan described in Table 28 do not mention changes to sludge management. It is not clear why this information was presented because the Scenario Analysis was not shared, changes due to the analysis are not evident and there is no mention of including this information in a future annual report.

#### Recommendation

ECCC recommends the Proponent clarify:

- if and when they will share the Scenario Analysis on alternative sludge management strategies; and
- if and how they will implement findings of their Scenario Analysis.

### Agnico Eagle Answer

Agnico Eagle is operating as per the most recent reviewed and approved Water Management Plan (WMP) and as per Design and As-Built reports submitted for the EWTP-WTC Modifications, and sludge produced as part of the TSS removal processes at the EWTP-WTC is currently discharged to saline water storage.

As requested in CIRNAC-4 comment on the 2022 Annual Report received through the NWB, sludge quality monitoring and potential impacts were presented and discussed in the 2023 Annual Report (section 7.3.3), as well as the preliminary conclusions of a Scenario Analysis investigating alternatives for sludge management. The Scenario Analysis conducted was mainly oriented on economic feasibility investigations.

Operational feasibility and efficiency of each method will be further discussed in the 2024 Annual Report.

Agnico Eagle will continue its efforts of investigating in-pit sludge disposal potential impacts, interpretation of monthly sludge sampling results and potential alternative sludge management options and results of this investigation will be presented in the 2024 Annual Report.

#### **ECCC-4: Tables missing information**

##### Comment

Several tables are missing precisions that could help confirm context when reviewing the results.

- The tables for WBWQM forecasted mean annual concentrations and observed mean annual concentration changes between 2020 to 2023 do not specify the forecast location. It is presumably CP1, but it would be good to confirm.
- Calibration data tables on pages 6 and 11 are illegible and on page 10, the values are difficult to read.

##### Recommendation

ECCC recommends that in future annual reports the Proponent ensure table titles or footnotes are sufficiently descriptive and all data are legible.

##### Agnico Eagle Answer

Agnico Eagle thanks ECCC for their comment and wishes to provide the below clarifications:

- The table at pages 427-431 of Appendix 4 should have been titled: *Table 3. WBWQM forecasted mean annual concentrations and observed mean annual concentration changes between 2020 to 2023, at the end-of-pipe treatment location MEL-14 (treated CP1 water)*. This will be corrected in future Annual Reports.
- Agnico Eagle will ensure all Tables are readable in future Annual Reports. Appendix 20 – Calibration Tables was revised and resubmitted to the NIRB and the NWB on April 19, 2024 to address this formatting issue (*Appendix 20 – 2023 Calibration Data\_Rev.pdf*).

#### **ECCC-5: Incinerator stack testing results**

##### Comment

Section 5.2 of the Annual Report discusses the results of incinerator stack testing that was performed between September 29 and October 2, 2023. ECCC appreciates the efforts involved in the testing and initial analysis. ECCC notes that there is a considerable range in the results reported for dioxins/furans. The concentrations for Test 3 are well below the applicable standard,

whereas the results of other two tests, and the average, exceed the maximum allowed concentration to achieve the standard.

This discrepancy in the test results may offer important clues in the investigation, including differences in materials consumed and weather conditions (large drop in temperatures during the testing series and increasing wind speeds, as noted in Appendix 23, Appendix A), and may assist in expediting an explanation for the range in test results.

#### Recommendation

ECCC recommends that temporal changes in consumed materials and weather conditions be included in the analysis of the stack testing results, and an anticipated time frame be provided for the completion of the analysis.

#### Agnico Eagle Answer

Agnico Eagle thanks ECCC for their comment and will assess including these additional components for the 2024 stack testing and reporting.

Agnico Eagle is investigating the exceedance observed during the 2023 stack testing and is currently evaluating options for additional monitoring/analysis, such as performing an audit of the incineration practices at site. Results of the investigation will be reported in the 2024 Annual Report.

### **ECCC-6: Large number of days with the same annual minimum temperature**

#### Comment

Section 7.8.3 of the Annual Report mentions that the annual minimum temperature of  $-39.8^{\circ}\text{C}$  was recorded on 16 separate days. This is an unusually large number of days to share the record for coldest minimum temperature. The recorded minimum temperature is similar to that of the freezing point of mercury; and thus, may be due to the use of a mercury thermometer rather than an alcohol-based thermometer. This may also explain the discrepancy with the lowest annual temperature of  $-44.5^{\circ}\text{C}$  recorded at Rankin Inlet. Alternately, there may be an error in the data logger or associated software processing of the data. Coldest temperatures are generally associated with strong radiative cooling, and thus a high bias in temperature may downplay the strength of the associated surface-based temperature inversions which vertically trap air emissions.

#### Recommendation

ECCC requests an investigation be performed to explain the large number of days with identical annual lowest minimum temperatures.

### Agnico Eagle Answer

The air temperature/relative humidity sensor that is installed at the Meliadine mine weather station is a Rotronic HC2-S3. The temperature range of the sensor is by default  $-40^{\circ}$  to  $+60^{\circ}\text{C}$ , but can be set to  $-50^{\circ}$  to  $+100^{\circ}\text{C}$ . Agnico Eagle experienced issues with the Meliadine mine weather station in 2023 and recalibration and general maintenance of the sensors was performed by a Campbell Scientific technician in October 2023. Due to the recurrence in the minimum temperatures recorded coinciding with the minimum temperature rating of the instrument, Agnico Eagle is suspecting that the Rotronic HC2-S3 was probably set to the default mode in 2023. Further maintenance of the Meliadine site weather station by a Campbell Scientific technician is planned for 2024.

### **ECCC-7: Issues with the table of daily average weather data**

#### Comment

In Table 1 of Appendix A, there is ambiguity with the average wind direction, as it may be a scalar or vector average. Scalar averages of northerly winds may be listed as southerly winds. The precipitation value for the “2023-06-08” (June 8, 2023) entry is suspiciously high at 50.7 mm, as hourly reports at Rankin Inlet only indicate rain at 22:00 and 23:00 (and 00:00 the next day). Wind speeds at Rankin Inlet increase to 50 km/h during the rain, so it is possible that rain splash may have contributed to the high precipitation value recorded at Meliadine.

#### Recommendation

ECCC recommends the Proponent provide:

- clarification on whether average wind directions are scalar or vector; and
- a diagnosis of the suspiciously high precipitation value recorded at Meliadine for the “2023-06-08” (June 8, 2023) entry.

### Agnico Eagle Answer

The sequence of measurements and computation of the wind average at the Meliadine Mine weather station is the following:

- Every 5 seconds, an absolute measurement of the wind speed (km/h) and wind direction (degrees to north) is collected.
- The hourly and daily wind speed (km/h) and wind (degrees to north) averaged values are the result of a vector averaging considering both wind speed and absolute measurements of wind direction. The vector mean is obtained using the CR-basic function [WindVector\(\)](#).

Agnico Eagle does think that the 50.7 mm rainfall event recorded at the Meliadine Mine weather station is not the result of a rain splash effect. No validation of the rainfall amount from the Rankin

Inlet weather station was possible since the available hourly and daily data that can be downloaded from the ECCC historical database for the 7<sup>th</sup> and 8<sup>th</sup> of August 2023 show no or missing rainfall amount.

However, the daily averages presented in the Appendix A Table 1 of the 2023 Air Quality Monitoring Report (Appendix 23 of the 2023 Annual Report), are actually the averages of the last 24h, and the values presented for August 8<sup>th</sup> should actually be presented for August 7<sup>th</sup> as they are representative of the values recorded over that day. Agnico Eagle will correct this oversight in future Annual Reports.

Over the night of the August 7<sup>th</sup> to August 8<sup>th</sup>, a significant rainfall shower event occurred in Rankin Inlet and at the Meliadine Mine, as reported in the spill report #2023 - MEL-SR1 Runoff at the Meliadine Gold Project. As shown in Table 1 below, the hourly data recorded at the Meliadine Mine weather station during that event shows high amplitude of rainfall but relatively well spread over time and relatively low wind, which suggest reliable recorded values.

Table 1. Hourly precipitation and wind speed values recorded during the important rainfall event of August 7<sup>th</sup>, 2023.

Date	Time	Precipitation (mm)	Wind Speed (km/h)
6/7/2023	12:00:00 AM	0.0	19.1
6/7/2023	1:00:00 AM	0.8	18.6
6/7/2023	2:00:00 AM	6.7	19.4
6/7/2023	3:00:00 AM	5.3	16.6
6/7/2023	4:00:00 AM	1.8	15.2
6/7/2023	5:00:00 AM	5.2	15.6
6/7/2023	6:00:00 AM	6.9	14.1
6/7/2023	7:00:00 AM	7.9	13.7
6/7/2023	8:00:00 AM	9.6	15.0
6/7/2023	9:00:00 AM	3.1	13.0
6/7/2023	10:00:00 AM	1.8	13.2
6/7/2023	11:00:00 AM	1.7	8.9
6/7/2023	12:00:00 PM	0.1	6.1
6/7/2023	1:00:00 PM	0.0	7.3

**ECCC-8: Incorrect Appendix reference**

Comment

Section 4 of Appendix 23 states that several parameters are provided in Appendix B. This appears to be an error, as the parameters are actually provided in Appendix A.

Recommendations

ECCC recommends the Proponent update the reference in Section 4, to state that the parameters are located in Appendix A, and not Appendix B.

Agnico Eagle Answer

Agnico Eagle confirms Section 4 of Appendix 23 should have referred to Appendix A and will correct this in the 2024 Annual Report.

**ECCC-9: 2023 Compliance Monitoring**

Agnico Eagle Answer

Agnico Eagle thanks ECCC for its Comment 9 on Compliance Monitoring including summaries of July inspection as well as confirmation of MDMER compliance throughout 2023 and status of spills reported in 2023.

Agnico Eagle would like to clarify that the Second Quarter MDMER report was submitted on time, on July 30, 2023.

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**Government of Nunavut (GN)**

**GN-01: Terrestrial Advisory Group (TAG) Annual Report**

**Comment**

TAG annual reports should accurately reflect the input provided by its members. Maintaining transparency in annual report documentation will help inform the Nunavut Impact Review Board (NIRB) on the status of monitoring for the Meliadine Project (the Project) and help the TAG function as an effective advisory body.

Table 2 in Appendix 32 summarizes the status of action items concerning the TAG in 2023. The GN disagrees with the reported status of two items in this table as follows:

1) Action item number 2022-8 in Appendix 32 states that:

“AEM should circulate a work plan for the TAG showing the priority items for the next few years” (Page 9).

It is the GN’s understanding that the intent of this workplan was to focus the activities of the TAG on items deemed to be of greatest importance regarding project monitoring and management. In Appendix 32, AEM reports the status of this action as “Resolved.” However, the GN wishes to indicate that action item 2022-8 is an unresolved action item from 2022. To date, a workplan has not been developed and/or reviewed with the TAG.

2) Action item number 2022-14 in Appendix 32 states that:

“Annual TEMMP report: Discuss in advance what should be included in the annual TEMMP report in terms of its structure and content.” (Page 13)

The GN notes that this recommendation was to ensure that the Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) Annual Report was discussed by the TAG in advance of its preparation. This discussion would afford the TAG an opportunity for meaningful input regarding the presentation and analyses of data relevant to monitoring Project impacts on wildlife and the effectiveness of mitigation measures. In Appendix 32, AEM lists the status of this action item as “Resolved.”

The TAG received an overview of the 2022 TEMMP Annual Report, but this occurred on April 14th, 2023, after the report had been drafted.

The content of the 2023 TEMMP Annual Report was not discussed with the TAG in advance of its preparation. Instead, the TAG only received an overview of the draft 2023 TAG Annual Report (i.e., one component of the TEMMP Annual Report) and was allotted the opportunity to comment in January and February 2024. As such, in the GN’s view, action item 2022-14 is unresolved.

### Recommendations

The GN recommends the following regarding the above concerns:

1. The Proponent should endeavour to reach consensus with members of the TAG on future TAG reports. Additionally, the Proponent should record where unanimous agreement or differences of opinion exist amongst TAG members regarding specific action items or related materials. Where differing opinions exist, this should be summarized in the TAG report along with any plans for resolution.
2. The Proponent should revise the status action items 2022-8 and 2022-14 in Table 2 to read as “Unresolved”.

### Agnico Eagle Answer

As per the TAG Terms of Reference, TAG recommendations (matters for which there are unanimous consensus) and TAG advice (matters for which there are a majority agreement) are gathered through the TAG meetings. TAG Meeting Minutes are provided to TAG Parties for their review and comments following each TAG meeting and a similar process is followed for the TAG annual report.

Prior to finalizing and submitting the TAG Annual Report (in Appendix of the 2023 Annual Report), the document was presented to TAG Members and discussed during the TAG meeting of January 25, 2024.

Regarding action item 2022-08, Section 3 of the 2022 and 2023 TAG Annual Reports set the agenda for the following year. The topics described are presented and discussed during a TAG meeting. The plan of the following year is discussed with TAG members each year. This item was determined to be resolved in the 2022 TAG Annual report.

As for action item 2022-14, Agnico Eagle shared the 2022 Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) Annual Report on April 14<sup>th</sup>, 2023. Following this meeting, comments shared by TAG parties were integrated into the 2023 TEMMP Annual Report. The TEMMP V5 is currently under revision with the TAG. During the process, the items to be included in the TEMMP Annual Report for each section are discussed.

Agnico Eagle remains available to discuss this matter with the TAG as needed.

### **GN-02: Raptor Surveys**

#### Comment

Appendix 25 does not provide information on raptor nest productivity in the vicinity of the Project despite being a listed objective in section 4.9.2 in the Project’s TEMMP.

Per section 4.9.2 of the TEMMP (AEM, 2022), objectives of the raptor monitoring program are as follows:

The raptor monitoring program will be completed on an annual basis with the following objectives:

- annual occupancy survey of all known nesting sites;
- first year survey of high quality habitat to search for new nesting sites;
- monitor distribution and breeding density;
- monitor clutch size and productivity; and
- marking individual adults and nestlings to identify site fidelity and mortality causes (Page 56).

Pursuant to the above objectives, Appendix 25 indicates that “[s]tudy design included two surveys: one to assess the location of occupied territories during the pre-incubation and incubation periods, and one to assess site productivity during the late brood rearing period” (Page 171). Appendix 25 presents an analysis of 2022-2023 raptor data to examine nest occupancy as a function of distance from sources of anthropogenic disturbance to test whether the Project may be affecting nest occupancy. However, the GN notes that Appendix 25 does not present a similar analysis for nest productivity

#### Recommendations

The GN recommends the following regarding the above concerns:

- 1) The Proponent provide an explanation as to why an analysis of raptor nest productivity in relation to anthropogenic disturbance is not included in Appendix 25.
- 2) The Proponent provide information on what plans are in place to assess Project effects on raptor nest productivity.

#### Agnico Eagle Answer

The GN is correct to point out that an estimate of a potential effect of distance to disturbance to disturbance on productivity is an important component of effects monitoring. An analysis of raptor nest productivity in relation to anthropogenic disturbance was not included in Appendix 25 of the 2023 Annual Report to remain consistent with the analysis conducted in 2022, and because the data collected to date are currently insufficient to provide a meaningful interpretation of the effect of disturbance to mine infrastructure.

Relative to plans for estimating a potential effect of distance to disturbance, Agnico Eagle anticipates an analysis of distance to disturbance on both occupancy and reproductive success will be possible following 2024 monitoring, and will report on it in the 2024 Annual Report.

### **GN-03: Caribou Behavior Study Results and Road Mitigation**

#### Comment

Results from the Project's caribou behaviour monitoring program, as detailed in Appendix 25, have not been used to inform adaptive management for the Project despite this being required under Project Certificate (No. 006, Amendment No. 002) Term and Condition 57 (NIRB, 2022).

Term and Condition 57 of the Project Certificate (No. 006, Amendment No. 002) directly links the results of wildlife monitoring programs to adaptive management where adverse effects are found.

Term and Condition 57 states:

Within its annual report to the NIRB, the Proponent shall incorporate a review section which includes:

- a) An examination for trends in the measured natural variability of Valued Ecosystem Components in the region relative to the baseline reporting;
- b) A detailed analysis of wildlife responses to operations with emphasis on wildlife behaviour, mortalities and displacements (if any), responses to operations of the all-weather access road and associated access roads/trails, and the waterlines;
- c) A demonstration and description of how the monitoring results, including the all-weather access road, associated access roads/trails, and waterlines contribute to cumulative effects of the project; and
- d) Any proposed changes to the monitoring survey methodologies, statistical approaches or proposed adaptive management stemming from the results of the monitoring program (NIRB, 2022).

(emphasis added by reviewer)

Appendix 25 provides an update on the Project's caribou behavior monitoring program, stating that:

Groups within 300 m of the road tended to have higher proportions of response behaviours than those further away..... These results support that within 300 m of the road, caribou are more alert and active. Following a disturbance event, the proportion of response behaviours in a group of caribou increased, but typically returned to baseline behaviours within two sampling periods (i.e., six minutes). Caribou were statistically more likely to be walking, alert, or running in sampling periods where a disturbance occurred (Page 35).

Despite finding that groups of caribou are visibly disturbed by traffic on the Project's All-Weather-Access-Road (AWAR) and that this disturbance occurs amongst caribou that are at least within 300m of the AWAR, the report does not make any recommendations for adaptive management.

AEM continues to only implement its traffic suspension protocol when 50 or more caribou are within 100m of the road (Section 4.2.1, AEM, 2022). However, results from behaviour monitoring indicate that this distance threshold is insufficient to prevent disturbance of caribou and justifies a distance threshold beyond 300m. In comparison, the threshold for road closure at AEM's

Meadowbank-Whale tail mine is 1500m (section 3.4; AEM, 2019). Studies have also demonstrated that caribou movements at this mine are affected by roads at distances of between 3 to 17 km (Boulanger et al., 2024) with the presence of traffic significantly reducing the probability of road crossing by caribou. This finding is supported by other recent studies of barren-ground caribou (e.g. Severson et al. 2023; Smith and Johnson 2023).

The GN notes that, despite the findings of the Project's caribou behavior studies, recent peer-reviewed research on barren-ground caribou responses to roads and traffic, and on-going concerns regarding distance thresholds voiced by TAG members (e.g., during the current review of the Project's TEMMP V5), AEM continues to implement a road closure distance threshold that is, in the GN's view, insufficient to prevent significant disturbance to caribou.

