

August 18<sup>th</sup>, 2025

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119 Gjoa Haven  
Nunavut NU X0B 1J0

**RE: *Meliadine Mine 2024 Annual Report for Water Licence 2AM-MEL1631***

Dear Mr. Dwyer,

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


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

250703 2AM-MEL1631 Meliadine Gold Mine 2024 Annual Report KIA Comments-IMLE  
250707 2AM-MEL1631 Meliadine Gold Mine 2024 Annual Report DFO Comments-IMLE  
250708 2AM-MEL1631 Meliadine Gold Mine 2024 Annual Report ECCC Comments-IMLE  
250718 2AM-MEL1631 Meliadine Gold Mine 2024 Annual Report CIRNA Comments-IMLE

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

With my best regards,



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### **Kivalliq Inuit Association (KivIA)**

#### **KivIA-1: Dust Management**

##### **Comment**

The measured air quality parameters (NO<sub>2</sub>, SO<sub>2</sub>, dust fall) did not exceed regulatory guidelines, except for the dust fall at station DF-4, which is down wind of the mine site and very close to Tiri OP-1. Increased site activity appears to be the reason for this.

##### **Recommendations**

The KivIA requests that the Proponent review its operational procedures, such as speed limits and the use of water and/or calcium chloride to better control dust, especially during periods of above average wind speed.

##### **Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, as noted by KivIA, site activity has indeed increased in the vicinity of DF-4, due to development activities at the western and southern extremities of Tiriganiaq Open Pit 1. Dustfall during the winter months was elevated compared to the rest of the year, but only a single monthly sample at this onsite location exceeded the regulatory guideline for dustfall in industrial areas, which is expected to occur occasionally. This is potentially due to winter pit operations. Historically, this has only occurred six times site-wide, which suggests that best management practices in place for dust mitigation continue to be implemented effectively to control nuisance-level emissions. Operational procedures for dust control are described in the Dust Management Plan and this practice will continue.

#### **KivIA-2: soil remediation**

##### **Comment**

Compaction of landfill material plus progressive capping with waste rock is being used to control dust and windblown debris. Ten (10) of thirteen (13) soil samples from the Waste Farm A soil windrows remediation failed GN's industrial soil remediation criteria. On-going remediation of the Waste Farm A soil windrows will continue during 2025 to resolve this issue.

##### **Recommendations**

KivIA looks forward to reviewing the results of the on-going remediation of the Waste Farm A soil windrows and resolution of the issue.

##### **Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges KivIA comment.

### **KivIA-3: Noise management**

#### Comment

All PPV and PW values recorded are within the DFO criteria for fish. Six (6) of the nine (9) 24-hour noise surveys recorded higher values. Noise exceedances at station NROR088 were related to seasonal helicopter flights and at station NPOR006a to the increased truck and machinery traffic related to the seasonal hauling of supplies from the barge re-supply in mid-September. The

#### Recommendations

KivIA suggests additional noise survey testing outside of the seasonal periods so that the Proponent can better determine the range in noise, in order to more effectively mitigate the seasonal variations.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle would like to clarify that results from broadband ambient noise surveys (e.g., 24-hour surveys) are not used to assess compliance with Fisheries and Oceans Canada (DFO) vibration limits for fish protection. Compliance with these standards is evaluated through a dedicated Blast Monitoring Program, which operates year-round and includes all blasting activities.

Regarding KivIA's recommendation to conduct noise surveys outside the helicopter and barge season, Agnico Eagle aims to perform ambient noise monitoring throughout the snow-free period. This timing aligns with guidance recommending optimal weather and terrain conditions, particularly concerning snow cover and wind speeds. Additionally, summer is typically the busiest season onsite, making it the most conservative period for assessing potential increases in ambient noise levels.

### **KivIA-4: Snow Removal at Dike D-CP1**

#### Comment

Regularly scheduled geotechnical inspections are completed by AEM and third party engineers of project infrastructure. The third party geotechnical inspection recommended better snow removal practices for Dike D-CP1 to mitigate the warming trend in the dike foundation. Results of this recommendation will be available in the 2025 Annual report that documents the annual geotechnical inspections. The third party geotechnical inspection also recommended more rock fill as a thermal cover and to promote better drainage for the CP-2 area, channels 1, 4, 5 7 and 10 and WRSF-1 and WRSF-3.

#### Recommendations

KivIA looks forward to reviewing the results of these recommendations in the 2025 Annual report.

Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks KivIA for their recommendation and will report on this request in the 2025 Annual Report.

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**Fisheries and Oceans Canada (DFO)**

**DFO-1: Hydrological monitoring of Meliadine Lake and its Outflow**

**Comment**

Hydrologic monitoring of water levels in Meliadine Lake, and flows at the 2 outlets of Meliadine Lake, began late in the open water season of 2024.

Information provided in the 2024 Annual Report related to this hydrological monitoring was limited due to the late start of the monitoring program. It is planned for this information to be included in the 2025 Annual Report.

It is unclear how this information will be reported and incorporated into the overall environmental management system in place at the Meliadine Mine. It is common place for a mines Aquatic Effects Management Program (AEMP) to include a hydrological component, which also allows for regular evaluation and potential response actions if detrimental effects are observed. Alternatively, the Meliadine mines Water Quality and Flow Monitoring Plan complements the AEMP.

DFO would ultimately like to better understand some of the details of this monitoring program sooner than the submission of the 2025 Annual Report, including:

- what historical data is available and will be used for long term comparison,
- the location where will this information be reported,
- how mine related changes in water level will be responded to if determined to be detrimental to fish or fish habitat.

**Conclusion/Request**

Proponent to provide additional details on the hydrological monitoring, including:

- what historical data is available and will be used for long term comparison,
- the location where will this information be reported,
- how mine related changes in water level will be responded to if determined to be detrimental to fish or fish habitat.

To consider the analysis and reporting of this hydrology data under the AEMP, Water Quality and Flow Monitoring Plan, or provide rationale for another appropriate location.

**Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks DFO for its recommendation. Agnico Eagle will specify in the next update of the Water Quality and Flow Monitoring Plan how this information will be included and reported in the annual Report.

As mentioned in section 3.2.5 Meliadine Lake Outflow Monitoring of the 2024 Annual Report, Agnico Eagle is in the process of gathering data. The project, focused on developing a water balance model for the lake, will also assess the potential effects of climate change on the hydrology of the lake. Over the next two years, the project will incorporate instrumentation,

monitoring, surveys and development of a numerical model of the lake water balance. Following this period, Agnico Eagle will assess the need to establish a responded plan to mine related changes in Meliadine lake.

## **DFO-2: Catch per unit effort (CPUE).**

### Comment

Catch per unit effort (CPUE) data can provide a loose measurement of fish abundance, and when collected and compared over a times series, can provide information on changes in fish abundance. CPUE data is being collected and provided in section 8.4.1 of Appendix 18 – 2024 Aquatics Effects Monitoring Program AEMP report, of the 2024 Annual Report. For small bodies fish, this is the third year of data collection, for large bodied fish this is the second year of data collection, however the report only provides data from 2024. Providing historical data in conjunction with current data would allow for this historical comparison.

### Conclusion/Request

Proponent to provide each years CPUE data in the annual report so that comparison can be made between years.

### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle will provide the requested CPUE data in future annual reports and wishes to provide the following information.

## **Threespine Stickleback**

Results of CPUE for Threespine Stickleback from the 2018, 2021, and 2024 monitoring years are presented in Table 1 and illustrated in Figure 1.

CPUE results do not show a consistent increasing or decreasing trend across the three sampling years. At MEL-01 specifically, CPUE declined from 2018 to 2021, then increased from 2021 to 2024.

While CPUE provides a general indication of relative fish abundance, interpretation over time (or across space) should consider the following factors:

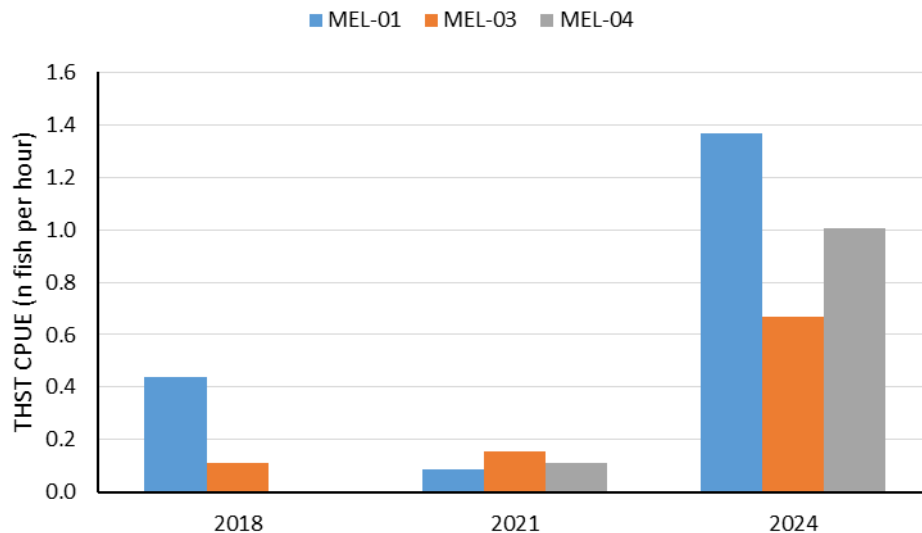
- Catchability is weather-dependent. Threespine Stickleback are more likely to be caught on sunny days with moderate to warm temperatures, while catch rates tend to decline on cloudy or windy days. The 2021 field season was characterized by frequent cloudy and windy conditions, whereas 2024 had predominantly sunny and warm weather—contributing to lower CPUE in 2021 relative to 2018 and 2024.
- Field crew familiarity improves over time. As crews gain experience with site-specific habitats, their ability to target preferred fish habitats improves. Consequently, CPUE may

increase in later sampling years not due to higher fish abundance, but due to more effective sampling resulting from increased familiarity with the site.

**Table 1. Catch Per Unit Effort (CPUE) for Threespine Stickleback (THST) among the three study areas in Meliadine Lake (2018, 2021, 2024).**

Area	Year	Total Soak Time (h)	THST Catch (n)	THST CPUE (n/h)	Total Catch (n)	Total CPUE (n/h)	% THST in Total Catch
MEL-01	2018	2049.0	899	0.44	905	0.44	99.3%
	2021	6268.2	533	0.085	543	0.09	98.2%
	2024	281.4	385	1.37	386	1.37	99.7%
MEL-03	2018	2692.0	298	0.11	318	0.12	93.7%
	2021	13596.9	2143	0.16	2496	0.18	85.9%
	2024	925.8	617	0.67	623	0.67	99.0%
MEL-04	2018	Not sampled					
	2021	13492.0	1512	0.11	1750	0.13	86.4%
	2024	387.7	389	1.00	410	1.06	94.9%

**Figure 1. Temporal changes in Catch Per Unit Effort (CPUE) for Threespine Stickleback (THST) among the three study areas in Meliadine Lake.**





## Lake Trout

CPUE results for the Lake Trout monitoring programs in 2021 and 2024 are presented in Table 2 and Figure 2.

In 2021, CPUE for Lake Trout in the East Basin of Meliadine Lake was approximately 1 fish/hr net set higher than in the reference lakes and higher than in the same area in 2024. Several factors may explain the higher CPUE observed in 2021 compared to the reference areas in 2021 and Meliadine Lake in 2024:

- **Differences in sampling effort and timing of net sets:** In 2021, daytime net sets were used at all three lakes, with additional overnight sets deployed in Atulik and Peter lakes to meet target sample sizes. These variations in sampling effort may have contributed to elevated CPUE in Meliadine Lake. In 2024, overnight sets were used exclusively in the reference lakes, while both daytime and overnight sets were used in Meliadine Lake. Although most Lake Trout in Meliadine Lake were captured during the overnight set, two daytime sets were required to achieve the target sample size of 26 fish.
- **Effluent discharge:** The mine was actively discharging effluent during the 2021 sampling period, which may have created conditions that attracted fish to the area near the diffuser (i.e., less energy devoted to osmoregulation in water with slightly higher concentrations of major ions). In contrast, no discharge occurred in 2024, resulting in more uniform water quality across the East Basin and potentially less localized fish aggregation.
- **Size and age structure:** In 2021, only large, older Lake Trout were captured in Meliadine Lake (youngest fish aged 15), suggesting that younger individuals may have avoided the area due to increased predation risk. In 2024, fish representing a broader range of age classes were captured, indicating more even habitat use throughout the basin.