### Recommendations

The GN recommends the following regarding the above concerns:

1) The Proponent increase the distance threshold for closure of the Project's AWAR to reflect results from project-specific behaviour monitoring studies, relevant peer reviewed studies, and discussion with the TAG.

### Agnico Eagle Answer

Agnico Eagle thanks the GN for the comment. As mentioned during the TEMMP revision discussions within the TAG, Agnico Eagle adheres to the TEMMP for AWAR closures and AWAR closure decisions are made in collaboration with the GN, KivIA and KHTO, based on field observations and variables.

## **GN-04: Caribou Behavior Study Design**

### Comment

As detailed in section 12 and Appendix F of Appendix 25, the Project's caribou behaviour monitoring program categorizes behaviour observation data into distance categories for analyses examining the relationship between distance from Project infrastructure and response behaviours. The GN notes that the use of distance as a categorical variable is necessary when sample sizes are limited but can result in loss of important information on the effect of distance on caribou behaviour.

Section 12 and Appendix F of Appendix 25 provide details on the Project's caribou behaviour monitoring program. For analyses of caribou response behaviours, the Proponent modelled the effect of caribou distance from infrastructure (distance) as a categorical variable using distance bins of 0-50, 50-100, 100-300, 300-1000, > 1000 m. Appendix F provides justifies the use of categorical variables due to inconsistent distance measurements in 2020, which was rectified in subsequent years (2021-2023) through the use of a rangefinder (Page 14).

The GN acknowledges that the use of distance bins may be necessary to retain power when sample sizes are low; However, the results of analyses can be biased by the number and size of the bins utilized. In the case of Project's caribou behaviour study, Figure 6.3-1 of Appendix F illustrates that most of the survey observations occurred in the 300-1000 and >1000m bins (Page 15). These are the two largest bins in terms of absolute distance – e.g., 300-1000m represents 700m, compared with 0-50m and 50-100m intervals (50m each). By pooling a majority of the data into these large bins, the analyses may have underestimated the effect of distance on caribou response behaviour thus losing important information relevant to Project effects and the effectiveness of mitigation.

### Recommendations

The GN recommends the following regarding the above concerns:

1) In accordance with the GN's recommendation (GN AR # 03) for the 2022 TEMMP annual report (GN, 2023), future analyses of the caribou behaviour monitoring data should treat distance from infrastructure as a continuous variable or, if sample size is insufficient, additional bins should be used in the 300-1000m and >1000m ranges.

### Agnico Eagle Answer

Agnico Eagle agrees that an analysis of distance as a continuous variable would be useful and will assess feasibility of doing the analysis for 2024 reporting. Note that by doing so, the 2020 data will be excluded since it was collected before the use of the laser rangefinder to get continuous distance data.

## **GN-05: Total Estimated Caribou Harvest**

### Comment

Section 13 of Appendix 25 provides details on the Proponent's Hunter Harvest Study (HHS). However, the GN notes that the total caribou harvest, as estimated by the Proponent within this section, does not account for growth in the number of hunters in Rankin Inlet since the Nunavut Wildlife Harvest Study (NWHS) was conducted by the Nunavut Wildlife Management Board (NWMB) between 1996 and 2001.

Agnico Eagle Mines Ltd.'s (AEM or the Proponent) Appendix 32 - 2023 Terrestrial Advisory Group (TAG) Annual Report (Appendix 32) summarizes the TAG's activities and the status of various action items.

The Government of Nunavut (GN) notes that Appendix 32 may not reflect the views or opinions of all TAG members. Specifically, the GN disagrees with the status of several action items as reported by AEM in Appendix 32.

In Appendix I of Appendix 25, the proponent describes the following methods used to complete the Rankin Inlet HHS:



## **AGNICO EAGLE**

**MELIADINE**

The number of hunters interviewed during the comprehensive 5-year Nunavut Wildlife Harvest Study (NWMB 2005) was 327, which apparently represented 97% of all hunters in Rankin Inlet (NWMB 2005). For the purposes of this annual report, and in the absence of more specific details on hunter numbers, the total number of active hunters in Rankin Inlet was estimated to be 300 to 350. Future discussions with KHTO members and other community groups in 2024 will focus on obtaining a better estimate of current numbers of active hunters in the Hamlet of Rankin Inlet (Page 11).

Using the methods indicated above, the Proponent estimates that the total number of caribou harvested by Rankin Inlet residents in 2023 was between 4,025 to 4,390 animals. However, this estimate is based on the 2023 HHS recorded harvest levels of 37 hunters and an assumption that the total number of hunters in Rankin Inlet is roughly unchanged from the estimate of 327 derived from the Nunavut Wildlife Management Board's (NWMB) NWHS, 1996-2001 (NWMB, 2004). This assumption is unrealistic as Statistics Canada census data for 2021 indicates that the population Rankin Inlet increased by 4.7% from 2016 to 2021. As such, it is reasonable to assume that the number of hunters has grown in proportion to the community's population.

### Recommendations

The GN recommends the following regarding the above concerns:

1) In future reports, total annual caribou harvest estimated by the HHS should utilize an estimate of total Rankin Inlet hunter numbers adjusted from 1996-2001 levels to account for population growth. In addition, any information gathered from discussions with local organizations including Hunter and Trappers Organization(s), as planned by the Proponent in 2024, should also be included in these estimates.

### Agnico Eagle Answer

Agnico Eagle recognizes that demographic conditions have changed since the late 1990s, however evaluating the proportion of residents, particularly new residents, that actively participate in hunting is not evident. As mentioned in the 2023 HHS report, to better understand hunter numbers in Rankin Inlet, Agnico Eagle will further discuss with the KHTO and other local organizations in 2024. Information gathered from these meetings, along with an adjustment for increasing population, will be used in the 2024 report to estimate hunter numbers in Rankin Inlet.

## **GN-06: Regional Caribou Monitoring**

### Comment

Based on information provided in Appendix 25, it is unclear whether terms and Conditions 44 and 45 of the Project Certificate (No. 006, Amendment No. 002) are being fully implemented. Specifically, the report does not demonstrate how AEM has; (a) increased caribou monitoring efforts within the Project's Regional Study Area (RSA), since the Project began, or (b) contributed to existing regional caribou monitoring programs, such as those operated by the GN.

Throughout the Project's life to date, concerns about potential impacts on caribou have been a major topic dominating project-related screenings, reviews, and hearings. Terms and Conditions 44 and 45 of the Project Certificate (NIRB, 2022) are key components of the Project Certificate intended to address these concerns. To ensure compliance and the protection of caribou, it is crucial that the Project's annual report provides specific information about how these terms and conditions have been implemented.

Term and Condition 44 states that:

...[T]he Proponent shall further develop its Terrestrial Environment Management and Monitoring Plan (TEMMP) to include increased caribou monitoring across the regional study area and additional details on the scope and design of monitoring programs. The Proponent shall also demonstrate consideration for contributing to existing and planned regional monitoring initiatives associated with terrestrial wildlife and wildlife habitat...

(emphasis added by reviewer)

The reporting requirements associated with Term and Condition 44 are as follows:

Results of discussions, implementation of measures, updates to the Plan, and monitoring results shall be reported and discussed in the Proponent's annual report to the NIRB.

Term and Condition 45 states that:

The Proponent shall demonstrate consideration for cooperating with existing and planned regional and/or community-based monitoring initiatives associated with terrestrial wildlife and wildlife habitat that produce information pertinent to mitigating project-induced impacts. The Proponent shall give special consideration for supporting regional studies of population health and harvest programs for Qammanirjuaq caribou which help address areas of uncertainty for Project impact predictions.

(emphasis added by reviewer)

The reporting requirements associated with Term and Condition 45 are as follows:

The Proponent shall provide a summary discussion of its implementation of this term and condition, including the results of monitoring, adaptive management strategies, consultation, and contribution efforts undertaken, to the NIRB through the Proponent's annual monitoring report.

Table 1 of Appendix 25 is a concordance table indicating which sections of the report fulfill requirements of the various terms and conditions of the project certificate. This table indicates that information on implementation of terms and conditions 44 and 45 is located in section 3.0 of Appendix 25. However, this section of the report does not provide any information on AEM's efforts to increase monitoring of caribou in the Project's RSA or contributions by AEM to existing or planned regional monitoring programs for caribou that interact with the Project, since the Project began in 2017. Section 12 of Appendix 25 discusses the Project's caribou behaviour monitoring and remote camera programs. However, these are AEM-run programs monitoring caribou at a local rather than regional scale. Road and height-of-land (HOL) surveys are

conducted by AEM for the purpose of detecting approaching caribou and triggering mitigation measures, such as road closures or operational shutdowns at the mine (see Appendix 25, section 12.4). These surveys are similarly conducted at a local scale. These surveys do not contribute to the assessment of impacts in the report, do not represent an increase in monitoring effort in the RSA, and/or are not a contribution to existing regional scale caribou monitoring programs.

Overall, the GN is concerned that Terms and Conditions 44 and 45 of the Project Certificate are not being fully implemented by AEM. Specifically, as is required by the project certificate, the annual report does not demonstrate how caribou monitoring in the RSA has increased and what contributions have been made to existing or planned regional caribou monitoring programs since the Project began in 2017; programs “for Qammanirjuaq caribou which help address areas of uncertainty for Project impact predictions” (NIRB, 2022).

### Recommendations

The GN recommends the following regarding the above concerns:

- 1) To provide evidence of compliance with Terms and Conditions 44 and 45, the GN requests that AEM provide the following summary tables in all future annual TEMMP reports:
  - a) A table detailing AEM’s caribou monitoring efforts in the RSA, by year, since 2017 for programs linked to Project impact monitoring; a link that should be demonstrated through analyses presented in the report.
  - b) A table detailing all AEM’s in-kind and/or financial contributions to existing or planned regional monitoring programs for the Qammanirjuaq caribou herd, by year, since 2017.

### Agnico Eagle Answer

Agnico Eagle thanks the GN for their comment.

a) Meliadine’s monitoring efforts linked to mitigation, thresholds and effects predictions, all which take place within the Regional Study Area (RSA), are documented in its Terrestrial Environment Management and Monitoring Plan (TEMMP; Agnico Eagle 2022). The TEMMP has been revised four times since 2015 and a fifth revision is pending. The revisions to the TEMMP reflect changes based on adaptive management and recommendations by intervenors and more recently the Terrestrial Advisory Group (TAG). Agnico Eagle annually reports on the implementation of the TEMMP, which links results to thresholds and Final Environment Impact Statement (FEIS) predictions. For example, Table 18 in the 2023 TEMMP annual report (WSP 2024) shows the impact predictions and thresholds for caribou relative to monitoring results during the 2023 monitoring year.

Increased monitoring that Agnico Eagle has implemented since 2017 include remote camera and ground-based behaviour programs that began in 2020 and is provided Appendix G and Section 12.1, respectively, of the 2023 TEMMP annual report (WSP 2024). The study referenced in T&C 44 (Golder 2021) is also new monitoring since 2017 and this report was updated in 2022 (Golder 2022). Recently Agnico Eagle completed its Commitment 38 analysis and provided a report to the TAG (WSP 2023a). This analysis was designed based on collaboration with the TAG and used the TAG’s recommendations for a study area, definitions for collared caribou deflection and

paralleling behaviours and numerous covariates including insect harassment (WSP 2023b). An addendum to the Commitment 38 report, which included additional analyses to address TAG comments, was also provided to the TAG (WSP 2023c). These are a few examples how Agnico Eagle has increased monitoring since 2017 and are available on the public registry. Agnico Eagle believes that all of the above works demonstrate compliance with Term and Condition 44.

In accordance with the TEMMP, monitoring by the Mine undergoes adaptive management annually and the outcomes from adaptive management may include new monitoring, no change to monitoring, decreased monitoring or discontinuation of monitoring.

b) Agnico Eagle has contributed to regional monitoring programs for the Qammanirjuaq caribou herd through payments made as per the previous Memorandum of Understanding (MOU) between Agnico Eagle and the GN. A yearly contribution of \$150,000 was made between 2017 and 2019, for the term of the MOU which was in effect for 3 years as per condition 1.1.

Between 2019 and 2023, discussions took place between the GN and Agnico Eagle to reach a new agreement that would replace the previous MOU. In early 2023, Agnico Eagle and the GN signed the Data and/or Sample Sharing Agreement (DSSA) acceptable to both parties. Agnico Eagle remains available to further discuss the details of the DSSA with the GN in a meeting.

#### **GN-07 to GN-14: Commitment 38**

Agnico Eagle thanks the GN for comments GN-07 to GN-14 on Commitment 38 and related Addendum that can be found in Appendix B of the TAG Annual Report (Appendix 32 of the 2023 Annual Report).

These comments were also received through the TAG at the end of February 2024, and Agnico Eagle will address them with the TAG and include results of these discussions within the TAG meeting minutes and TAG annual report.

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**Kivalliq Inuit Association (KivIA)**

**KivIA-1: Terrestrial Advisory Group**

**Comment**

The KivIA appreciates progress consistent with T&C 132 as the four TAG meetings in 2023 (April, May, June and October) were collaborative and the meetings are well organized especially the competent minute taking. Although, Agnico Eagle comments on the lack of written comments from TAG members (App. 32, Table 2), the KivIA would like to assure NIRB that KivIA has provided written comments on Commitment 38 (4 March 2024), the TEMMP (23 February 2024) and as well, a baseline analysis of calf abandonment by Qamanirjuaq caribou cows (23 January 2024).

KivIA had previously recommended that Agnico Eagle ensure that TAG annual report include either copies of reports and presentations or, alternatively, where they are archived (KivIA comments 2022 Annual Report). Agnico Eagle has appended to Appendix 32, Commitment 38 report in its entirety but none of the other 2023 presentations or reports were included. The Meliadine web site did not, in May 2024, appear to have the reports.

While KivIA is uncertain about the status of their 2022 recommendation, KivIA has, during the 2023 and 2024 TAG meetings, come to realize that there is a wider problem. The problem is that Information provided to the TAG is not included in the 2023 Annual Report. For example, Agnico Eagle provided the TAG (26 January 2024) with an analysis integrating 2023 collar movements and Height of Land caribou observations to describe monitoring for the approach of caribou. However, the integrated information was not included in the 2023 Annual Report although it is a useful analysis. A second example is the 2023 calving distribution maps were provided to the TAG but the maps or a summarized description were not included in the 2023 Annual Report although they would have been highly relevant. A third example is a report on the reduction in mine site noise during 2023 Level 3 mitigation was provided to the TAG (October 2023). Its importance for the Annual Report is that it relates to the effectiveness of mitigation.

**Recommendations**

Agnico Eagle to ensure that the availability of presentations and reports provided to the TAG are in accessible archives and the summarized information is also available in the annual Terrestrial Environmental Mitigation and Monitoring Report.

**Agnico Eagle Answer**

Agnico Eagle thanks the KivIA for recognizing the progress made towards getting the TAG operational in 2023. Agnico Eagle reiterates its commitment to collaborating with TAG Parties in maintaining an operational TAG.

In the 2023 TAG Annual Report, the comment stated for each action Item of Table 2 Appendix 32 are related to 2023 items. Agnico Eagle acknowledges that the KivIA submitted C38 comments within the TAG in March 2024 and this information will be included in the 2024 TAG Annual report.

Topics discussed or presented within the TAG are presented in the TAG Annual Report and described in the meetings minutes appended to the TAG Annual Report which are part of the overall Meliadine annual report document, distributed to various stakeholders and available for consultation on the NIRB website as well as on the Agnico Eagle website.

Agnico Eagle wishes to clarify that all presentations and reports presented within the TAG are accessible to TAG participants via OneDrive folders. Agnico Eagle acknowledges that this process required adjustments at first, but TAG participants have confirmed access to the OneDrive folders and Agnico Eagle remains available to discuss alternative archive practices with the TAG.

## **KivIA-2: Collared caribou analysis**

### Comment

#### **1. Gap/Issue**

Although Commitment 38 investigated deflections and was completed in 2023, Table 18 (App. 25, S. 12.5) records that the accuracy of impact for sensory disturbance (threshold <10% deflections from AWAR) was not assessed in 2023.

The gap is whether this is an oversight or whether it reflects the on-going TAG discussion about the adequacy of Commitment 38?

#### **2. Disagreement with the Annual Report conclusion**

The KivIA is not yet satisfied about how Commitment 38 tests impact predictions for caribou responses to AWAR and the mine site.

#### **3. Reasons for disagreement with the Annual Report conclusion**

The KivIA appreciates Agnico Eagle's efforts for the Commitment 38 analysis and for seeking TAG advice on design and comments on the preliminary results. The report was well presented and is included in the 2023 Annual TAG Report (Appendix 32). Agnico Eagle in Commitment 38, states that it is complete. This leaves uncertainty as Agnico Eagle also describes Commitment 38's status for the TAG as on-going (App. 32, Table 2). The KivIA's concern is that Commitment 38 was intended to meet T&C 44. T&C 44 specifies that "Monitoring should be adequate to test impact predictions, monitor impact thresholds and trends over time, and to support implementation of mitigation measures".

Agnico Eagle's analysis, Commitment 38, was designed to describe impacts on caribou and it concluded that an adverse response was not measurable (App. 32, S.12.3, p.40). The KivIA disagrees that the impacts were adequately described and has attached the KivIA's technical review as shared with the TAG to this 2023 Annual Report review.

Agnico Eagle did acknowledge the sample size limitations and that the analysis was unable to separate responses to the mine site compared to AWAR. The KivIA agrees and sees those two

points as being partly why the KivIA questions whether the analysis is inadequate especially that the number of collars did not have sufficient statistical power to detect a response to the AWAR and mine site given the number of habitat variables and the high individual variation among the cows. The analysis did not accommodate caribou social behavior (whether the collared caribou were in the same group and influenced each other). Mosquito harassment of caribou can override their responses to roads and traffic (Seversen et al 20231) which cannot be discounted as a significant effect in the Commitment 38 analysis.

Commitment 38 only used the collars and did not integrate information from road surveys, remote camera and behavior monitoring. This is a limitation as each of the four sets of monitoring information samples a particular aspect of caribou responses. We know that caribou cross the AWAR, but we are uncertain under what conditions they cross (traffic, hunting, mosquitos, for example). The behavior and camera monitoring (App. 25; Apps. F and G) have added to the depth of understanding about caribou responses, the frequency of traffic and the extent that the road closures are partial (App. 25; App. F S. 6.4, p. 25). Integrating the monitoring information could further progress to a detailed analysis of wildlife responses to the all-weather access road and assessing the effectiveness of AWAR closures (T&C 57b).

### Recommendations

- i. The KivIA requests Agnico Eagle to clarify whether rate of deflections measured in the Commitment 38 is applicable to assess the accuracy of sensory disturbance threshold for and whether the rate of deflections should be annually measured given the trend to earlier distribution of caribou in the Regional Study Area.
- ii. The KivIA requests Agnico Eagle provide options for integrating collar, road surveys, behavior and camera monitoring to assess the effectiveness of the road closures.
- iii. The KivIA requests Agnico Eagle provide options for amending Commitment 38 in light of KIA's technical questions about the results.

### Agnico Eagle Answer

Agnico Eagle thanks the KivIA for comments on Commitment 38 and related Addendum that can be found in Appendix B of the TAG Annual Report, in Appendix 32 of the 2023 Annual Report.

Agnico Eagle will address the comments on the Commitment 38 report with TAG and include a summary of those discussion within TAG annual reports as per TAG Terms of References.

### **KivIA-3: Wildlife surveys and incidental sightings**

#### Comment

#### **1. Gap/Issue**

The wildlife road surveys and the incidental wildlife sightings are not discussed relative to implications for ecology, monitoring and mitigation.

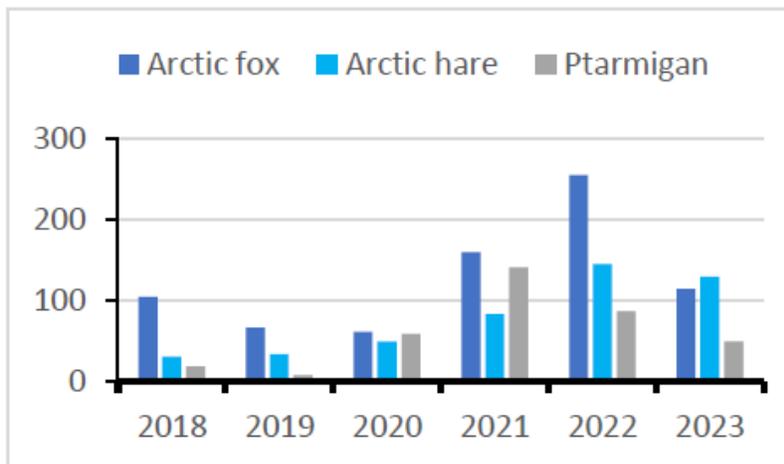
#### **2. Disagreement with the Annual Report conclusion**

The 2023 Annual Report includes the wildlife survey and incidental sightings (App. 25, S. 9.0, Table 8) for the 5 years previous to 2023 which is potentially useful. But Agnico Eagle does not comment on any trends in sightings or provide insight into how its monitoring could be coordinated with other monitoring initiatives.

### 3. Reasons for disagreement with the Annual Report conclusion

Although the numbers do not include any measure of survey effort, they likely capture broad trends. There was no cross-reference to the similar trends for foxes and hares detected on the remote cameras (App.25, App. G, Table 6.2.1).

The trends include wildlife likely to fluctuate or cycle in number (Arctic Fox, Arctic Hare and Ptarmigan). Agnico Eagle relies on tables but in some cases, graphs may draw the reader's attention to the trends (Figure 1). The trends are likely predictive for monitoring and mitigation. For example, if the sightings of Arctic foxes peaked in 2022, then it is uncertain whether the increased mitigation in 2023 (App. 25, S. 9.5.2) was effective or that there were fewer foxes. The increasing trend in raven sightings (App. 25, S. 9.0, Table 8) may reflect an increase in scavenging opportunities. Consideration could also be given to whether the trends include those species which are peregrine prey as peregrine nesting in 2023 was declining (App. 25, S.85).



*Figure 1. Wildlife survey and incidental sightings based on 2023 Annual Report (App. 25, S.9.0 Table 8).*

T&C 45 states that “The Proponent shall demonstrate consideration for cooperating with existing and planned regional and/or community-based monitoring initiatives associated with terrestrial wildlife and wildlife habitat . . .”.

For example, the Nunavut General Monitoring Plan. The 2023 Annual Report does not describe whether there was cooperation with NGMP or other monitoring initiatives. The possible trends would also be an opportunity to ask Inuit elders about changes in numbers and how the mine may be contributing to ecological changes.

## Recommendations

- i. The KivIA requests that Agnico Eagle increase progress toward T&C 45 through reaching out to NGMP and other regional monitoring initiatives.
- ii. The KivIA requests Agnico Eagle consult with Inuit elders to discuss their knowledge on the changes in the wildlife sightings and incidentals.

## Agnico Eagle Answer

Agnico Eagle does support both regional and community-based monitoring for wildlife and wildlife habitat as part of the TEMMP (Agnico Eagle 2022). In early 2023, Agnico Eagle and the GN signed the Data and/or Sample Sharing Agreement (DSSA) acceptable to both parties, fulfilling the intent of T&C45 and used for the regional monitoring of the Qamanirjuaq caribou. Meliadine monitors birds in accordance with Environment and Climate Change Canada's Program for Regional and International Shorebird Monitoring (PRISM; Section 8.2, WSP 2024), which is a Canada-wide monitoring initiative and the Mine's monitoring fills spatial gap in Arctic Canada. Wildlife habitat loss by the Mine is monitored using the GN's Kivalliq Land Cover Classification system, which describes different land covers that provide wildlife habitat across the region.

Meliadine also relies on community-based monitoring to implement mitigations for caribou. The KivIA and Kivalliq Hunters and Trappers Organization (KHTO) participate in Height of Land surveys and road surveys that are used to manage mining activities for caribou. Incidental observations of caribou by community members in the field are also considered as source of monitoring information for the Mine. The Mine's Hunter Harvest Program is done in collaboration with the KHTO and also relies on community-based monitoring and reporting of hunting activity in the area around the Mine (Section 13, WSP 2024).

Furthermore, Agnico Eagle will aim to address the topic of changes in wildlife sightings during future meetings with the Kivalliq Elders Advisory Committee.

All of the above are used by Agnico Eagle and are pertinent to mitigating Mine-related impacts to caribou, other wildlife and wildlife habitat. Agnico Eagle believes that implementation and reporting on these monitoring programs demonstrates compliance with Term and Condition 45.

## **KivIA-5: Behavior and remote camera monitoring**

### Comment

#### **1. Gap/Issue**

Gaps include that specific results were not reported for the mine site, whether there was an increase in the duration of the responses in 2023 and that there were no recommendations for future sampling and analyses especially to assess mitigation effectiveness.

#### **2. Disagreement with the Annual Report conclusion**

The KivIA notes that the reports (App. 25, App. F and G) did not address how the monitoring could be further developed to analyze caribou responses to operations including the different types of traffic, groups with and without calves and to describe mitigation effectiveness.

### **3. Reasons for disagreement with the Annual Report conclusion**

The behavior and camera monitoring have contributed to describing responses to the AWAR which is consistent with T&C 57. However, the lack of information on the responses to the mine site, the duration of responses (behavior monitoring) and traffic-type specific responses were a limitation for 2023. Although sample size may be a restriction, the results for the mine site separate from AWAR should have been reported for 2023 even as descriptive statistics. The duration of responses in 2023 appeared to be longer than 2022, for example, but this is from a visual comparison of graphs (App. G, Figures 6.3.6) as descriptive statistics were not provided. The on-going shift in calving to the vicinity of the mine was not considered nor spatial trends (mine site versus southern AWAR) and year (in 2023, cows with younger calves). The impact of groups with young calves was not included as a variable in the analyses but cows with younger calves are likely more responsive.

In 2023, 10 cameras were placed at the mine site and behavior was sampled (App. F and G) for which KivIA thanks Agnico Eagle and for including the traffic type and frequency results. But the KivIA in 2022 had requested cameras be placed on both sides of the narrows and this did not apparently happen in 2023 (App.32 Table 2). Additionally, the cameras in the vicinity of the mine site faced away the mine site and thus could not detect whether vehicle movements were visible despite the sea-can walls. This would have been an opportunity to test the mitigation effectiveness for the sea-can walls and to measure the frequency and type of surface activity during the different levels of mitigation.

The 2023 Annual Monitoring Report lists when the AWAR was closed (Level 3), the estimated group size and the distance of the sighting (App. 25, App. H). But the listing does not separate when the AWAR bridges were closed to ATVs and does not cross-reference to the behavior monitoring which did report the frequency of disturbance by vehicle type. Annually, light trucks are the majority of vehicles on the AWAR and ATVs are only 5% of all one-way trips (App. 25, 17). But in summer, the situation changes based on the traffic monitored with the remote cameras (App. 25, App. G). When the AWAR is closed, ATVs are second to light trucks, 40% and 56%, respectively, of all vehicles (App. 5, App. G. Table 6.4.1). When AWAR was open (17 July 2023 onwards), ATVs were 10% and light trucks 35%, respectively. The behavior monitoring does mention that GN and the KHTO closed the AWAR in 2023 to all traffic including hunters (App. 25, App. F. p.,2). but did not separate responses relative to the type of disturbance. The information is needed to assess the effectiveness of the road closures, and the impact of monitoring (pick-up trucks).

The 2023 Monitoring Report does not have recommendations for how to develop the behavior or remote camera monitoring to refine questions to be answered or how the monitoring could address questions of the mitigation effectiveness or revise the accuracy of impact predictions. Both monitoring programs are in their 4th year and have consistency in methods and results so further development would be consistent with T&C 57.

## Recommendations

- i. The KivIA requests that Agnico Eagle provide the TAG with design options to apply the behavior and remote camera monitoring to test mitigation effectiveness at the mine-site and AWAR.
- ii. The KivIA requests that Agnico Eagle analyse the behavior monitoring to report descriptive statistics for the duration of responses by year to assess how season (month or calf age) is a contributing variable.

## Agnico Eagle Answer

Agnico thanks the KivIA for their comments. Agnico Eagle would like to mention that the remote camera study did in fact evaluate the spatial trends of caribou patterns around the mine and the AWAR. This analysis can be found in section 6.2.1 of Appendix G of Appendix 25 of the Annual report.

As per the camera looking at the narrow, logistical and safety issues restrained Agnico Eagle from deploying cameras in the narrows area in 2023. In 2023, the helicopter wasn't present on site and the ice was unsecure to use the snowmobile to deploy the cameras. In 2024, Agnico Eagle made sure to deploy cameras facing the narrows. Additionally, during the TAG meeting of May 30, 2024, members discussed the location of the cameras around site. TAG parties provided comments which were accounted for in the placement of 3 cameras within the mine site. The cameras are facing the seacan walls as proposed by the KivIA to record the traffic generated by the light duty activities in each level, aiming to inform on the effectiveness of the seacan walls.

Agnico Eagle will evaluate design options to apply the behaviour and remote camera monitoring to test mitigation effectiveness at the mine site and AWAR. Agnico Eagle will collaborate with the TAG to discuss an analysis in the behaviour monitoring to determine if there is an effect of season (e.g., month or calf age) on caribou behaviour.

## **KivIA-6: Cumulative impacts**

### Comment

#### **1. Gap/Issue**

The issue is how the monitoring results, including the all-weather access road and associated access roads/trails, and waterlines contribute to cumulative effects of the project.

#### **2. Disagreement with the Annual Report conclusion**

The KivIA is concerned that cumulative impacts are not mentioned in the 2023 Annual Report nor even preliminary analyses or methodology are presented.

#### **3. Reasons for disagreement with the Annual Report conclusion**

T&C 57c states that "A demonstration and description of how the monitoring results, including the all-weather access road, and associated access roads/trails, and waterlines contribute to cumulative effects of the project;" The reporting requirement for the Terms and Conditions (App.

36) state that “the Proponent shall provide its discussion of these factors to the NIRB through the Proponent’s annual monitoring report.” Although Agnico Eagle for T&C57c (App. 36), refers to the Annual Report (Section 7.9.1 and 11.11) and Appendix 25, these sections do not describe how the monitoring could or does contribute to measuring cumulative impacts.

The annual monitoring such as the behavior monitoring lends itself to projecting cumulative effects. The measured responses of caribou being alerted or trotting all represent interruptions in forage intake typically up to 6 min/disturbance (App. 25, App. F). The frequency of disturbances can be measured through the remote cameras and road surveys. Forage intake can be modelled to project from individual to herd-scale responses for example. The 2023 Annual Report did estimate the proportion of the herd exposed to the mine site and AWAR based on the collars (although more correctly it was the proportion of the cows not the overall herd) but did not use the information in the context of cumulative impacts.

#### Recommendations

- i) The KivIA requests that Agnico Eagle to provide design options for the TAG to measure how monitoring results at Meliadine contribute to cumulative impacts and toward meeting T&C57c.

#### Agnico Eagle Answer

Agnico Eagle would like to clarify that using the camera study record and the road survey will not provide a frequency of disturbance significance. The traffic recorded by the camera is at a specific time and specific location. The photos don’t show context including the presence of caribou around.

It would be wrong to assume that each vehicle captured by photo disturbs caribou. The majority of the traffic recorded is happening when the AWAR is open, hence no caribou should be close to the road.

Agnico Eagle will work with the TAG to discuss how monitoring results at Meliadine can be used to look at cumulative effects of the mine and facilities on caribou.

### **KivIA-7: Harvesting Access**

#### Comment

##### **1. Gap/Issue**

The 2023 Monitoring Report does not have a section on assessing if and how the all-weather access road changed harvesting access.

##### **2. Disagreement with the Annual Report conclusion**

T&C 48 lists measures to ensure mitigation and monitoring consider increases to harvesting from improved access. However, the 2023 Annual Monitoring report does not provide information on how to measure changes in harvest levels if access did have an impact. An additional

consideration is whether harvesting associated with the use of ATVs modifies the responsiveness of caribou to the AWAR.

### **3. Reasons for disagreement with the Annual Report conclusion**

The 2023 Annual Monitoring Report lists when the AWAR was closed (Level 3), the estimated group size and the distance of the sighting (App. 25, App. H). But the listing does not separate when the AWAR bridges were closed to ATVs. The behavior monitoring does mention that GN and the KHTO closed the AWAR in 2023 to all traffic including hunters (App. 25, App. F. p.,2). The behavior monitoring did report the frequency of disturbance by vehicle type but did not separate responses relative to the type of disturbance. Annually, light trucks are the majority of vehicles on the AWAR and ATVs are only 5% of all one-way trips (App. 25, 17). But in summer, the situation changes based on the traffic monitored with the remote cameras (App. 25, App. G). When the AWAR is closed, ATVs are second to light trucks, 40% and 56%, respectively, of all vehicles (App. 5, App. G. Table 6.4.1). When AWAR was open (17 July 2023 onwards), ATVs were 10% and light trucks 35%, respectively.

The harvest study does not report monthly caribou harvests which would reveal the number of caribou harvested during the period when the caribou are most likely in the vicinity of the AWAR. The Harvest Study does not summarize methods such as ATV, on foot or a light truck or effort.

#### Recommendations

- i. The KivIA requests that Agnico Eagle explore options with TAG to measure if and how the all-weather access road changed harvesting access.
- ii. The KivIA requests that Agnico Eagle reports the caribou harvest on a monthly basis and add harvesting effort to the reporting of caribou harvest.

#### Agnico Eagle Answer

The 2023 HHS report (in Appendix I of Appendix 25 of the 2023 Annual Report) did report monthly Caribou harvest (refer to Table 6) and attempted to assess differences in harvest rates before and after the AWAR was constructed (refer to Section 6.1.3 and Tables 6.3 and 6.4). As discussed as part of the TEMMP review process, Agnico Eagle will continue to discuss aspects of the HHS with TAG members and explore additional ways to assess how the AWAR may have changed harvesting access. For the 2024 report, Agnico Eagle will provide a table similar to Table 6.4 that includes an assessment of harvest changes within the AWAR Local Study Area.

Agnico Eagle has data on the number of ATVs recorded by cameras and during behavioral observations; however, the presence of ATVs is not automatically associated with acts of harvesting. For this reason, it is difficult to link data on ATV presence to harvesting data.

## **KivIA-8: Environmental variables**

### Comment

#### **1. Gap/Issue**

The 2023 Annual Report has a brief reporting of annual environmental conditions including timing of snowmelt, green-up for 2023 as required in T&C 56e but not with reference to previous years.

#### **2. Disagreement with the Annual Report conclusion**

The KivIA suggests that the trends of annual environmental conditions are part of an assessment and are an essential context for describing monitoring and mitigation.

#### **3. Reasons for disagreement with the Annual Report conclusion**

The 2023 Annual Report (App. 25, S.4.0) only reports the bare minimum for environmental variables. However, knowing trends and annual variability is essential to support separating environmental effects from project impacts. For example, the shift in calving is likely related to trends in the timing of plant green up and baseline information is available; comparing the annual green-up timing relative to previous years could contribute to understanding caribou local distribution. During the public hearings for the Meliadine Extension Project, there was discussion about whether caribou had abandoned the traditional crossing west of the mine site in response to mine activities or the timing of lake ice break-up. This suggests that more information such as the timing of Meliadine Lake break-up as well as the date of snowmelt (App. 25, S. 4.0) would be useful.

The significance of describing the minimum temperatures (App. 25, S. 4.0) is not explained; more useful would be, for example, the number of hot days (>20oc) which is relevant to caribou behavior and movements. The temperature, wind speeds and directions are included in the behavioral monitoring (App. 25, App. F; App. B). Although, they did not show as significant variables, most of the behavior scans were earlier in summer before the mosquito season and hot weather (App. 25, App. F, S. 6.3.4).

There are more precise ways of presenting the dates for green-up as using the Normalized Difference Vegetation Index (NDVI) averaged across the Regional Study Area returns too broad a range of dates (26 June and 12 July 2023) for comparison with other years. This could include plant Growing Degree Days or alternate methods for presenting the satellite-based estimates. A mosquito index as an environmental variable is useful to support assessing caribou road crossing behavior. The index includes wind speed which should be included as a variable as it relates to, for example, dust fall and noise levels.

### Recommendations

- i) Agnico Eagle to consult with TAG to compile a list of environment variables that would contribute as a context for monitoring and mitigation.