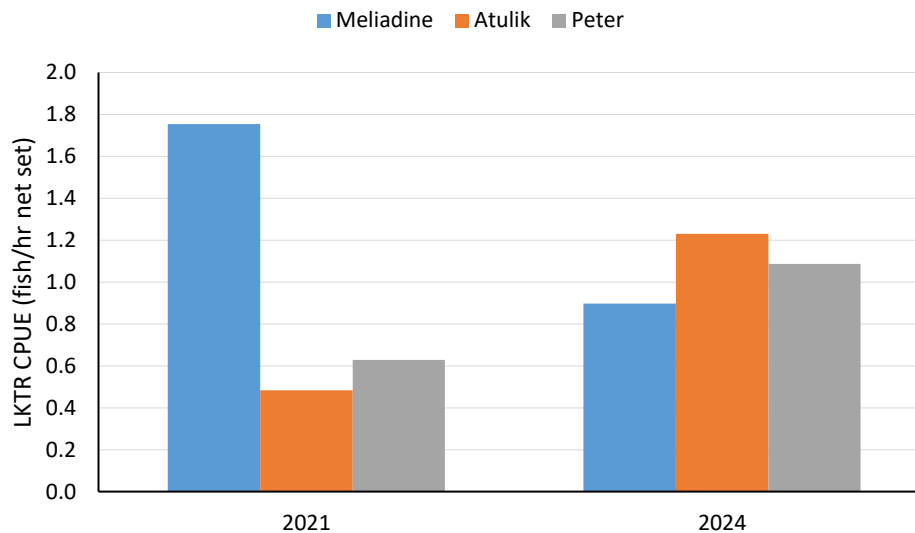
These observations suggest that CPUE differences between years may reflect behavioural responses to effluent discharge and variation in sampling conditions rather than changes in population abundance.

**Table 2. Catch Per Unit Effort (CPUE) for Lake Trout (LKTR) in Meliadine Lake, Atulik Lake, and Peter Lake in 2021 and 2024.**

Lake	Year	Total Soak Time (hr)	LKTR Catch (n)	LKTR CPUE (fish/hr net set)	Total Catch (n)	Total CPUE (n/h)	% LKTR in Total Catch
Meliadine	2021	38.2	67	1.75	74	1.94	90.5%
	2024	31.2	28	0.90	63	2.02	44.4%
Atulik	2021	78.6	38	0.48	57	0.73	66.7%
	2024	43.9	54	1.23	110	2.51	49.1%
Peter	2021	71.6	45	0.63	67	0.94	67.2%

2024	57.1	62	1.09	99	1.73	62.6%
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**Figure 2. Temporal changes in Catch Per Unit Effort (CPUE) for Lake Trout (LKTR) in Meliadine Lake, Atulik Lake, and Peter Lake.**



### DFO-3: Culverts Repair and Installation

#### Comment

A total of six culverts along the All Weather Access Road (AWAR), Rankin Inlet Bypass Road (RIBR), and Exploration (EXPLO) roads have previously been identified as being undersized for flow, showing signs of erosion.

Under DFO file # 23-HCAA-02631, AWAR 10 was installed in the winter of 2024 and due to delays and work proceeding under DFO file # 24-HCAA-01238 that culvert 7 on the AWAR will not be installed. Culvert RIBR 11 has not yet been installed, and is planned for 2025. Under DFO file # 24-HCAA-02901, two additional culverts were identified as needing replacement (AWAR 8.8, EXPLO 1.1) and one new culvert needing installation (AWAR 15.4). These culvert installations are planned for 2025.

These issues were identified in 2023, and are blocking flow causing ponding of water at identified locations. In 2024 this resulted in a discharge of water containing elevated TSS at location AWAR 8.8 as described in Spill Report #2024-463.

DFO would like to know when these culverts are planned for installation and looks forward to receiving the final design reports under the Water Licence process.

Conclusion/Request

Proponent to confirm when culvert installation is planned for in 2025.

Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Culvert 10 (AWAR KM16) and Culvert 11 (RIBR KM 3.5) were both installed early 2025. Both culverts were visited by two DFO staff during their visit to the Meliadine Mine site August 25-28, 2025.

The Design Report for three watercourse crossings (Explo Road KM 1.1, AWAR KM 15.4, and AWAR KM 8.8) was submitted to the Nunavut Water Board on June 26, 2025. Upon approval, culverts will be installed in the fall, 2025.

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

### **ECCC-1: Spill Contingency Plan - Version control**

#### **Comment**

The title page of the Spill Contingency Plan states that it is version 15; however, the document control section of the plan (p. x) and the Annual Report (p. 101) indicate that the plan is version 16.

#### **Recommendation**

ECCC recommends the Proponent confirm that the Spill Contingency Plan is version 16 and correct if necessary. This will help to minimize confusion when ensuring that the latest version of the plan has been distributed to personnel and/or placed at key locations at the project site.

#### **Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC's recommendation and would like to clarify that the Spill Contingency Plan submitted within the 2024 Annual report is version 16. The title page will be updated to reflect the correct version.

### **ECCC-2: Storage of hazardous materials**

#### **Comment**

Table 3-1 lists the maximum amount of each hazardous substance stored on site in units, as well as the amount of substance per unit. As currently listed, it is necessary to multiply the two columns together to determine total quantity of the hazardous substance in weight or volume. A knowledge of total volume on site is needed when preparing for and responding to spills, and it is therefore recommended that this information be provided in an additional column. Furthermore, the addition of a column to this table listing any mitigation measures that will be used for storage of each hazardous substance (as appropriate) to prevent leaks or spills (e.g., use of secondary containment) would be helpful.