- ii) Agnico Eagle to present the annual environmental variables as trends over time and to use graphs to allow distinguishing particularly severe or benign years.

Agnico Eagle Answer

Agnico Eagle thanks the KivIA for their comments. Reporting of environmental variables in annual TEMMP reports is consistent with those identified by NIRB in Term and Condition 56, item e which includes timing of snowmelt, green-up, as well as standard weather summaries. Agnico Eagle will assess revising future reports to include multi-year reporting and assessment of the environmental variables identified in Term and Condition 56, item e.

Agnico Eagle reports other meteorological variables such as wind speed and direction on other temporal scales in the annual Air Quality Monitoring Report (Appendix 23 of the 2023 Annual report).

As the KivIA identified, weather data are already recorded and reported during wildlife studies so they can be linked directly to the scale of wildlife observations. Wildlife studies such as caribou behaviour monitoring are used to examine Mine-related impacts and mitigation. Agnico Eagle may implement special studies from time to time, such as the Commitment 38 analysis (WSP 2023), which can consider specific environmental variables recommended by the TAG and known to influence wildlife and wildlife habitat. For example, cumulative growing degree days was included as a model covariate in relation to collared caribou movements in the Commitment 38 analysis (WSP 2023). Agnico Eagle is opened to discussing special study proposals within the TAG.

**KivIA-9: Reference Sites for the AEMP**

Comment

There is evidence of impacts to the Far Field areas in Meliadine Lake due to mining activity. Additional control areas in the local area should be incorporated into the AEMP to better distinguish between mine related impacts and local variability in the watershed.

Recommendations

As committed to by Agnico Eagle during the NWB licence amendment Technical Meeting, June 6, 2024, additional reference areas at Peter Lake and other lakes should be monitored, with results reported as an annex to the AEMP.

Agnico Eagle Answer

Agnico Eagle would like to note this recommendation was addressed through the 2024 NWB Water Licence Amendment Technical Meeting Process.

Agnico Eagle submitted a response to comments from the KivIA and ECCC regarding impacts to water quality at the far-field areas in Meliadine Lake. Please refer to Agnico Eagle's response to



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ECCC-TC-15 where temporal trends in Meliadine Lake compared to Peter Lake and Atulik Lake were discussed.

Agnico Eagle agreed to monitoring additional reference lakes during the technical meeting for the Water Licence Amendment (see commitment number WLA-05). A limited sampling campaign in Peter Lake and Atulik Lake is also planned for August 2024 as part of the AEMP/EEM.

**Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**

**CIRNAC-1: Saline Water Volumes Pumped to Tiriganiaq Open Pit #2 (TIRI02)**

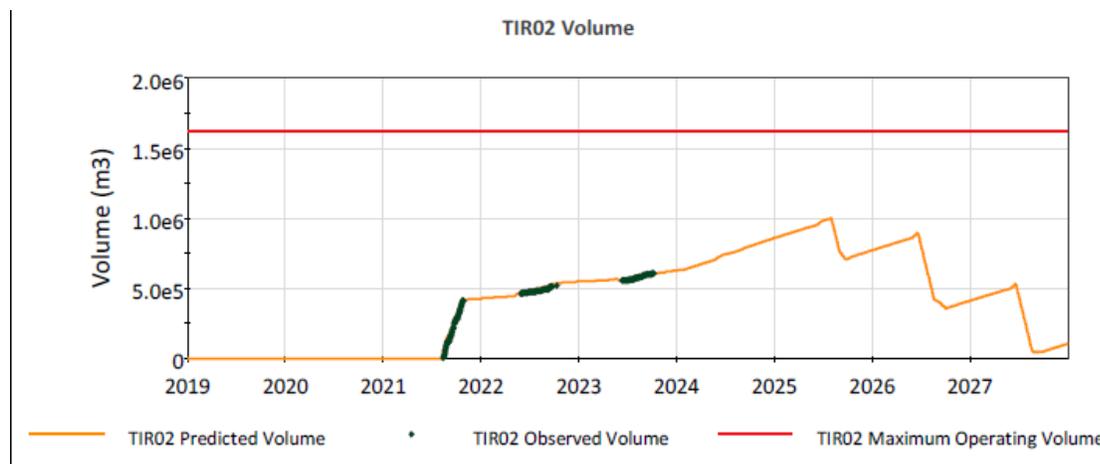
Comment

Section 3.1.3 of the Meliadine Gold Mine Project 2023 Annual Report states that the volume of underground saline water pumped to the surface was 71,971 m<sup>3</sup> in 2023, and Table 4 provides the pumping distribution by month over the year.

A review of prior annual reports found similar information provided for each of the previous years starting in 2018. The table below summarizes pumped volumes for this review, the reported total volume of underground saline water pumped into the pit is 373,906 m<sup>3</sup> by the end of 2023.

2018	2019	2020	2021	2022	2023	total to date
37,766	37,031	103,486	54,805	68,845	71,973	373,906

Meliadine 2023 Annual Report; Section 3.2.1.4 Figure 14 shows the results of modelled and observed volumes of saline water in TIRI02. It notes that saline water pumped from Tiriganiaq will be stored in TIRI02 until 2025, after which the water will be discharged through the waterline to Itivia Harbour. Predicted groundwater inflow rates to the underground mine were updated in 2024 to reflect an updated mine plan scenario. They included a limited calibration based on groundwater inflow monitoring over previous years.



**Figure 14: Forecasted saline water volume in TIRI02 against observed volumes.**

As seen in Figure 14, the predicted and actual volume of saline water stored in the pits was approximately 500,000 m<sup>3</sup> in 2023. This figure shows a substantial discrepancy from the total of 373,906 m<sup>3</sup> previously reported at Meliadine in the 2018 to 2023 Annual Reports. It is important to note that these volumes don't account for any decrease in pit volumes due to the discharge of saline water pit volumes that took place between 2019 to 2021.



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Table 1 in Section 2.1 Predicted Groundwater Volumes of the Groundwater Management Plan, Appendix A to the Water Management Plan, provides Predicted Groundwater Inflow for the years 2023 to 2031, as seen below.

**Table 1: Predicted Groundwater Inflow and TDS to the Underground Mine (2017 to 2033)**

Year	Predicted Groundwater Inflow (m <sup>3</sup> /day)	Predicted TDS (mg/L)
2023	300	57,500
2024	450	57,000
2025	450	57,000
2026	475	56,500
2027	475	56,500
2028	450	56,500
2029	475	54,000
2030	475	53,500
2031	475	53,500
2032	450	53,500
2033	450	53,500

Based on this table, the pit is expected to receive an additional groundwater inflow of 328,500 m<sup>3</sup> between 2024 and 2025. This would bring the total to 702,406 m<sup>3</sup> considering the groundwater inflow previously reported in the Annual Report. This estimate deviates significantly from the 1,000,000 m<sup>3</sup> depicted in Figure 14.

CIRNAC notes that the inflow predictions in Table 1 above vary from those provided by AEM in support of the Amendment Application to the Nunavut Water Board dated January 2024, which included Table 16 of the Water Management Plan and Table 6 of the Updated Hydrogeology Modelling Report. These two tables also varied from each other.

In light of the variances between actual volumes reported to date and predictions to date and the provision of three different predicted rate tables for inflow for future years, it is difficult to determine if the projections of saline water inflows will vary substantially from, or have impact predictions outside of the Project FEIS targets.

### Recommendation

CIRNAC recommends that AEM:

Provide clarification concerning the various discrepancies between the total volume of saline water from underground that was pumped to the surface, as detailed in Section 3.1.3 of the Meliadine 2023 Annual Report for the period from 2018 to 2023, and the corresponding volumes illustrated in Figure 14.

Reconcile any disparities in the projected groundwater inflow rates from 2024 onward against the updated predictions provided in the FEIS. Verification of these expected inflows against the FEIS will enhance transparency and ensure alignment with regulatory expectations.

#### Agnico Eagle Answer

- a) Volumes presented in Table 4 of Section 3.1.3 of the Annual Report are the volumes of water pumped to surface from the underground mine and are consistent with the yearly totals presented in the table provided in CIRNAC-01 comment. Figure 14 of section 3.2.1.4 shows the results of the modelled and observed volumes of saline water stored in Tiri 02. They include saline water pumped from the underground mine but also include other inflows of water to Tiri 02. The following natural inflows also contribute to the volume of water stored in Tiri 02:
- Tiri 02 water surface snowmelt and rain
  - Tiri 02 snowmelt and rain from the pit walls
  - Natural runoff from the pit drainage area

Other sources of water, as specified in the Water Management Plan, are also occasionally pumped to Tiri 02. The following is a list of the other sources that contribute to the volume of water stored in Tiri 02:

- EWTP sludge water
  - Water from Tiri 01 main and residual SP4 sumps
  - Brine from reverse osmosis plant
- b) On January 26<sup>th</sup>, 2024, Agnico Eagle submitted an application to amend the NWB Water Licence to support the completion of mining deposits that were included in the 2014 Final Environmental Impact Statement and approved in Project Certificate No.006 issued by the NIRB in 2015. The amendment application included an updated version of the GWMP which takes into consideration the mining of additional deposits. Agnico Eagle assumes CIRNAC is referring to the projected groundwater inflow rates provided in the Water Licence Amendment application and not the FEIS in recommendation b). The greater projected inflows in the Water Licence Amendment application when compared to values presented in the 2023 Annual Report is due to the inclusion of the additional deposits which are not reflected in the groundwater modelling of the currently approved mine plan.

While some of the supporting information used as part of the amendment application is present in the current GWMP, the updated version submitted with the 2023 Annual Report presents the collection, treatment, storage and discharge of saline groundwater as it pertains to the currently approved Meliadine project (submitted in accordance with Part B, Item 12 of the Licence).



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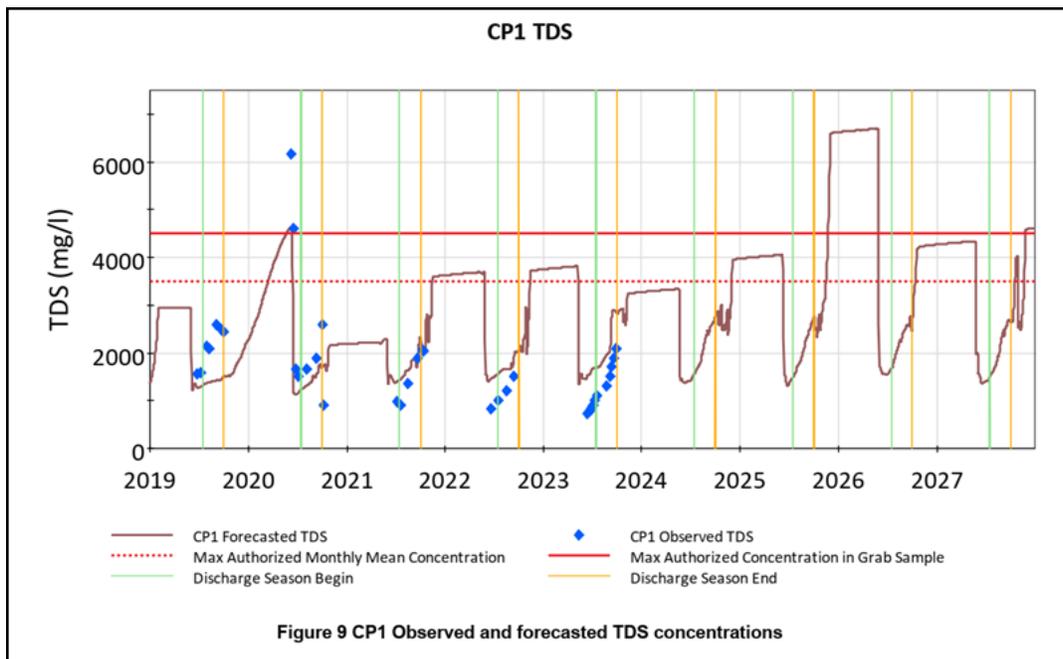
### CIRNAC-2: Water Quality Predictions

#### Comment

As shown in the figures below, the predicted Total Dissolved Solids (TDS) concentrations in CP1 as presented in Appendix 4 of the Meliadine 2023 Annual Report are much higher than the TDS predictions presented Meliadine Water License No. 2AM-MEL1631, Amendment Application, 23 February 2024).

As in previous years, the Water Balance and Water Quality Model (WBWQM) overpredicted ammonia-nitrogen concentrations and total phosphorous in CP1. As recommended by CIRNAC in its 2022 Annual Report Comments, AEM conducted a study, whose results are reported in Meliadine 2023 Annual Report; Appendix 5. The study reaffirmed previous findings that nutrient dynamics in CP1 are linked to algae in aquatic ecosystems. Although the ammonia removal mechanism remains unclear in CP1, data indicate that natural attenuation through algal growth significantly influences this process.

From the 2023 Annual report (Appendix 4, page 492):

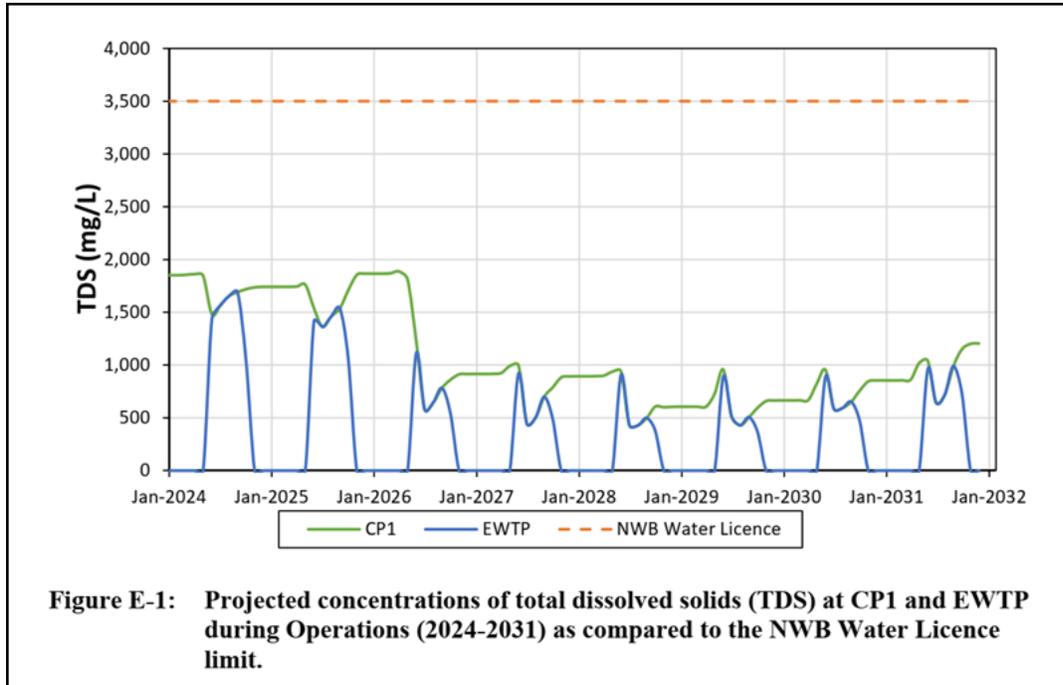


From the 2024 Nunavut Water Board Amendment Application (Appendix B\_WBWQM Figures, Lorax-memo: February 23, 2024):



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In addition, water quality predictions included in the 2023 Annual Report and Appendix 4 for CP1 and TIRI02 are only forecasted until the end of 2027, as a result, it is not possible for CIRNAC to confirm conformance through the life of the mine and closure and post-closure periods. These longer-term figures are required for assessing long-term trends and comparing these trends to those predicted in the FEIS.

### Recommendation

CIRNAC recommends that AEM:

- Enhance the accuracy in predicted CP1 TDS concentrations from 2024 to 2028.
- Enhance the accuracy of ammonia-nitrogen and total phosphorous concentration predictions in the WBWQM by incorporating CP-specific nutrient attenuation processes.
- Provide WBWQM figures that verify expected concentration results during operations, closure and post closure.

### Agnico Eagle Answer

- Regarding the differences in predicted TDS concentrations between Appendix 4 of the Meliadine 2023 Annual Report and those presented Meliadine Water License No. 2AM-MEL1631, Amendment Application, 23 February 2024), it is important to note that the water balance and water quality model for the Water Licence Amendment are considering new mine components, such as the F Zone, Wesmeg, Pump, and Discovery deposits for which the mining suggests reduced TDS generation.

Further, Agnico Eagle wishes to emphasize that the increase of predicted TDS concentrations during the winter months are associated to cryo-concentration and should not be compared to observed TDS values over the open water period. During the open water period, the 2023 Annual Report predictions of TDS concentration are conservative and in an acceptable range of error when compared to observed concentrations.

Agnico Eagle provided updates of the Water Balance and Water Quality forecast as per the requirements of the NWB Water Licence.

As for extending the simulation period from 2019-2027 to 2019-2028, Agnico Eagle would like to refer CIRNAC to answer provided in c) below.

- b) Please refer to response to ECCC-2 comment, which details the improvements that will be made to the ammonia and phosphorous concentration predictions in CP1.
- c) On January 26<sup>th</sup>, 2024, Agnico Eagle submitted an application to amend the NWB Water Licence to support the mining of deposits that were included in the 2014 Final Environmental Impact Statement and approved in Project Certificate No.006 issued by the NIRB in 2015. The amendment application included an updated version of the WBWQM which takes into consideration the mining of additional deposits.

While some of the supporting information used as part of the amendment application is present in the 2023 Annual Report WBWQM, the latter presents updated results as it pertains to the currently approved Meliadine project (and is submitted in accordance with Part B, Item 12 of the Water Licence). The water balance and water quality model developed for the Water Licence amendment that considers the additional mine components also includes a simulation of the water balance and quality during mine closure and post closure.

Pending the Meliadine Water License No. 2AM-MEL1631 Amendment Application is approved, Agnico Eagle will transition to the WQWQM developed for the Water Licence Amendment. The subsequent annual reports will then include longer term water quality prediction for operation, mine closure and post closure.

### **CIRNAC-3: Improving Effects Monitoring in Meliadine Lake**

#### Comment

As noted in Meliadine's 2023 Annual Report; Appendix 17, the objective of the Aquatic Effects Monitoring Program (AEMP) for the Meliadine Mine is to verify that the mine is operating as planned and not causing changes in water quality that could adversely impact aquatic life or traditional uses of Meliadine Lake.

The 2023 AEMP notes that water quality in Meliadine Lake has changed in recent years with increasing concentrations of some parameters, including major ions (chloride, sodium, sulphate), organic carbon, and a few metals (arsenic, molybdenum, strontium, and uranium). These concentration increases were observed throughout the lake. Treating effluent discharge into

Meliadine Lake has, among other factors, contributed to these changes, most obviously within the East Basin.

Despite these observations, which are similar to previous years, the AEMP did not identify any mining-related exceedances of the AEMP Action Levels for water quality or phytoplankton that have been developed for toxicological impairment and nutrient enrichment. However, these elements and chemicals may contribute to increasing primary productivity via separate pathways. The current monitoring frequency (i.e., collecting water samples three times a year) is inadequate to accurately discern potential correlations necessary for a comprehensive assessment of the impacts of mine effluent on Meliadine Lake.

#### Recommendation

CIRNAC recommends a more detailed study in the AEMP to minimize uncertainty in water quality in Meliadine Lake through expanded data collection and assessment. This may include, but is not limited to:

- a) Extending the current AEMP monitoring period (i.e., June to October instead of July to September) and increasing the frequency of water chemistry monitoring (i.e., once a week instead of once a month) to help define the factors influencing the system's productivity.
- b) Collecting oxygen profiles, turbidity data and water chemistry measurements (including dissolved organic and inorganic carbon) at depth to determine if the elevation of organic material in surface water and at depth indicates the early stages of eutrophication and the accumulation of organic material.
- c) Collecting and analyzing lake bottom sediment samples annually for trend analysis.

#### Agnico Eagle Answer

CIRNAC recommends a more detailed AEMP study in 2024. Agnico Eagle would like to point out that the scope of the 2024 program will include the following components in addition to the annual surface water quality program and phytoplankton study in Meliadine Lake:

- sediment chemistry and benthic invertebrate community (exposure areas MEL-01 & MEL-02; reference areas MEL-03 and MEL-05);
- small-bodied fish (Threespine Stickleback) population assessment and tissue chemistry (exposure area MEL-01; reference areas MEL-03 and MEL-04), and
- Lake Trout health assessment and tissue chemistry (exposure area MEL-01; external reference lakes Peter and Atulik).

The benthic invertebrate and fisheries studies follow the Metal and Diamond Mining Effluent Regulations (MDMER) Environmental Effects Monitoring (EEM) guidance for assessing the potential effect of effluent exposure on fish and fish habitat.

CIRNAC listed some possible examples of how the Meliadine Lake water quality program could be expanded. Below is a response to each of those recommendations.



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- a) June and October are not viable options for water sampling on Meliadine Lake. Ice typically starts receding from the shoreline in mid-June, and boat access to the various study areas is not possible until the lake is free of ice. Lakes in the region typically begin to freeze over in October, which presents health and safety risks to the field team. For these reasons, the AEMP is limited to 3 water sampling events in July, August, and September with roughly 3-4 weeks between events.
  - b) Limnology profiles are completed in April, July, August, and September as per the AEMP Design Plan. Dissolved oxygen, pH, temperature, and specific conductivity readings are taken near the surface and at 1 m intervals to within 1 m of the sediment. Long-term monitoring at MEL-01 has consistently shown that surface water is well mixed based on the in-situ DO, temperature, and pH measurements. Turbidity is measured at the laboratory (ALS Environmental) from the water samples collected at mid-depth in the water column. There is no evidence of increasing turbidity in the East Basin of Meliadine (MEL-01) compared to the range of values observed during the baseline period and at the reference areas (see in figure below).
  - c) Erosion and sedimentation rates in arctic lakes are low as indicated by low concentrations of TSS and low turbidity (see plots in Appendix C2 of the 2023 AEMP Report). Without a source of particulate material, sediment chemistry has remained relatively consistent from baseline through early operations. Sediment sampling is scheduled for August 2024. If there is evidence of increasing temporal trends for metals of interest linked to activities at the Mine, more frequent (annual) sediment sampling may be conducted.

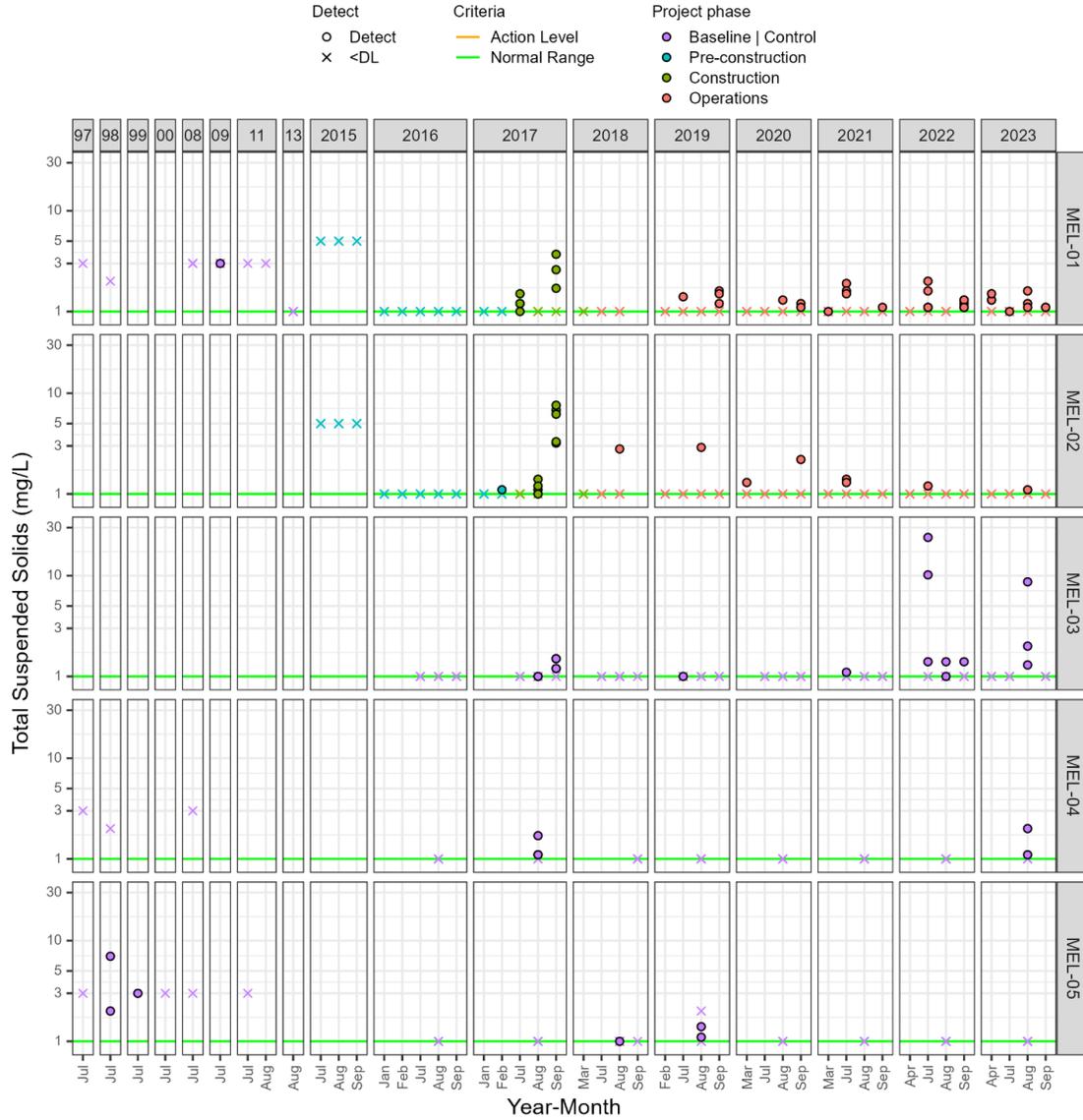
Agnico Eagle has also committed to water sampling at additional reference lakes over 3 years starting in 2025 through the 2024 Water Licence Amendment process (commitment WLA-05 in response to KivIA-TC-03 and ECCC-TC-15).





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Total suspended solids (TSS, mg/L) in Meliadine Lake (1997-2023):



#### **CIRNAC-4: Employment schedule**

##### Comment

Pursuant to Term and Condition 92 of Project Certificate 006, Amendment 2, AEM is required to “submit a detailed staff schedule to the NIRB and the Government of Nunavut in the first 6 months following the issuance of a Project Certificate. The schedule should, at a minimum, provide a description of:

- a. Title of positions required by department and division;
- b. Quantity of positions available by Project phase and year;
- c. Transferable skills, both certified and uncertified, which may be required for, or gained during, employment within each position; and,
- d. The National Occupational Classification (NOC) code for each individual position.”

AEM is also “encouraged to consult the Government of Nunavut during development of the schedule. A new schedule should be submitted following any significant deviation from original predications.”

The NIRB Project Certificate Tracking Table included in AEM’s Appendix 36 of the Meliadine 2023 Annual Report makes reference to section 12.2 of the 2022 Annual Report and related appendices for information relating to the compliance status of this Term and Condition. Section 12.2 of the Meliadine 2022 Annual Report and its Appendix 37, Socio-Economic Monitoring Program Report do not present the detailed staff schedule required under Term and Condition 92. A copy of this schedule should be provided, along with information as to whether or not it has been updated in recent years to reflect workforce changes following the Ministerial written approval, of the NIRB’s recommendation for AEM’s Saline Effluent Discharge to Marine Environment Proposal, including the new and revised Project Certificate Terms and Conditions on January 31, 2022.

##### Recommendation

CIRNAC recommends that AEM:

- a. Confirm whether any changes were made to its detailed staff schedule following the approval of its Saline Effluent Discharge to the Marine Environment Proposal.
- b. Provide a reference as to where the most recent copy of its detailed staff schedule can be found on the NIRB public registry; as well as providing a reference as to where the most recent copy of its detailed staff schedule can be found on the NIRB public registry.
- c. Specify where its detailed staff schedule can be found on the NIRB public registry in all future Annual Report submissions

### Agnico Eagle Answer

Agnico Eagle thanks CIRNAC for their comment. As presented in the FEIS Addendum for the Treated Groundwater Effluent Discharge into Marine Environment, Rankin Inlet (Agnico Eagle 2020), construction of the proposed activities could result in the use of local contractor; however, the construction period is short, and the number of employment opportunities would be very small and likely be filled by the contractor's existing workforce.

Therefore, Agnico Eagle does not consider this work to cause "significant deviation from original predications" and an updated schedule would not be warranted at this time.

The detailed staff schedule was submitted to the NIRB on November 3<sup>rd</sup>, 2015. It can be found on the NIRB public registry under document no. 325135 (190527-11MN034-Meliadine Staff Schedule-IA1E.pdf), NIRB File No. 11MN034, Project Application 124106.

Agnico Eagle will add a reference to this document in the NIRB Project Certificate Tracking Table Appendix of future Annual Reports.

### **CIRNAC-5: Non-Traditional Land Use and Resource Use – Consultation with Outfitters and Guides**

#### Comment

Pursuant to Term and Condition 104 of the Amended Meliadine NIRB Project Certificate, AEM "is encouraged to consult with outfitting and guiding businesses that operate in the Local Study Area and Regional Study Area regarding use of the area, specifically as it relates to hunting, fishing and guiding within proximity of the All-Weather Access Road. Results of this consultation should be incorporated into updated plans where applicable."

Furthermore, the Reporting Requirements for this Term and Condition state that, AEM "shall provide a summary discussion of its implementation of this term and condition (including results of monitoring, adaptive management strategies, consultation, and contribution efforts) to the NIRB through the Proponent's annual monitoring report."

The NIRB Project Certificate Tracking Table included in AEM's 2023 Annual Report (Appendix 36) makes reference to section 7.9.1, 11.7 and a related appendix (i.e., the 2023 TEMMP Report included as Appendix 25, which includes the 2023 Hunter Harvest Study Report) for information pertaining to this Term and Condition's compliance status. Upon review of this material it is not known if AEM regularly engages with outfitting and guiding businesses that operate in the Local and Regional Study Areas to satisfy the requirements of this Term and Condition. Granted this, Section 11.7 of the 2023 Annual Report mentions that in addition to the Kangiqliniq Hunter Trapping Organization, other community hunters and outfitting and guiding businesses participated in the 2023 Hunter Harvest Study.



### Recommendation

CIRNAC recommends that AEM provide an update on its practice of consulting with outfitting and guiding businesses that operate in the Local Study Area and Regional Study Area regarding use of the area, specifically as it relates to hunting, fishing and guiding within proximity of the All-Weather Access Road. This update should include results from consultation activities and how they are incorporated into updated plans where applicable.

### Agnico Eagle Answer

In 2023, and as part of the HHS community visits, meetings were held with KHTO members, who provided information on active outfitting and guiding businesses in Rankin Inlet. Outfitters and guides were contacted by email, house visits, and/or text messaging. In 2023, one outfitter participated in the HHS and provided harvest information.

As mentioned in previous HHS reports, the primary objective of the HHS is to monitor potential project-related effects on harvesting of wildlife by residents of the Hamlet of Rankin Inlet. Other objectives include assisting Agnico Eagle in mitigative actions and the GN in management decisions. Results of the HHS, including consultation with outfitting and guiding businesses, may be used for updating the TEMMP as relevant and in consultation with the TAG.

Agnico Eagle will continue its efforts to engage with outfitting and guiding businesses as part of the ongoing HHS and welcomes any additional contact information or introductions with respect to outfitters, guides, or other hunter/harvester stakeholders in Rankin Inlet.

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**Health Canada (HC)**

**HC-01: Screening criteria for Drinking Water Quality.**

**Comment**

The suitability of the Aquatic Ecosystem Monitoring Program (AEMP) Benchmark and Action Levels as screening criteria for drinking water quality is unclear. The 2023 Annual Monitoring Report (Appendix 17, PDF pg. 17) indicates that “*the AEMP Benchmarks are screening guidelines that are protective of aquatic life and human drinking water quality for the project*”; and, “*the AEMP Action Level is an early warning trigger equal to 75% of the AEMP Benchmark*.” The report also indicates that “*in the context of the AEMP, water is considered safe for drinking if measured concentrations of parameters are below guidelines published by Health Canada*” (Appendix 17, PDF pg. 19). While HC does not recommend drinking untreated surface water, the GCDWQ can be an effective screening tool for identifying potential health risks. HC supports use of the GCDWQ as the basis for provincial and territorial drinking and recreational water quality requirements for the protection of human health. The GCDWQ were established by HC in collaboration with the Federal-Provincial-Territorial Committee on Drinking Water and other federal government departments. The guidelines are based on a comprehensive review of the known health effects associated with each contaminant, exposure levels, and availability of treatment and analytical technologies. While several of the AEMP Benchmarks and Action Levels appear to be below the GCDWQ values (and therefore, more stringent), the AEMP Benchmark and Action Level for arsenic is greater than the GCDWQ value. Specifically, the AEMP Action Level for arsenic (18.8 µg/L) reported in the 2023 AEMP Report (Appendix 17, PDF pg. 7; Table 4-4, PDF pg. 112) was above GCDWQ (10 µg/L), so it is unclear how use of the AEMP Benchmark or Action Level would be considered protective of human drinking water quality (Appendix 17, PDF pg. 99). Recognizing that the annual monitoring report offers an opportunity for proactive risk communication, HC encourages efforts to improve accessibility and transparency of data presented in annual monitoring reports. To avoid potential confusion about the safety of water for human consumption, it is important to communicate how the AEMP Benchmarks and Action Levels are meant to be protective of human drinking water quality.

**Recommendation**

HC recommends providing a rationale to support use of AEMP Benchmarks and Actions Levels as guidelines considered protective of human health for substances with AEMP Benchmarks and/or Action Levels above the GCDWQ (e.g., arsenic).

**Agnico Eagle Answer**

The KivIA raised concerns about the protectiveness of the SSWQOs for arsenic, fluoride, and iron during the technical meeting for the Meliadine Extension held in Rankin Inlet in October 2023 (see KivIA-TRC-03 in the letter dated August 31, 2023). Their detailed comment is provided below:

Traditionally, Inuit have used the water from Meliadine Lake for drinking while fishing, hunting, or camping in the area. Currently, the water in Meliadine Lake meets Health Canada Drinking Water guidelines for maximum acceptable concentrations of arsenic, fluoride, and iron, however, AEMP Benchmarks for these compounds exceed the guidelines.

While it is unlikely that concentrations of the above would exceed drinking water guidelines in Meliadine Lake, it is important that site specific water quality objectives for Meliadine Lake are below these thresholds to ensure safety of local Inuit, as well as Agnico Eagle employees who drink water from Meliadine Lake on site.

To address this concern, Agnico Eagle agreed to compare the water quality data from Meliadine Lake against the GCDWQs for arsenic, fluoride, and iron to verify that water is safe for locals who use the lake for traditional and recreational purposes. Arsenic, fluoride, and iron concentrations in Meliadine Lake were below GCDWQ in 2023.

Arsenic concentrations in Lake B7 have increased in recent years and in 2023 concentrations exceeded the Health Canada guideline of 10 ug/L in most of the samples (range 9.6 to 23.4 ug/L).. If the Water Licence Amendment is approved, Lake B7 will be dewatered in 2025 and converted to a saline storage pond. Lake A8 is also scheduled to be dewatered as other deposits are developed. Therefore, neither of these lakes will be potential sources of drinking water for people using the area around the mine. As new lakes are added to the AEMP, water quality data will be screened against the GCDWQs to verify that water is safe to drink for locals who use the area for traditional and recreational purposes.

**HC-02: Elevated concentrations of arsenic levels in soil, vegetation, snow and surface water samples.**

Comment

Enhanced arsenic monitoring in soil and other environmental media is recommended to better understand the causes of observed arsenic levels, the spatial extent of elevated arsenic levels, and potential project-related effects.

Monitoring arsenic and trend analyses during the life of the project are important to confirm that concentrations are not increasing over time, particularly in locations already elevated under baseline conditions.

As stated in HC's comments on the 2022 Annual Monitoring Report (NIRB Registry ID - 345483), arsenic in soil and surface water under current mine site conditions may warrant further monitoring. Arsenic results from the 2023 Annual Monitoring Report suggest a similar conclusion. Specifically, the report (PDF pg. 109) indicates that additional years of sampling, and sampling over a larger area would be required to determine if arsenic in soils is increasing, the spatial extent of naturally elevated arsenic, and any project-related effects. Agnico Eagle's plans to undertake additional soil sampling in 2024 are noted.