#### **Recommendation**

ECCC recommends the Proponent include the following information in Table 3-1 of the Spill Contingency Plan:

- Maximum amount of substances anticipated to be on-site (by total weight or volume)
- Mitigation measures that will be used for each substance to prevent leaks or spills

#### **Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC's recommendations and will commit to updating Table 3.1 to include the maximum amount of each substance anticipated to be on site in the next version of the Spill Contingency Plan. Information regarding hazardous materials and fuel storage locations is well-detailed in the Hazardous Materials Management Plan and a reference to this Plan is in section 1.2 of the Spill Contingency

Plan. Mitigations measure are described in Appendix B to H of the Spill Contingency Plan which describe the general procedure for all the substances described in Table 3.1

### **ECCC-3: General mitigation measures**

#### Comment

The Spill Contingency Plan does not currently contain a map highlighting where hazardous materials are stored on site. It is noted that a map is provided within the Hazardous Materials Management Plan highlighting fuel storage plans. Inclusion of a map within the Spill Contingency Plan is recommended, as the plan will be relied on in emergency situations, and a general awareness of all potential sites where spills of hazardous substances could occur (and the types of substances that could spill) can support preparedness and situational awareness during a response.

#### Recommendation

ECCC recommends the Proponent include within the Spill Contingency Plan a map showing storage locations for hazardous substances on site.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC's recommendation and will include storage locations for other hazardous substances on the site maps in the next version of the Spill Contingency Plan.

### **ECCC-4: General mitigation measures**

#### Comment

There are several additional mitigation measures / storage best practices that contribute to spill prevention included within the Hazardous Materials Management Plan (Section 2.2 General Hazardous Materials Storage Guidelines). ECCC suggests that the proponent put a reference to the Hazardous Materials Management Plan be placed in Section 4 of the Spill Contingency Plan to ensure that the full range of mitigation measures and storage practices that will be used are communicated.

Additionally, the language on one suggested mitigation measure: "Encourage workers to take reasonable measures to prevent spills" (p. 8, Spill Contingency Report) should be strengthened – as it would be an expectation that workers would take reasonable measures.

#### Recommendation

ECCC recommends the Proponent:

- Add to the Spill Contingency Plan a reference to the Hazardous Materials Management Plan to indicate that additional mitigation measures and storage practices may be found in that document

- Consider changing the language of the bullet: “Encourage workers to take reasonable measures to prevent spills” to strengthen the mitigation measure, e.g.: “Require workers to take all reasonable measures to prevent spills”

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC’s recommendations and will include both the reference to the Hazardous Materials Management Plan and updated wording in the bullet point indicated to strengthen the mitigation measure in the next version of the Spill Contingency Plan.

### **ECCC-5: Vehicle, equipment, and refueling mitigation measures**

#### Comment

Use of equipment and vehicles, as well as their refueling, can present a risk of leaks or spills of hazardous substances. Neither the Spill Contingency Plan nor Hazardous Materials Management Plan currently contain information related to mitigation measures for vehicle and equipment leaks and spills. A section should be added to the Spill Contingency Plan or Hazardous Materials Management Plan to highlight the best practices that project personnel must follow, and to enable a more thorough assessment of spill prevention.

#### Recommendation

ECCC recommends the Proponent include a section on mitigation measures within the Spill Contingency Plan or Hazardous Materials Management Plan related to refueling, equipment, and vehicles. Measures that form standard best practices in similar projects and could be considered for this section include (but are not limited to):

- Use of drip trays or absorbent mats at refueling locations to prevent drips
- Fuel nozzles equipped with automatic shutoffs
- Operators stationed at both ends of hoses during refueling operations, unless both ends of the hose are visible and accessible by one operator
- Fuel remaining in hoses is discharged into equipment or returned to the storage container
- Refuel at least 31 m from the normal high-water mark of any water body
- Provide adequate lighting at refueling areas
- Use of secondary containment for any equipment with a built-in fuel tank
- Regular inspection of vehicles and equipment for drips or leaks, as well as regular maintenance
- Use of biodegradable hydraulic oil (when appropriate) for equipment that is working near or in water
- Park vehicles and equipment over a drip tray or absorbent mat overnight, and at a location that is at least 31 m from the normal high-water mark of any water body

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC's recommendation and would like to mention that both the Spill Contingency Plan and Hazardous Materials Management Plan do contain references to mitigation measures related to the refueling.

Section 5.3.2 Fuel Truck Transfer Procedures, located in the Hazardous Materials Management Plan does contain a list of mitigation measures in place prior to fuel transfer.

Agnico Eagle will take ECCC's recommendation into consideration during the next review of the Spill Contingency Plan and Hazardous Materials Management Plan.

#### **ECCC-6: Vehicle maintenance and safety**

##### Comment

A list of potential causes for vehicle accidents is listed in this section. One type listed is: "Risk of people getting stuck on the roads in bad weather such as in blizzard, whiteout or dense fog conditions, or due to mechanical breakdown"

Mechanical breakdown could also result in spillage of potentially harmful materials to the environment, either because it caused an accident where a subsequent spill occurred, or the mechanical breakdown itself resulted in the release (e.g., loss of vehicle fluids).

In the list of non-reportable spills for 2024, there are several instances where mechanical breakdown / failure led to loss of hazardous substances, including hydraulic oil, diesel, coolant, and engine oil to the environment.

A potential mitigation measure for this scenario is the regular inspection of vehicles for drips / leaks.

##### Recommendation

ECCC recommends the Proponent add the possibility of spills or leaks of potentially harmful materials in the event of a vehicle accident caused by a mechanical breakdown.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle acknowledges ECCC's recommendation and would like to mention that the Spill Contingency Plan does contain references to mitigation measures related to the refueling and that Section 9 of the Spill Contingency Plan describes the possibility of a vehicle accident on the AWAR causing a fuel spill.

Agnico Eagle will take ECCC's recommendation into consideration during the next review of the Spill Contingency Plan and Road Management Plan.

#### **ECCC-7: Smoking near hazardous material storage sites**

##### Comment

The list of storage practices and mitigation measures that will be put into place at hazardous material storage areas currently states: “Storage areas will be adequately signed indicating that hazardous materials/wastes are stored therein”

Additional information should be added to the signs to indicate that smoking should not take place within 15 m of the storage areas. Smoking near these areas poses a risk of igniting flammable vapours.

##### Recommendation

ECCC recommends the Proponent add additional information to the signs demarcating hazardous materials storage areas to specify no smoking within 15 m of the storage area.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle has specific areas on site where smoking is allowed, and those areas are well signed. This information is part of the induction training required for all employees and contractors. All the smoking areas are well far from 15m from any hazardous storage.

Both fuel farms and the cyanide path have no smoking signage visible when entering the area.

#### **ECCC-8: Update of MSDS to SDS**

##### Comment

The plan refers to MSDS (Material Safety Data Sheets), which are now called SDS (Safety Data Sheets).

##### Recommendation

ECCC recommends the Proponent change references to “MSDS” or “Material Safety Data Sheets” to “SDS” or “Safety Data Sheets”.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for its recommendation and will make the change during the next update of the Management Plans.

#### **ECCC-9: Clarification of type of diesel storage tanks**

##### Comment

The Executive Summary (p. iv) of the Hazardous Materials Management Plan states: “During the summer months, diesel will be shipped from eastern ports to Rankin Inlet, where it will be transferred into storage tanks at the Itivia Oil Handling Facility. Diesel tanks are single-walled,



constructed of welded steel, and meet the Canadian Council of Ministers of the Environment guidelines for Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.”

Section 5.2 Diesel Fuel Storage in Rankin Inlet and at the Project Site (p. 12) states: “The large diesel tanks at the mine and at Itivia are double-walled, constructed of welded steel, and designed, constructed, and located to meet the CCME guidelines for Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.”

Section 3.3 On-Site Handling (p. 8) states: “All tanks used for the storage of diesel fuel are double walled. There are some exceptions where single walled tanks exist, but all are equipped with secondary containment areas sized to hold at least 110 % of the volume of the largest tank.”

There is inconsistency in the description of the diesel tanks at the Itivia Oil Handling Facility. Although secondary containment is provided in the form of a berm, understanding whether tanks are single- or double-walled is important when assessing mitigation measures that are in place to prevent leaks.

#### Recommendation

ECCC recommends the Proponent clarify whether diesel tanks at the Itivia Oil Handling Facility are single- or double-walled, and correct the Hazardous Materials Management Plan as necessary.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle confirms that the Itivia Fuel Tank are double walled. The Hazardous Materials Management Plan will be corrected to be consistent.

### **ECCC-10: Inconsistencies in temperature summary information**

#### Comment

In Section 7.8.3, mean annual and minimum temperatures in Table 23 agree with values stated in Section 7.9.1; however, different values are presented in the text of Section 7.8.3.

#### Recommendation

ECCC recommends the Proponent resolve the inconsistencies in the temperature summary information.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for their comment. The correct values of temperature are the one indicated in table 23 of the 2024 Annual Report. Agnico Eagle will make sure values in tables are correctly represented in the text in future annual report.

#### **ECCC-11: Incinerator stack testing results interpretation**

##### Comment

ECCC appreciates Agnico-Eagle's efforts related to stack testing of the incinerators. Section 5.2 of the annual report states that stack testing of Incinerator 1 (Eco Waste) shows concentrations slightly exceed on average the acceptable standard for dioxins and furans. The stack testing report, Table 6.5, shows that the concentration for the second test was over 2.5 times the acceptable standard, whereas the other two tests were in compliance with the acceptable standard. Section 5.2 states that an investigation is ongoing with audits of the incineration practices and waste management. Not mentioned is the possibility of external factors that may affect stack testing results; for example, wind speeds at Rankin Airport during the second test were considerably slower than for the other tests.

##### Recommendation

ECCC recommends that external factors such as meteorological parameters also be considered as part of the investigation into stack testing exceedances for Incinerator 1.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for the recommendation and will assess the feasibility of including meteorological parameters to the stack testing.

#### **ECCC-12: Disposal of empty explosive boxes or bags**

##### Comment

Section 3.6 states that empty explosive boxes or bags are burned on-site. The composition of these boxes or bags is not evident from the report. Some explosives, such as Anfo Blasting agent, are packaged in plastic bags. Table 2 of the Environmental Guideline for the Burning and Incineration of Solid Waste indicates that plastic wastes are not to be open burned.

##### Recommendation

ECCC recommends that empty explosive boxes or bags be disposed in compliance with the Nunavut's Environmental Guideline for the Burning and Incineration of Solid Waste.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for this recommendation and will ensure that explosive packaging is disposed of according to the Nunavut's Environmental Guideline for the Burning and Incineration of Solid Waste

### **ECCC-13: Saline water storage at TIRI02**

#### Comment

Saline water from the underground is stored in pit TIRI02 until it can be treated and discharged to Itivia Harbour via the waterline. The construction and commissioning of the waterline and saline effluent treatment plant (SETP) were planned for 2025 but have been postponed, and discharge through the water line is now anticipated for 2026.

Previously, stored water volumes in TIRI02 were anticipated to be reduced in 2025 because of the discharge. The new predicted volumes without discharge are presented in Figure 10, which does not go past the end of 2025. Predictions for water volumes further into the future would help ensure that appropriate measures are planned and put in place to manage water volumes at TIRI02.

The tabular data for TIRI02 from the Water Balance and Water Quality Model (WBWQM) in Appendix 4 presenting projections for inflows and outflows from the pit is outdated because it includes outflow to the SETP in 2025. The Water Management Plan acknowledges the model is outdated and states: “this assumption will be revised in the next update and submission of the model.” No timeline has been provided for the update or submission. An updated WBWQM is a yearly requirement under the water licence and is relevant at this time since there have been changes to the proposed water management plan.