To the furthest extent possible, HC encourages alignment of additional soil sampling with any additional planned analysis of geological maps, dustfall sampling, and wider metal sampling to determine possible cause(s) of observed exceedances (as indicated in the 2023 Annual Monitoring Report, PDF pg. 109), particularly where observations from the 2022 TEMMP Annual Report (PDF pg. 37) overlap with other monitoring plans and programs (e.g., the Air Quality Monitoring Plan [AQMP] and the AEMP), such as off-site migration of dust west and south of the mine site (Appendix 17, PDF pg. 7, 30 & 105-107; and, Appendix 23, PDF pg.3).

As part of plans to refine existing monitoring for metals, including arsenic, HC recommends the AQMP include collection of data necessary to validate predicted dustfall and metals accumulation in soil (and associated potential risks to human receptors) for the different project phases, and consideration of cumulative effects.

Proactive engagement with Inuit and Indigenous communities is recommended to ensure that the locations of monitoring stations remain protective of potential exposures to human receptors (e.g., the workers' camp and hunter/trapper cabins), including traditional land users, and can be used to inform additional mitigation and management approaches. This approach would improve relevance of the monitoring data and help inform potential community outreach initiatives.

#### Recommendation

1. Annual monitoring reports demonstrate increasing arsenic concentrations that exceed health-based guidelines. HC supports the continued monitoring of arsenic.
2. As part of discussions to refine existing monitoring for metals, including arsenic, it is recommended to:
  - a. Evaluate the hypotheses for the cause(s) of observed exceedances, review sampling methods to test these hypotheses, explore the best options for supplementary monitoring of soil as well as other environmental media; and,
  - b. As part of the Air Quality Management Plan, include collection of data necessary to validate predicted dustfall and metals accumulation in soil (and associated potential risks to human receptors) for the different project phases, including an analysis of cumulative effects.
3. Proactive engagement with Inuit and Indigenous communities is recommended to ensure that the locations of monitoring stations remain protective of potential exposures to human receptors, including traditional land users.

#### Agnico Eagle Answer

Agnico Eagle thanks Health Canada for their comment. In 2024, Agnico Eagle mandated an external firm to conduct additional analysis of the existing data (from tailings, soil, lichen, dust and snow chemistry samples). A Principal Component Analysis (PCA) will be completed and will aim to identify relationships between these data sets, determine how they are linked, identify spatial trends and the potential sources of elevated metal concentrations.

In mineralized landscapes, the expected levels of metals in soils or lichen may deviate from widely used guidelines, such as those applied in agriculture. A more accurate characterization of expected metal concentrations in the mineralized soils surrounding the Meliadine mine site is essential for a precise assessment of the potential impacts of mining activities. The PCA may also aid in identifying suitable reference or background sites, and subsequent calculation of a site-specific arsenic guideline.

Agnico Eagle confirms additional soil sampling will be carried out in 2024. The soil sampling campaign will aim to confirm sampling methodology for future TEMMP monitoring and reporting (with the next full assessment of soil and vegetation health monitoring being planned for 2025).

### **HC-03: Metals Analysis of Total Suspended Particulates (TSP) - Arsenic**

#### Comment

The addition of analysis for arsenic in Total Suspended Particulate (TSP) samples to the Project's Air Quality Monitoring Plan (AQMP) is recommended.

As part of the Project's AQMP, samples for analysis of particulate-bound metals are collected from two monitoring locations (DF-5 and DF-7) that correspond to the nearest human receptor sites to the Meliadine Mine (the workers' camp and Receptor 1 cabin site), respectively, as shown in Appendix 23 and the 2014 FEIS.

Under the current AQMP, analysis of metals in TSP are limited to cadmium and iron for comparison to the health-based screening value and maximum model predictions from the 2014 FEIS.

Given recent observations of elevated arsenic levels from soil and surface water monitoring (as discussed in HC-02), which has been associated with off-site dust migration from the mine site, HC recommends sampling of arsenic concentrations in TSP to validate model predictions from the 2014 FEIS (Appendices 10.2-A and 10.2- B). The inclusion of arsenic in this monitoring could help refine future monitoring to better understand the spatial extent of elevated arsenic levels and ensure that the locations of monitoring stations remain protective of exposure to human receptors, including traditional land users.

#### Recommendation

Measurement of arsenic in TSP as part of the Project's AQMP to validate model predictions from the 2014 EIS is recommended.

#### Agnico Eagle Answer

Agnico Eagle appreciates Health Canada's comment regarding analysis of arsenic in suspended particulate for comparison to health-based screening values. Currently, cadmium and iron are measured in TSP in accordance with Term and Condition 1b of the Project Certificate ("... the collection of total suspended dust samples year round, including sampling for metals content



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relevant to the Project”). Cadmium and iron are considered relevant to the Project because maximum modeled concentrations in air were predicted to exceed the most protective of available health-based thresholds for chronic inhalation at the Human Health Risk Assessment (HHRA) Chemicals of Potential Concern (COPC) screening stage. No other metals, including arsenic, were predicted to exceed health-based screening thresholds for inhalation.

To date, year-round onsite TSP monitoring indicates that measured ambient concentrations of TSP at the Project are largely within FEIS air quality model predictions (Figure 1). Further, concentrations of the metals cadmium and iron measured in TSP to date are less than predicted (2023 values shown in Figure 2, Figure 3). As a result, there is no suggestion currently that FEIS air quality model predictions for suspended particulates (and their associated metals) are invalid. Changes in soil and water concentrations, if from dust, may be due to larger particle sizes migrating without any significant period of suspension. Therefore Agnico Eagle suggests that additional analyses of metals in TSP are not necessarily warranted at this time.

Nevertheless, Agnico Eagle will continue to review FEIS air quality model inputs as part of the ongoing assessment of elevated arsenic measurements in soil and water, and will consider the feasibility of conducting a limited-duration analysis of arsenic in TSP to verify that suspended particulate-bound concentrations were not under-predicted.

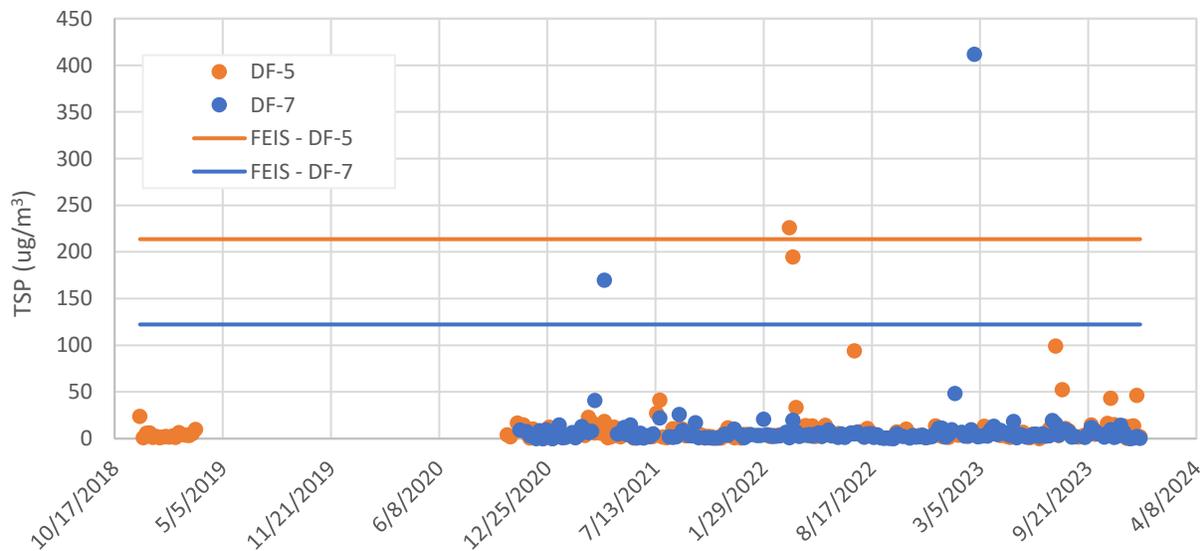


Figure 1. 24-h measured concentrations of total suspended particulates (TSP) at monitoring stations DF-5 and DF-7 at the Meliadine site (points) and 2014 FEIS maximum model predictions for each station.



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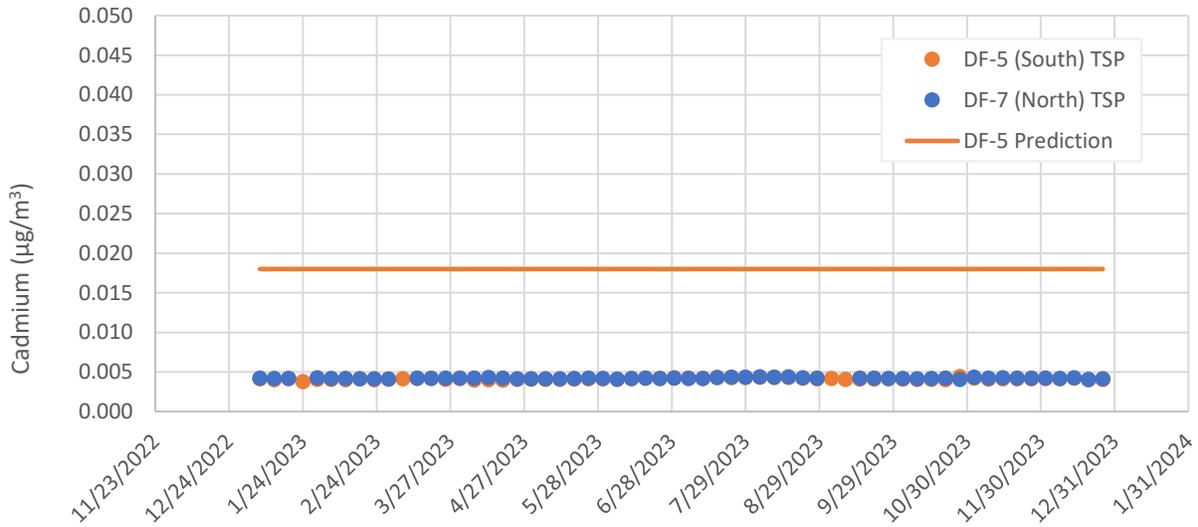


Figure 2. Measured concentrations of cadmium in 24-h TSP samples collected from stations DF-5 and DF-7 at the Meliadine site (points) and the FEIS maximum model-predicted value for station DF-5 (for DF-7, the prediction is less than the laboratory detection limit so is not plotted here).

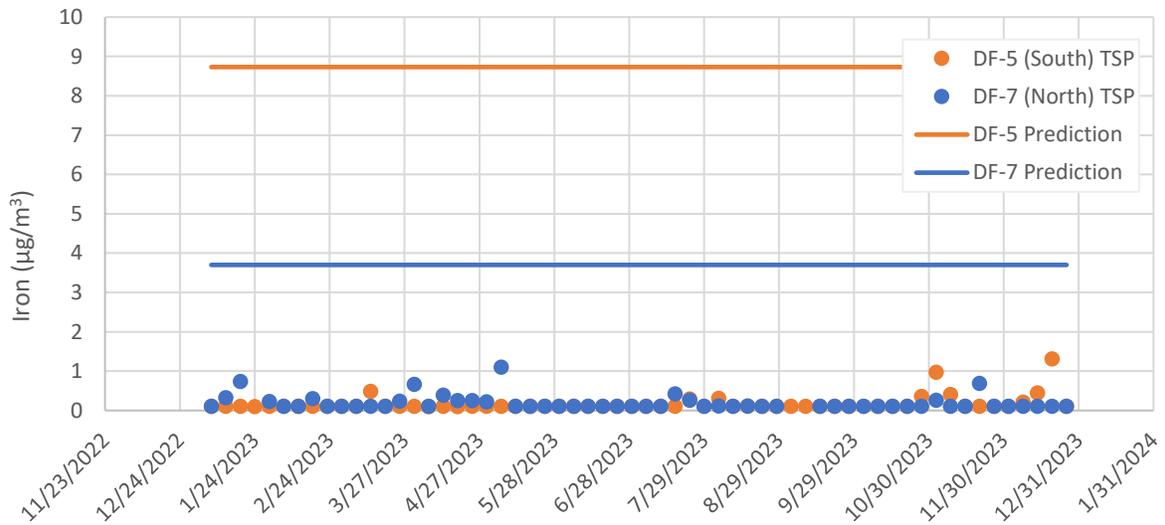


Figure 3. Measured concentrations of iron in 24-h TSP samples collected from stations DF-5 and DF-7 at the Meliadine site (points) and the FEIS maximum model-predicted value for each monitoring station.

#### **HC-04: Mitigation of exhaust emission from non-road vehicles and stationary equipment.**

##### Comment

HC supports implementing all economically and technologically feasible mitigation measures to limit emissions of non-threshold air contaminants to the extent possible.

The applicable air quality standards, such as the Canadian Ambient Air Quality Standards (CAAQS), Should not be considered “pollute up-to” levels and the Proponent is encouraged to strive for continuous improvement.

Efforts to mitigate impacts and improve air quality in their Annual Monitoring Report (Appendix 23, Section 7.1) are noted to include:

- Management of exhaust emissions from non-road vehicles through the purchase of new equipment that met Tier 4 emission standards in 2023.
- Reduction of SO<sub>2</sub> emission from non-road vehicles and stationary equipment through use of ultra-low sulphur fuel (<8 ppm) in 2023.

##### Recommendation

HC acknowledges Agnico Eagle’s effort to mitigate the Meliadine Gold Mine’s impact on air quality in 2023 and encourages continuous improvement including the implementation of all economically and technologically feasible mitigation measures to limit emissions of non-threshold air contaminants to the extent possible.

##### Agnico Eagle Answer

While not specifically reported in the annual Air Quality Monitoring Report, Agnico Eagle is continually investigating and implementing new technologies and practices to mitigate Project-related emissions. At a global scale, some of these efforts are described in the 2023 Sustainability Report ([https://s21.q4cdn.com/374334112/files/doc\\_downloads/sd\\_reports/2023/2023-AgnicoEagle-SustainabilityReportEN.pdf](https://s21.q4cdn.com/374334112/files/doc_downloads/sd_reports/2023/2023-AgnicoEagle-SustainabilityReportEN.pdf)). At the Meliadine Mine, a few of the specific projects initiated in 2023 alone include:

- New equipment evaluations: Proven and novel dust monitoring technologies were evaluated for use in Arctic conditions. A shortlist of potentially suitable options were provided through an external consultant (BBA). Technology may be ultimately used for realtime monitoring and forecasting.
- Energy Governance Committee launch: This working group was launched to prioritize energy saving initiatives and align different departments with the site energy objectives. The committee will oversee the implementation of the prioritized projects and provide direction to ensure successful completion.  
Routing optimization: This project deals primarily with reducing the distances haul trucks need to travel and optimizing their day-to-day routes to minimize fuel consumption. This

includes the implementation of a dispatch system, pit ram real time tracking system. Estimated reduction in GHG emissions is 9500 TOCO<sub>2e</sub>

#### **HC-05: Noise monitoring at locations protective of off-duty workers**

##### Comment

Noise monitoring should be considered in locations that are protective of off-duty workers.

It is unclear if occupational noise data collected as part of the Meliadine Industrial Sampling Plan referenced in the 2023 Annual Monitoring Report (PDF pg. 91) could be used to characterize noise levels experienced by off-duty workers, particularly at the on-site camp (i.e., accommodations) location (as shown in the 2023 FEIS Addendum, Figure 1.1-4) and monitor for potential adverse noise-related health impacts such as sleep disturbance experienced by off-duty workers.

As mentioned in HC's comments on the 2022 Annual Monitoring Report (NIRB Registry ID-345483), adverse health impacts on sleep may begin when average sound levels inside sleeping quarters exceed 30 dBA for continuous noise sources, or 45 dBA (max) for discrete noise events (WHO, 1999). The only Leq<sub>(nighttime)</sub> values (39.9 dBA, 34.9 dBA and 39.4 dBA) reported for 2023 were at station NPOR008, which is located approximately 2 km from the mine lease (Appendix 22, Figure 1, Table 8). Additional noise monitoring stations located closer to the camp accommodations could be considered to characterize noise exposure for the closest human receptors.

##### Recommendation

1. Consider locating noise monitoring stations where they can monitor future noise levels (particularly night-time levels) experienced inside of dwelling spaces (i.e., sleeping quarters) and inform the need for additional mitigations should measured levels exceed noise guidelines.
2. HC supports the implementation of additional mitigations under the Proponent's noise abatement plan (Project Certificate Condition 10) should monitoring results indicate potential adverse noise-related health impacts for off-duty workers.

##### Agnico Eagle Answer

Agnico Eagle thanks HC for their comment.

While the Mine Health and Safety Act and its regulations do not mandate the understanding and mitigation of noise exposure during off-duty periods, Meliadine management prioritizes the control and reduction of noise exposure within its worksite. Agnico Eagle will conduct additional noise monitoring in the Meliadine dwelling spaces and the analysis will be provided in the 2024 Annual Report.



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Agnico Eagle Meliadine has a strict Noise Policy in the residential wings restricting noisy activities during designated 'sleep' hours with a noise curfew in effect from 9 am to 5 pm and from 9 pm to 5 am.

The following rules are part of the Noise Policy to respect and promote the health and well-being of coworkers;

- Minimize all noise in the wings between 9:00am to 5:00pm and 9:00pm to 5:00am
- Turn off alarm before leaving the room
- Lower voice in wings and rooms at all time
- No laundry activities after 9:00pm
- Minimize noise disturbance when in the room
- Avoid returning to the room while on work day or before 5:00pm of the crew change day
- Abstain from rolling suitcase between 9:00am to 5:00pm and 9:00pm to 5:00am
- Monitor sound level of all electronic equipment
- No electronic personal care items in rooms. These equipment should be used in the bathroom.

Disciplinary measures may be applied in case of non-compliance with the Noise Policy.

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**Transport Canada (TC)**

**TC-01 Marine Transportation - Oil Handling Facility**

**Comment**

The oil handling facility is in compliance with regulatory requirements as per part 8 of the Canada Shipping Act, 2001. No inspection was carried out in 2023. The facility is in compliance with the Marine Transportation Security Regulations. The last inspection was carried out in 2023; no deficiencies were identified. Tanker Marlin Hestia, associated with project shipping, was inspected by Transport Canada in 2023, and no deficiencies were noted. No enforcement activity was undertaken or required last year by Transport Canada.

**Recommendation**

None

**Agnico Eagle Answer**

Agnico Eagle thanks Transport Canada for their comment on the Oil Handling Facility compliance.

**TC-02 Marine Transportation – 2024 Annual Notice to Mariners**

**Comment**

Transport Canada recommends the Proponent make vessel operators serving the Project aware of the 2024 Annual Notice to Mariners, and in particular section A2 Marine Mammal Guidelines and Marine Protected Areas and section 7A Voyage Planning for Vessels Intending to Navigate in Canada's Northern Waters and section 7C Vessels Intending to Navigate in Kitikmeot Region in Canada's Northern Waters

**Recommendation**

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

**Agnico Eagle Answer**

Agnico Eagle thanks Transport Canada for bringing this information to Agnico Eagle's attention. The vessel operators are made aware of the notice and related requirements and reminders are sent by the shipping companies at the start of the season.

**TC-03 Shipping Management Plan – Ballast Water**

**Comment**

An updated Shipping Management Plan was not provided with the 2023 Annual Report. Version 9 of the Shipping Management Plan does not reflect the current requirements of the Ballast Water Regulations (SOR/2021-120).

Transport Canada's ballast water exchange and treatment requirements were updated in the Ballast Water Regulations, SOR/2021-120 that came into force on June 23, 2021. Treatment and

water quality standards applicable to ballast water discharged within Canada will be coming into effect in 2024 using a phase-in approach from 2019 to 2024. From the date of entry into force of the Ballast Water Management Convention (September 8, 2017), all vessels must conform to at least the D-1 standard (exchange); and all new vessels, to the D-2 standard (treatment) (refer to the infographic attached). Note that Canadian vessels that don't voyage internationally, other than to U.S. Great Lakes ports, need to meet Convention standards at launch, in 2024 or in 2030 depending on when they were built.

- Ballast Water Regulations Ballast Water Regulations ([justice.gc.ca](https://justice.gc.ca))
- <https://tc.canada.ca/en/marinetransportation/marine-safety/list-canada-sdesignated-alternate-ballast-water-exchangearea-fresh-waters-tp-13617e-2021#item2>

### Recommendation

Transport Canada requests that:

- AEM update Section 7 – Shipping Management Plan be updated to reflect the requirements of the Ballast Water Regulations.
- A new version of the Shipping Management Plan be included with the 2024 Annual Report.

### Agnico Eagle Answer

Agnico Eagle will update relevant sections of the Shipping Management Plan to reflect the current Ballast Water Regulations (SOR/2021-120) in the next update of the Plan.

Agnico Eagle would like to note the contracted shipping companies comply with all applicable regulations, including the Ballast Water Regulations, and that the Shipping Management Plan update is not required annually, but as needed when changes occur.

## **TC-04 Shipping Management - Biofouling**

### Comment

The following is for the information of AEM, NIRB, and reviewers of the 2023 Annual Report on the subject of biofouling:

In Fall 2022, Transport Canada published its Voluntary Guidance for Relevant Authorities on In-Water Cleaning of Vessels ([canada.ca](https://canada.ca)), which includes a biofouling management plan and biofouling record book templates that have been well regarded internationally. The guidance provides clarity to stakeholders (competent authorities, vessel owners and operators, and in-water clean-up service providers) on recommended best practices that can be used to manage the biosecurity and water quality risks associated with cleaning vessels underwater.

The International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC) adopted the revised "Guidelines for the Control and Management of Ship's Biofouling to Minimize the Transfer of Invasive Aquatic Species" (Marine Environment Protection Committee (MEPC 80), 3-7 July 2023 – preview ([imo.org](https://imo.org))). These guidelines provide recommendations on in-water inspections with a focus on the quantitative assessment of biofouling using a biofouling rating number, as well as on observations of the anti-fouling system condition, which will assist

vessel owners and operators in minimizing the transfer of potentially harmful aquatic species, following globally agreed guidance.

#### Recommendation

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

#### Agnico Eagle Answer

Agnico Eagle thanks Transport Canada for bringing this information to Agnico Eagle's attention, and confirm it was shared with the currently contracted shipping companies.

### **TC-05 Permits – Navigation Protection Program**

#### Comment

Transport Canada's Navigation Protection Program (NPP) has issued two approvals for works associated with the Project:

- 2010-600573 - Bridge Meliadine River
- 2019-600003 – Outfall/diffuser, Melvin Bay

Transport Canada notes these approvals are not listed in Table 29 - List of active permits and authorizations for Meliadine.

Regarding the two approvals and the Project:

- NPP received no complaints about navigation related to the project in 2023.
- NPP did not carry out any inspections for the project in 2023.

#### Recommendation

Transport Canada requests that the above two approvals be added to the list of active permits for the project.

#### Agnico Eagle Answer

Agnico Eagle will add the above two approvals to the list of active permits for the project in future Annual Reports.

### **TC-06 Mine aerodrome**

#### Comment

Term and Condition #70 deals with flight altitudes to and from the Meliadine Mine aerodrome. Transport Canada did not receive any complaints related to this aerodrome in 2023.

Transport Canada did not conduct any site inspections or enforcement activities related to the Meliadine Mine aerodrome in 2023.

Recommendation

None

Agnico Eagle Answer

Agnico Eagle thanks Transport Canada for their comment.

**TC-07 Transportation of Dangerous Goods / Hazardous Materials**

Comment

At p. 112 of the 2023 Annual Report, AEM reported that Transport Canada conducted an inspection to verify compliance with the Transportation of Dangerous Goods Regulations.

Transport Canada confirms that AEM's reporting of the inspection and outcome are accurate.

AEM has liaised directly with Transport Canada regarding corrective measures.

Recommendation

None

Agnico Eagle Answer

Agnico Eagle thanks Transport Canada for their comment and for confirming Agnico Eagle's reporting of the inspection and outcome is accurate.

**TC-08 Transportation of Dangerous Goods / Hazardous Materials**

Comment

Transport Canada reviewed the shipping waste manifest that was provided to Transport Canada by AEM separately from 2023 Annual Report. Transport Canada notes the documentation does not comply with requirements set out in the Transportation of Dangerous Goods Regulation. Transport Canada's TDG Group will follow up directly with AEM about this matter.

Other than what was reported in Comment Number TC-07, no other type of TDG monitoring was carried out by Transport Canada in 2023. No complaints/concerns regarding TDG were received. No other enforcement action was done.

Other than the shipping waste manifest, Transport Canada's TDG Group had no other concerns with the 2023 Annual Report.

Recommendation

None



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Agnico Eagle Answer

Agnico Eagle thanks Transport Canada for their comment and looks forward to working with Transport Canada to resolve any remaining issues or concerns related to the transportation of dangerous goods.

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**Sayisi Dene Fist Nation and Northlands Denesuline First Nation (SDFN/NDFN)**

**SDFN/NDFN-1: Fencing and wildlife deterrents in spill response**

Comment

In “Appendix H – General Response Procedures for Spilled Saline Water - Point 7c – Spills on the AWAR and/or Bypass Road due to Waterline Leak” it indicates that a spill will be isolated to prevent caribou access. Temporary snow fencing should be used as an isolation mitigation technique. On p. 26-27, Tables 7-2 and 7-3, which list response equipment and material stored in emergency mobile trailers and sea-cans, no snow fencing to exclude wildlife from a spill is listed. The use of wildlife deterrents (balloon eyes, reflective tape) should be deployed during a spill.

Recommendation

SDFN/NDFN requests that AEM revise “Appendix H- General Response Procedures for Spilled Saline Water - Point 7c - Spills on the AWAR and/or Bypass Road due to Waterline Leak” to include deployment of snow fencing and wildlife deterrents to exclude caribou and other wildlife from accessing saline waterline discharges. Include snow fencing and wildlife deterrents as spill materials in Tables 7-2 and 7-3.

Agnico Eagle answer

Agnico Eagle thanks the SDFN/NDFN for their comment and will assess revising the Spill Contingency Plan to include the deployment of a wildlife deterrent to prevent wildlife access to saline water in the event of a spill. As stated in the draft TEMMP version 5, in case of possible contact between wildlife and a spill, Agnico Eagle would confer with KivIA, GN, KHTO and community elders and assess installing additional deterrents on site.

**SDFN/NDFN-2: Clarification of wording in “Toolbox Presentations”**

Comment

Based on dates of observed caribou occurrences from 2024 “Caribou Migration Alert” maps, please re-word the first bullet to state “Yearly migration occurs at Meliadine between mid-May to mid-July”. The second bullet should place the word “can” before the word “vary” and re-word to state “Arrival dates, patterns, duration and numbers can vary over the years.” On Slide 3, “Decision Trees” are mentioned, yet on Slide 4 which shows the three mitigation decision levels, there is no label on the slide identifying this as a “Decision Tree.” On Slide 9 “Meliadine Project Protection Zones”, second bullet - AWAR; the text is confusing. Please re-word text to state “Within 100 m of the road” for clarity.

Recommendation

Please revise Slides 2, 3, 4, and 9 in Toolbox Presentations, Meliadine Caribou Migration Protocol for better clarity.

### Agnico Eagle Answer

Agnico Eagle would like to clarify that the presentations referred to were given in 2023 prior to discussions within the TAG regarding Calving and Post-calving period. The presentations were updated for 2024.

### **SDFN/NDFN-3: Missing caribou mortality incident**

#### Comment

Matrix biologist, Dan Chranowski, attended the AWAR site visit at KM 12 on June 28, 2023, as a member of the AEM Terrestrial Advisory Group (TAG). He observed a caribou in distress approximately 200 m northeast of the gatehouse at KM 12. The caribou appeared to die as it fell over and did not get up. Mr. Chranowski reported the observation to KivIA Land officer, Craig Beardsall and AEM Environment Department Supervisor, Matt Gillman. Both indicated this observation would be investigated and reported to the Government of Nunavut Wildlife officers, also. In the January 24/25, 2024, TAG meeting minutes on page 27, it was acknowledged by AEM that this information should have been recorded. This caribou mortality is not reported in the Annual Report or TEMMP.

#### Recommendation

SDFN/NDFN request AEM investigate this anomaly and report back with an answer as to why this caribou mortality was not reported.

### Agnico Eagle Answer

Agnico Eagle would like to clarify that no caribou mortality was observed by Agnico Eagle staff or contractors in 2023. It is important to note that the January 2024 TAG meeting minutes excerpt from page 27 refers to a wildlife sighting and not a wildlife mortality. The June 2023 Wildlife report has been amended to reflect that sighting and is attached to the present.

### **SDFN/NDFN-4: Insect harassment data collection in caribou behaviour monitoring**

#### Comment

There is a behaviour category listed as “Insect response behaviour” that observers can record (although few occurrences are noted). However, there is no recording of estimated levels of insect activity (e.g., high, medium, low). Estimating insect activity levels would be helpful to interpret caribou response behaviours.

#### Recommendation

SDFN/NDFN requests AEM insert a column on the caribou behaviour monitoring data sheet to record estimated insect activity levels.

### Agnico Eagle Answer

Agnico Eagle confirms that caribou behaviour monitoring methods have been updated prior to the 2024 season to include recording of insect responses.

## **SDFN/NDFN-5: Trail camera study enhancement to track caribou migration phenology**

### Comment

AEM's initiative to collect caribou crossing data along the planned Discovery Road is helpful as pre-disturbance data can help inform specific mitigation strategies in the future. This monitoring needs to be enhanced with more cameras set at 5 km to 8 km distances from the mine and Discovery Road to track caribou migration phenology using similar methodology as Tape & Gustine (2014) on the east and west side of Meliadine Lake and thus validate and fine-tune the timing of collared caribou migration movements as they approach the mine.

### Recommendation

SDFN/NDFN request that AEM enhance the trail camera study budget to purchase more cameras and implement a caribou migration phenology study.

### Agnico Eagle Answer

Agnico Eagle thanks the SDFN/NDFN for acknowledging the relevance of the additional monitoring conducted by Agnico Eagle.

While Agnico Eagle's camera study budget is not part of the annual report reporting requirement, Agnico Eagle remains available to discuss current monitoring programs throughout the TAG.

## **SDFN/NDFN-6: Terrestrial Advisory Group, Term and Condition 132**

### Comment

Term and Condition 132 includes the following reporting requirement:

A finalized Memorandum of Understanding and Terms of Reference for the Terrestrial Advisory Group between the Proponent and Responsible Parties shall be provided to the Nunavut Impact Review Board (NIRB) a minimum of sixty (60) days prior to any construction of the waterlines being undertaken.

The requirement for a Memorandum of Understanding to be concluded and filed with the NIRB prior to any construction of the waterlines being undertaken was included in Term and Condition 132 by the Responsible Ministers based on recommendations received from SDFN/NDFN.

During the development of the Terms of Reference (TOR), AEM advised that certain Responsible Parties listed in Term and Condition 132 were not interested in participating in the TAG and AEM proposed that parties negotiate separate Memorandums of Understanding with AEM. Under the TOR for the TAG (filed with the NIRB in February 2023), in order for a Responsible Party to become a "Party" for the purpose of the Terms of Reference, it is necessary for that Party to confirm its participation in the TAG in writing, which would be filed with the NIRB and circulated to all other Responsible Parties. The same notification procedure would occur for a Responsible Party that wished to discontinue participation in the TAG. The purpose of this language was to ensure a common understanding of which groups were Parties to the TAG. This is reflected in Section 4.1 of the Terms of Reference, which states:

TAG membership is determined by an organization's mandate which allows it to contribute to TAG's purpose. The following Parties (should they wish to participate) may appoint one (1) Party representative plus one (1) alternate Party representative to participate on the TAG:

- Kivalliq Inuit Association
- Agnico Eagle
- Nunavut Tunngavik Incorporated
- Kivalliq Wildlife Board
- Government of Nunavut (Department of Environment)
- Kangiqliniq Hunters and Trappers Organization
- Baker Lake Hunters and Trappers Organization
- Sayisi Dene First Nation
- Northland Denesuline First Nation
- Arviat Hunters and Trappers Organization
- Issatik Hunters and Trappers Organization
- Aqigiq Hunters and Trappers Organization

The TAG will operate under the TOR. The TOR will be reviewed by the Parties at least once every two years following their establishment and will be reviewed from time to time should a new Party confirm they wish to participate in the TAG.

Parties shall confirm participation in the TAG in writing, through a Memorandum of Understanding or other written means such as a letter or email which will be filed with NIRB and circulated to all of the organizations listed in this Section 4.1. Should any Party listed in this Section 4.1 wish to discontinue its participation in the TAG, they may do so on 30 days written notice which will be provided to NIRB and all Parties listed in this Section 4.1. For clarity, reference to a "Party" or "Parties" in all other sections of these TOR refers to parties that have confirmed participation in the TAG in writing and have not confirmed that they wish to discontinue participation.

SDFN/NDFN requested from AEM copies of the Memorandums of Understanding or written confirmations of the TOR on numerous occasions between March and June 2023. SDFN/NDFN also raised this concern at the Meliadine Extension public hearing in September 2023. In advance of the submission of the 2023 TAG Annual Report, SDFN/NDFN requested that the 2023 TAG Annual Report provide a status update on this reporting requirement of Term and Condition 132, including setting out the date that the Terms of Reference was filed with the NIRB and the dates that the Memorandums of Understanding and written confirmations were filed with the NIRB.

To date, it does not appear that AEM has filed with the NIRB, nor circulated to the organizations listed in Section 4.1 of the TAG Terms of Reference, any Memorandums of Understanding for the TAG or other written confirmations of participation in the TAG.

### Recommendation

Pursuant to the reporting requirements of Term and Condition 132, AEM file with the NIRB and circulate to the organizations listed in Section 4.1 of the TAG TOR, any Memorandums of Understanding for the TAG or other written confirmations of participation in the TAG.

### Agnico Eagle Answer

As Agnico Eagle has confirmed to the NIRB in writing on September 6<sup>th</sup>, 2023, the following parties have either signed a memorandum of understanding or confirmed to Agnico Eagle that they wish to participate as members in the TAG.

To date, no parties have indicated that they wish to discontinue its participation in the TAG. Accordingly, in Agnico Eagle's view it is appropriate to refer to the following list as "Parties".

- Kivalliq Inuit Association (KivIA);
- Agnico Eagle;
- Government of Nunavut (Department of Environment);
- Kangiqliniq Hunters and Trappers Organization;
- Baker Lake Hunters and Trappers Organization (BLHTO);
- Sayisi Dene First Nation (SDFN);
- Northland Denesuline First Nation (NDFN).

Agnico Eagle has entered into Memorandums of Understanding (MOU) with the SDFN/NDFN and with the KivIA which are the only parties to the TAG that requested a MOU.

Other parties, including GN, Rankin Inlet HTO and Baker Lake HTO have indicated in writing that they agree with the Terms of Reference (TOR).

Organizations such as the Nunavut Tunngavik Incorporated (NTI), the Kivalliq Wildlife Board (KWB) and the Athabasca Denesuliné have been participating in TAG meetings as observers. Should their status change, Agnico Eagle will ensure the information is communicated to NIRB.

The following organizations did not wish to join the Meliadine TAG: Arviat Hunters and Trappers Organization; Issatik Hunters and Trappers Organization; and Aqigiq Hunters and Trappers Organization.

If SDFN and NDFN wish for the Memorandum of Understanding signed on January 30, 2023 to be filed on the NIRB registry, please advise.

### **SDFN/NDFN-7: Collared Caribou Memorandum, Term and Condition 44**

#### Comment

During Meliadine waterline reconsideration process, AEM provided a memorandum describing the crossings and deflections of caribou in relation to the all-weather access road, as assessed

by using collared caribou data. At the public hearing for the Meliadine waterline reconsideration, the Proponent agreed to revise the memorandum.