#### Recommendation

ECCC recommends the Proponent provide:

- an updated Water Balance and Water Quality Model that incorporates the new proposed timelines for discharges from pit TIRI02 to Itivia Harbour through the waterline; and
- a discussion of capacity to manage saline water volumes through 2026 and 2027.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for their comment and will update the site Water Balance and Water Quality Model (WBWQM) to allow long-term forecasts of the site saline water storage based on the new proposed timelines for discharges from TIRI02 pit to Itivia Harbour through the waterline. This update will also include the last updated Water Licence water management strategy.

Agnico Eagle would like to clarify that the Operational WBWQM model used for the historical comparison between forecasted and observed volume in TIRI02, and the 2025 TIRI02's volume forecast, presented in Figure 10 of the 2024 Annual Report, account for the new proposed timelines for discharges from pit TIRI02 to Itivia Harbour through the waterline. As mentioned in section 3.2.2, there are limited differences in the 2025 water management strategy considered in Operational WBWQM and the Water Licence Amendment (WLA) WBWQM. For the year 2025, it's therefore anticipated that the volume predictions presented in Figure 10 of the 2024 Annual Report will closely reflect the observed volumes.

The WLA WBWQM results presented in Figure 11 of the 2024 Annual Report and in model technical report (Lorax, 2024) show that water transfer to saline pond (SP) 6 and discharge through the waterline, once commissioned, will allow the dewatering of TIRI02. The primary

inflows to TIRI02 are limited to groundwater inflows pumped from the underground mine and surface runoff within the pit catchment. Assuming the following forecast criteria; (i) no transfers or discharge of Tiri02 water would be possible in 2026 and 2027, (ii) the forecasted surface runoff to TIRI02, and (iii) the forecasted groundwater inflows considering the planned underground mine plan (Groundwater Management Plan V12, Table 2, or Table 5 from WSP, 2024d), the volume in TIRI02 should be reaching 1,400,000 m<sup>3</sup> at the end of 2026 and reaching the Maximum operating level in TIRI02 (i.e., 1,616,554 m<sup>3</sup>) in the fall 2027.

In the 2025 annual report, Agnico Eagle will include water balance and water quality forecasts for Tiri02 based on the latest approved strategy of saline water management and timelines for discharges from pit TIRI02 to Itivia Harbour through the waterline.

#### **ECCC-14: Response to water quality concerns in Lake B7**

##### Comment

Water quality in the peninsula lakes B7 and A8 has been influenced by mine activities, with increasing concentrations of major ions, arsenic and barium. Arsenic concentrations in Lake B7 in August 2024 were above both the (AEMP) Action Level and the site-specific water quality objective (SSWQO). The 2024 AEMP Report proposes that arsenic concentrations are due to initial arsenic loading from offsite migration of dust in 2019/2020 and “The subsequent increasing trend likely reflects internal cycling rather than ongoing external loading.” The Annual Report concludes “results from the snow chemistry monitoring program indicate that efforts to minimize dust migration have resulted in lower concentrations of metals in the snowpack in recent years.”

The snow core chemistry data from 2020 to 2024 are presented in the 2024 AEMP Report. Though total suspended solids (TSS) concentrations in 2022 were markedly lower than in other years, concentrations in April 2024 at most stations were similar to those measured in April 2020. Arsenic and aluminum concentrations are also similar between 2020 and 2024. It is not clear which results from the snow core program indicate lower metal concentration, so further loading of metals into the lakes is likely occurring. This could help explain the increasing overall trend in the arsenic concentration seasonal cycling.

The AEMP Design Plan does not set out a response framework for peninsula lakes monitoring, but states: “Water quality data from the Peninsula Lakes are evaluated using the same approach as the Meliadine Lake study, including comparisons to (1) baseline conditions (Normal Range assessment), (2) water quality guidelines, and (3) predictions in the 2014 FEIS (if available). The objective is to ensure changes in water quality are detected early to mitigate against adverse effects to aquatic life.”

The exceedance of both the Low Action Level and SSWQO for arsenic concentrations warrants further response, including development of a Moderate Action Level. Though the two impacted lakes are scheduled to be drained in the next few years, increasing concentrations indicate off-site effects and currently those lakes drain into and are connected to the receiving aquatic

environment. Understanding the causes and preventing further increases of metals in Lakes B7 and A8 may also be relevant to preventing similar impacts to other nearby waterbodies.

#### Recommendation

ECCC recommends the Proponent:

- propose mitigation measures to reverse the increasing trend in arsenic concentrations in the peninsula lakes adjacent to the mine; and
- develop Moderate Action Level for water quality in peninsula lakes.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Dust is an inherent aspect of all mining operations, and wind erosion from exposed mine surfaces—particularly the Tailings Storage Facility (TSF)—is one of the most significant sources of dust at the Meliadine Mine. While ongoing dust deposition from the TSF cannot be ruled out as a potential contributor to water quality changes in Lake B7, historical loadings during the early years of operation (2019–2021) are believed to be the primary driver of the observed changes. This conclusion is supported by the temporal trend for arsenic shown in Figures 4-5 and 4-6 of the 2024 AEMP.

To minimize its impact on the environment and human health, Agnico Eagle implements a Dust Management Plan (Agnico Eagle 2025). Dust generation at the TSF is mitigated by minimizing disturbance through compaction of the fine tailings and limiting traffic. Monitoring includes daily visual inspections by TSF operators and weekly drone surveys during dry periods and high wind events. If there is poor visibility or high levels of dust near “significant waterbodies”, additional mitigation measures may be implemented including:

- application of water or approved dust suppressants to exposed tailings surfaces.
- wind fencing or other physical barriers (windbreaks, rock cap)
- reduced haul truck speeds during high wind events.
- temporary suspension of tailings deposition during high wind events.
- regular monitoring of dust suppression effectiveness.