In Section 5.1.1.4 of the Final Hearing Report for the Meliadine waterline reconsideration, the NIRB reached the following conclusion regarding the memorandum:

In the Board's view, revisiting Agnico Eagle's original assessment of potential impacts of the AWAR to caribou is crucial to understanding the impacts of the proposed project activities under the Waterlines Proposal in combination with the existing project activities. Noting that without sufficient background data, analysis on any adverse impacts from increased linear infrastructure along the AWAR or positive impacts from the decrease in trucking cannot be reliably predicted and/or monitored. Also, recognizing that Agnico Eagle has committed to working with parties to revise the previous predictions of the potential for the AWAR to have effects on caribou, the Board looks forward to receiving an update in Agnico Eagle's annual report. The Board also highlights the importance of Agnico Eagle considering and meaningfully incorporating Inuit Qaujimagatuqangit, Traditional, Community and Indigenous Knowledge into its updated predictions, to better understand the living nature of caribou and how their behaviour may be impacted by the installation and operation of the waterlines system infrastructure.

The Board emphasizes the importance of a comprehensive and rigorous monitoring program that is sufficient to capture any impact from the change in conveyance of saline effluent from trucking to waterlines. Through monitoring, the Proponent is expected to validate the predictions of impacts made in the IS Addendum, and the validated predictions should also be considered by Agnico Eagle in the updated Caribou Collar Memo. In the Board's view, this update to the baseline assumptions underlying monitoring of caribou interactions with the AWAR in advance of the installation of the waterlines should greatly reduce uncertainty and provide a baseline from which to identify trends and thresholds before potential effects associated with the Waterlines Proposal are identified. Working from an updated baseline better positions Agnico Eagle to identify whether the predicted positive impacts of the waterlines do occur and are maintained through the construction, operation and closure of this component.

The requirement for AEM to revise the Collared Caribou Memorandum, in consultation with the TAG, prior to the construction/installation of the waterlines was included in Term and Condition 44 by the Responsible Ministers based on recommendations received from SDFN/NDFN.

On May 11, 2022, AEM submitted a revised collared caribou memorandum to the NIRB and requested comments from interested parties by May 27, 2022. As this memorandum was revised unilaterally by AEM, it did not satisfy Term and Condition 44. Comments were provided by the SDFN/NDFN and other parties. In AEM's response to a comment on the 2021 Annual Report, AEM stated the following with respect to the collared caribou memorandum:

Agnico Eagle would like to thank all parties for contributing with their comments on the revised collar caribou Meliadine AWAR interactions report. At the moment, the comments are under revision. The main findings and next actions will be discussed within the TAG.

AEM submitted a report entitled “Commitment 38 Analyses: Caribou Movements Relative to Meliadine Mine and Other Factors” to the NIRB on July 17, 2023. At the Meliadine Extension Proposal public hearing, AEM confirmed that the Commitment 38 Analyses was intended to address Term and Condition 44 of the Amended Project Certificate. In the Reconsideration Report for the Meliadine Extension from November 2023, the NIRB indicated that Commitment 38 (Term and Condition 44) had not been resolved. The NIRB stated at page 103:

As described in section 3.1.1.1, several members of the newly formed Terrestrial Advisory Group (TAG) contested the conclusions of Agnico Eagle’s Commitment 38 Analysis, which Agnico Eagle provided as evidence that the approved Meliadine Gold Mine Project does not impact the movement of caribou and that mitigation measures are functioning. Although Agnico Eagle committed to reviewing the Commitment 38 Analysis with the members of the TAG, presently the Board does not have confidence in Agnico Eagle’s conclusion that caribou movement is not being impacted by the approved Project. The Board notes that this was a commitment made during the Waterlines Proposal, which has not yet been resolved, to address parties’ concerns about the uncertainty of how caribou are reacting to mine site infrastructure such as the AWAR. Without understanding the current impacts of the Project on caribou movements there remains a significant gap for the Board to understand how movements may be impacted if the activities at the site are intensified and extended by 11 years as proposed in the Extension Proposal and if the calving and post-calving grounds continue to shift towards the Regional Study Area.

A revised Commitment 38 report was provided to the TAG prior to the October 2023 TAG meeting.

AEM indicated in the 2023 Annual Report that waterline construction commenced on May 20, 2023.

#### Recommendation

The commencement of waterline construction does not appear to comply with Term and Condition 44.

#### Agnico Eagle Answer

The Term & Condition 44, related to the Commitment 38, states:

*“The Proponent in consultation with the Terrestrial Advisory Group shall revise the 2021 Technical Memorandum entitled “Collared Caribou Meliadine All-Weather Access Road Interactions” describing the crossings and deflections of caribou in relation to the all-weather access road as assessed using caribou collar data and shall provide a copy to the NIRB prior to construction/installation of the waterlines.”*



On April 22, 2022, Agnico Eagle submitted a technical memorandum titled *Revised Collared Caribou Meliadine AWAR Interactions (NIRB PC 006 T&C 44)*, which provided new information and an updated assessment that fulfilled the requirements of Term and Condition #44.

Agnico Eagle completed an additional analysis of collared caribou interactions with the Mine and AWAR through Commitment 38 from the Waterlines Project. The final study design and analysis of Commitment 38 was discussed within the TAG meeting of April 13, 2023 but discussions began in December 2022. As stated in the minutes of the April 2023 meeting, all components of the analysis were discussed and agreed upon by TAG participants. Based on these discussions, Agnico Eagle completed the Commitment 38 analysis. The results of the Commitment 38 analysis was shared with TAG members on June 27, 2023. No written comments were provided by any Parties following this meeting.

As described above, the Commitment 38 analysis was designed within the TAG, following design comments and inputs from TAG parties. All variables were described within TAG meeting of April 13, 2023.

Both of the revised technical memorandum and the design of the Commitment 38 analysis were completed by Agnico Eagle before beginning the waterline construction.

Agnico Eagle would like to note that an addendum to the Commitment 38 analysis was prepared, which reflected TAG comments on the Commitment 38 analysis results presented at the June 27, 2023 meeting, was presented to the TAG on October 25, 2023. The results of the addendum supported the conclusions of the Commitment 38 analysis that caribou are not responding adversely to the Mine and AWAR. Comments were received by TAG participants late February/early March 2024 which will be discussed throughout the TAG.



**AGNICO EAGLE**  
MELIADINE



## Appendix



**AGNICO EAGLE**  
MELIADINE

**Meliadine Gold Mine  
Monthly Wildlife Report  
June 2023 - Amended**

**Prepared for:  
Government of Nunavut**

**Prepared by:  
Agnico Eagle Mines Limited – Meliadine Division**

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## **SECTION 1 • INTRODUCTION**

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This Wildlife report summarizes the ongoing activities at the Agnico Eagle Meliadine Gold Mine for June 2023. This report describes the mitigation actions taken and the wildlife sightings, incidents and mortalities recorded near the project and in or around work sites.

## **2.0 MITIGATION ACTIONS TAKEN**

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### **2.1 Environmental Inspections**

Throughout the month, the Meliadine Environment Department completed wildlife and housekeeping inspections regularly. These inspections ensure that waste management/segregation is being appropriately conducted by site personnel and that no denning areas are available to wildlife in or around the infrastructure and materials. Every inspection was recorded according to the procedures, and in some instances, corrective measures were performed (e.g. adding waste bins, general housekeeping).

The camp population average for June 2023 was 762 people. All new employees working at Meliadine completed a general environmental induction upon arrival to the mine site, including information on environmental management (waste and Hazmat management, spills, wildlife). Environmental awareness is also communicated through the distribution of daily toolbox topics.

## **3.0 WILDLIFE SIGHTINGS**

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### **3.1 Incidental Sightings**

All incidental sightings by site personnel are reported to the Environment Department and recorded in the Wildlife Observations database.

All reported observations for June 2023 are provided in Appendix A.

### **3.2 Caribou Migration**

Level 1 of the caribou migration was implemented on May 30<sup>th</sup>, 2023. Regional exploration drilling operations were suspended; the helicopter was demobilized to Rankin Inlet on June 2<sup>nd</sup> for the duration of the caribou migration. No incidents occurred since the beginning of the caribou migration and the AWAR was closed for a total of 213.5 hours during the month.

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### **3.3 AWAR Wildlife Surveys**

In addition to the caribou migration surveys completed 3 times a day, Meliadine Environmental technicians performed 4 wildlife surveys on the AWAR and 4 on Mine site in June. Observations made during these surveys are presented in Appendix A.

### **3.4 Helicopter use around Meliadine**

The helicopter was used for a total of 0.3 hour around the Meliadine Mine on June 2<sup>nd</sup>, for the demobilization of the helicopter to Rankin Inlet.

### **3.5 Wildlife Incidents**

On June 9<sup>th</sup>, a deceased fox was found in Tiriganiaq Open Pit 2. The cause of death is unknown; it is assumed that the fox drowned. The Environment department was notified and proceeded to recover the animal. The carcasse was placed in a freezer pending direction from the GN Conservation officers for disposal.

APPENDIX A  
SUMMARY OF THE WILDLIFE OBSERVATIONS

**Table 1:** Summary of Agnico Eagle’s wildlife observations in June 2023. Observations in grey shaded cells were added in amended report.

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Friday, June 02, 2023	10:41:00 AM	KM16	Sandhill cranes	4	Immobile	Spencer Knowles	No action required
Friday, June 02, 2023	10:56:00 AM	KM5	Seagull	2	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	10:41:00 AM	KM16	Sandhill cranes	4	Immobile	Spencer Knowles	No action required
Friday, June 02, 2023	10:56:00 AM	KM5	Canada geese	11	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	10:47:00 AM	KM12	Canada geese	24	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	10:28:00 AM	KM27	Canada geese	4	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	11:06:00 AM	KM2 - Bypass road	Seagull	1	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	10:41:00 AM	KM16	Duck	1	Swimming	Spencer Knowles	No action required
Friday, June 02, 2023	10:42:00 AM	KM16	Canada geese	3	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	10:50:00 AM	KM9	Canada geese	1	Flying	Spencer Knowles	No action required
Friday, June 02, 2023	11:02:00 AM	KM5 - Bypass road	Squirrel	1	Walking	Spencer Knowles	No action required
Monday, June 05, 2023	11:38:00 AM	Communication tour	Arctic hare	1	Resting	Guillaume Lauzon	No action required
Monday, June 05, 2023	11:42:00 AM	CP-1	Duck	2	Swimming	Guillaume Lauzon	No action required
Monday, June 05, 2023	11:43:00 AM	CP-1	Tundra swan	1	Swimming	Guillaume Lauzon	No action required

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Monday, June 05, 2023	12:03:00 PM	Exploration road	Canada geese	2	Eating	Guillaume Lauzon	No action required
Monday, June 05, 2023	11:54:00 AM	CP-4	Canada geese	1	Observing	Guillaume Lauzon	No action required
Monday, June 05, 2023	11:53:00 AM	CP-2	Tundra swan	1	Flying	Guillaume Lauzon	No action required
Monday, June 05, 2023	11:37:00 AM	Communication tour	Squirrel	1	Observing	Guillaume Lauzon	No action required
Monday, June 05, 2023	12:00:00 PM	Exploration road	Ptarmigan	1	Immobile	Guillaume Lauzon	No action required
Saturday, June 9, 2023	11:30 AM	Tiri02	Fox	1	Dead	Kevin Smith	No action required
Saturday, June 10, 2023	9:31:00 AM	KM15	Canada geese	2	Walking	Mark Miller	No action required
Saturday, June 10, 2023	8:33:00 AM	KM22	Duck	3	Swimming	Mark Miller	No action required
Saturday, June 10, 2023	8:34:00 AM	KM22	Canada geese	1	Immobile	Mark Miller	No action required
Saturday, June 10, 2023	8:29:00 AM	KM25	Sandhill cranes	2	Flying	Mark Miller	No action required
Saturday, June 10, 2023	9:29:00 AM	KM16	Canada geese	-	-	Mark Miller	No action required
Saturday, June 10, 2023	9:36:00 AM	KM12	Sandhill cranes	2	Walking	Mark Miller	No action required
Saturday, June 10, 2023	9:53:00 AM	KM0	Canada geese	2	Flying	Mark Miller	No action required
Saturday, June 10, 2023	8:31:00 AM	KM23	Duck	2	Flying	Mark Miller	No action required
Saturday, June 10, 2023	8:26:00 AM	KM29	Canada geese	1	Walking	Mark Miller	No action required

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Saturday, June 10, 2023	9:47:00 AM	KM3	Canada geese	2	Resting	Mark Miller	No action required
Saturday, June 10, 2023	9:39:00 AM	KM10	Tundra swan	1	Swimming	Mark Miller	No action required
Saturday, June 10, 2023	9:37:00 AM	KM11	Canada geese	2	Flying	Mark Miller	No action required
Saturday, June 10, 2023	9:33:00 AM	KM13	Canada geese	30	Flying	Mark Miller	No action required
Saturday, June 10, 2023	9:38:00 AM	KM10	Sandhill cranes	1	Immobile	Mark Miller	No action required
Saturday, June 10, 2023	9:41:00 AM	KM8	Canada geese	2	Flying	Mark Miller	No action required
Saturday, June 10, 2023	8:29:00 AM	KM25	Squirrel	1	Walking	Mark Miller	No action required
Monday, June 12, 2023	6:00:00 PM	Exploration Camp	Sandhill cranes	2	Walking	Mark Miller	No action required
Monday, June 12, 2023	6:00:00 PM	Near Exploration Camp	Sandhill cranes	1	Walking	Mark Miller	No action required
Monday, June 12, 2023	5:00:00 PM	Past Emulsion towards Lake E3	Sandhill cranes	2	Walking	Mark Miller	No action required
Monday, June 12, 2023	6:00:00 PM	Exploration Camp	Canada geese	2	Walking	Mark Miller	No action required
Monday, June 12, 2023	5:00:00 PM	Dyno	Arctic hare	3	Immobile	Mark Miller	No action required
Monday, June 12, 2023	6:00:00 PM	On CP1	Duck	5	Swimming	Mark Miller	No action required
Monday, June 12, 2023	5:30:00 PM	Near Tiri 2 pit	Raven	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 20	Seagull	2	Flying	Mark Miller	No action required

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Friday, June 16, 2023	9:30:00 AM	km14.5	Seagull	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	10:00:00 AM	km 5	Squirrel	1	Fleeing	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 17.5	Canada geese	7	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 14	Canada geese	14	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 10.5	Tundra swan	1	Swimming	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 7	Duck	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 10.5	Seagull	2	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 10.5	Duck	3	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 26	Canada geese	1	Swimming	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 25	Duck	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 24	Seagull	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 9	Sandhill cranes	4	Walking	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 14	Raven	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 17.5	Tundra swan	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 12	Seagull	1	Flying	Mark Miller	No action required

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Friday, June 16, 2023	9:30:00 AM	km 12	Duck	2	Swimming	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 10	Tundra swan	1	Swimming	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 8	Seagull	5	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 7	Duck	1	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:00:00 AM	km 19	Seagull	2	Flying	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 6	Sandhill cranes	2	Walking	Mark Miller	No action required
Friday, June 16, 2023	9:30:00 AM	km 17	Tundra swan	2	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	3:30:00 PM	Lake B5	Canada geese	5	Swimming	Mark Miller	No action required
Sunday, June 18, 2023	5:00:00 PM	CP1	Duck	22	Flying	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Road to Exploration Camp	Sandhill cranes	2	Walking	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Road to Exploration Camp	Duck	1	Flying	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Exploration Camp	Arctic hare	3	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	4:00:00 PM	Near emulsion plant	Squirrel	1	Running	Mark Miller	No action required
Sunday, June 18, 2023	6:00:00 PM	North of CP1	Squirrel	1	Fleeing	Mark Miller	No action required
Sunday, June 18, 2023	5:00:00 PM	CP1 pond	Tundra swan	2	Immobile	Mark Miller	No action required

Date	Time	WL_Sub Location Detail	Wildlife Species	Quantity	Behavior	WL_Observer Name #1	WL_Action
Sunday, June 18, 2023	5:00:00 PM	CP1 pond	Duck	2	Swimming	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Road to Exploration Camp	Squirrel	1	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Exploration Camp	Canada geese	2	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	4:00:00 PM	Near emulsion plant	Squirrel	1	Running	Mark Miller	No action required
Sunday, June 18, 2023	6:00:00 PM	North of CP1	Squirrel	1	Fleeing	Mark Miller	No action required
Sunday, June 18, 2023	5:00:00 PM	CP1 pond	Tundra swan	2	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	5:00:00 PM	CP1 pond	Duck	2	Swimming	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Road to Exploration Camp	Squirrel	1	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Exploration Camp	Canada geese	2	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	4:00:00 PM	Side of Road East of Emulsion Plant	Arctic hare	1	Immobile	Mark Miller	No action required
Sunday, June 18, 2023	5:30:00 PM	Road to Exploration Camp	Canada geese	5	Walking	Mark Miller	No action required
Sunday, June 18, 2023	3:00:00 PM	Lake E3	Duck	1	Nest	Mark Miller	No action required
Wednesday, June 21, 2023	6:20:00 PM	MSB	Arctic hare	1	-	Malik	No action required
Saturday, June 24, 2023	3:21:00 PM	KM8	Tundra swan	6	Swimming	Amy Tagoona	No action required
Saturday, June 24, 2023	2:54:00 PM	KM24	Seagull	1	Swimming	Amy Tagoona	No action required

<b>Date</b>	<b>Time</b>	<b>WL_Sub Location Detail</b>	<b>Wildlife Species</b>	<b>Quantity</b>	<b>Behavior</b>	<b>WL_Observer Name #1</b>	<b>WL_Action</b>
Saturday, June 24, 2023	3:18:00 PM	KM10	Seagull	1	Flying	Amy Tagoona	No action required
Saturday, June 24, 2023	2:37:00 PM	KM29	Caribou	1	Eating	Amy Tagoona	No action required
Saturday, June 24, 2023	3:12:00 PM	KM12	Tundra swan	2	Swimming	Amy Tagoona	No action required
Monday, June 26, 2023	11:40:00 AM	Explo camp	Duck	1	Swimming	Amy Tagoona	No action required
Monday, June 26, 2023	11:41:00 AM	WTP	Duck	5	Swimming	Amy Tagoona	No action required
Monday, June 26, 2023	2:00:00 PM	Open Pit	Sandhill cranes	3	-	Cameron Boyes	No action required
Tuesday, June 27, 2023	2:30:00 PM	CP1	Semipalmated Plover	1	-	Cameron Boyes	No action required
Wednesday, June 28, 2023	-	KM12	Caribou	1	-	KivIA, SDFN/NDFN, Matt Gillman	Monitored the area
Friday, June 30, 2023	3:00:00 PM	KM17	Wolf	2	Walking	Randy Schwandt	No action required