Agnico Eagle will continue implementing the best practices within the Dust Management Plan to minimize impacts of dust to Lake B7 and other waterbodies located near the Mine.

Agnico Eagle will consider developing Low and Moderation Action Levels for the Peninsula Lakes and will provide an update in the 2025 AEMP Report and next AEMP Design Plan.

### **ECCC-15: Response to nutrient enrichment in Meliadine Lake**

#### Comment

Fish studies were conducted in 2024 and the threespine stickleback study found “Most of the comparisons between MEL-01 [exposure area] and the individual reference areas (MEL-03 and MEL-04) exceeded the CES of 10 % for condition and 25 % for relative liver weight, suggesting

fish in MEL-01 either have more energy available or use it more efficiently than those in the reference areas.”

These findings fit the Low Action Level for nutrient enrichment assessment criteria for fish which are defined in the AEMP Design Plan:

- “Statistically significant differences in fish health endpoints AND
- Changes in direction and magnitude that are indicative of nutrient enrichment AND
- Magnitude of effect above the CES”

The response to reaching the Low Action Level should be described and implemented. It typically includes actions to investigate the cause of the Low Action Level exceedance and developing Moderate and High Action Levels.

#### Recommendation

ECCC recommends the Proponent:

- describe and implement a response to reaching the Low Action Level for fish health from nutrient enrichment in Meliadine Lake; and
- develop Moderate Action Level for fish health in Meliadine Lake.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, ECCC’s interpretation of the Low Action Level exceedance for nutrient enrichment aligns with the criteria outlined in Table 6-3 of the AEMP Design (Azimuth 2025). However, the table does not explicitly reference the requirements under the Metal and Diamond Mining Effluent Regulations (MDMER). This was an oversight in the most recent update to the AEMP Design Plan. According to the Environmental Effects Monitoring (EEM) Technical Guidance Document, to confirm that observed effects are mine-related and not artifacts or the result of confounding factors, biological monitoring studies must be repeated in a subsequent three-year phase. If a similar type of effect—defined as the same endpoint, showing the same direction of change from zero relative to reference levels—is observed in two consecutive phases, the effect is considered confirmed.

Triggering management actions under the AEMP framework without first confirming the effect is misaligned with the intent of the EEM Program, which forms the basis for the fish health and benthic invertebrate community components of the AEMP.

The results of the Cycle 2 (2021) and Cycle 3 (2024) Threespine Stickleback studies indicate that no endpoints exceeded the Critical Effect Size (CES) in two consecutive cycles (Figure 3). Therefore, in alignment with MDMER and the EEM framework, the primary course of action is to confirm the 2024 results through a follow-up study, which is scheduled for the summer of 2027.

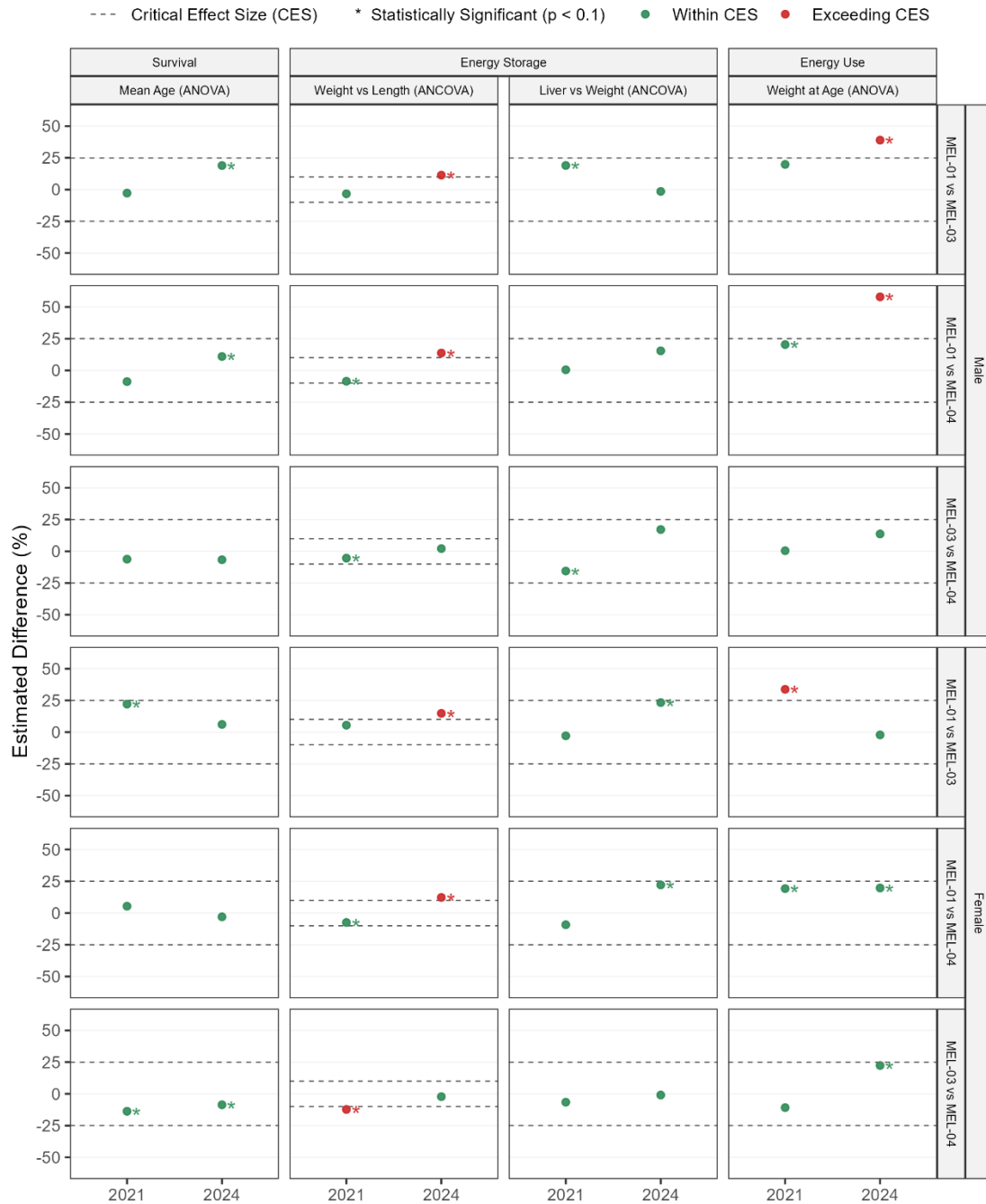
If the results from the EEM Cycle 4 (2027) Threespine Stickleback study confirm effects on body weight at length (condition) and liver weight at length in fish from MEL-01 compared to the reference areas—and the magnitude of the effect exceeds the CES—the next steps will include:

- conducting an investigation into the underlying cause of the observed effects; and

- developing a Moderate Action Level and identifying appropriate management actions to address the confirmed effects.

It is also worth noting that results from the annual phytoplankton monitoring program in Meliadine Lake have not shown evidence of nutrient enrichment attributable to effluent discharge or other mine-related activities.

**Figure 3. Comparison of Threespine Stickleback findings between Cycle 2 (2021) and Cycle 3 (2024).**





#### **ECCC-16: Location of runoff sampling stations**

##### Comment

The water licence requires monitoring of surface runoff “downstream of Construction areas at Meliadine Site and Itivia Site, Seeps in contact with the roads, earthworks and any Runoff and/or discharge from borrow pits and quarries” with the exact locations to be determined. Water quality results from runoff sampling points are presented and discussed in the Annual Report, with the detailed results tabulated in Appendix 19. ECCC was unable to find where the numbered MEL-SR monitoring stations were located. The station location relative to project infrastructure can help reviewers interpret water quality results.

##### Recommendation

ECCC recommends the Proponent include a map locating the surface runoff monitoring locations relative to project infrastructure, or reference where it could be found.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for the recommendation and will consider this recommendation in subsequent Annual Reports.

#### **ECCC-17: 2024 Compliance Monitoring**

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks ECCC for its Comment 17 on Compliance Monitoring including summaries of inspections as well as confirmation of MDMER compliance throughout 2024.

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

**CIRNAC-1: Water Line Construction, Commissioning, Discharge Clarifications**

**Comment**

The 2023 Annual Report indicated that saline water discharge would commence in 2025. Section 2.1.2.1 of the 2024 Annual Report provides high-level information on waterline construction activities carried out in 2024 and planned activities for 2025, including: *“Piping, optic fiber, and earthworks from KM15 to Itivia; Remaining mechanical installation; Directional drilling at Itivia and diffuser installation; and Commissioning.”* It is unclear what commissioning specifically refers to or when the operation will commence. However, Section 3.2.1 CP1 Water Balance Results notes that key changes are anticipated in 2025 that are not currently reflected in the Water Licence Approval Water Balance and Water Quality Model (WLA WBWQM) results, which include that Commissioning and operation of the Waterline will not occur in 2025.

Appendix 29-18, Section 4.1 Key Water Management Activities, Table 12, states that the Planned 2025 Schedule includes: “continued waterline construction and anticipated commissioning of the SETP-WTC.” The 2026 Planned Schedule includes: “anticipated waterline commissioning and SETP-WTC discharge through the waterline.” Appendix 29-18, Section 4 Water Management Strategy, states that “saline contact water volumes will be stored in Tiriganiaq Pit 2, until SP6 and the waterline are commissioned, and saline water can be treated for discharge to Itivia Harbour”.

The above sources provide inconsistent information on the timing of waterline commissioning and discharge, with no details on the reasons for changes to the construction and discharge schedules.

**Recommendation**

CIRNAC recommends that AEM clarify the status of the waterline and provide additional details on:

- a. The physical status of the waterline at the 2024 year-end,
- b. Planned 2025 and 2026 activities,
- c. Schedules for completion of waterline construction, commissioning, and start of discharge, and
- d. Expected operational practices (daily, monthly, annual discharge) upon start of discharge at Itivia.

**Agnico Eagle Answer**

As per answers to 2024 NIRB Annual Report Comments, in 2024, the waterline construction was completed up to KM 5.6 from the Mine site.

In 2025, Agnico Eagle has been working on the waterline construction works to Itivia, including HDD directional drilling and the installation of the diffuser outfall in Melvin Bay.

Hydrotesting of the waterline initiated in 2025 and is anticipated to be completed in 2026. Therefore, Agnico Eagle expects to commission the waterline in 2026.

As per the waterline assessment, there can be up to 20,000 m<sup>3</sup>/day, under unfrozen conditions, which is assumed to be 85 days.

## **CIRNAC-2 Clarification of Ore Storage Quantities**

### Comment

Section 2.1.3 of the Annual Report states that 561,000 tonnes and 1,436,000 tonnes of ore were mined respectively from the Open Pit and Underground for a total of 1,997,000 tonnes in 2024.

Section 4.4.1 states that 1,543,000 tonnes of tailings were deposited into the tailings storage facility (TSF) in 2024. Subtracting the tailings (i.e., ore milled & placed in the TSF) from the tonnes of ore mined leaves 454,000 tonnes of ore. Appendix 29-09 states that 423,000 tonnes of tailings were placed underground in 2024,

Based on the numbers above, it appears that 31,000 tonnes of ore mined in 2024 were not processed in 2024. As a result, it is expected that this amount of ore would be added to the ore stored on site by the end of 2024 (as noted below).

In Section 4 of Appendix 29-12, Agnico Eagle notes that ore will either be transported directly to the mill and crusher for processing or will be temporarily stockpiled at one of the designated ore stockpiles on OP2 (Stage 1 / Stage 2) for subsequent processing. Table 4.4 shows that 216,000 tonnes and 323,000 tonnes of ore were stockpiled at year end in 2023 and 2024, respectively.

If the difference in ore mined vs. milled and deposited as tailings in 2024 was 31,000 tonnes, CIRNAC would expect that the ore stored at year end 2024 would be less than the 323,000 tonnes reported (i.e., 216,000 tonnes at year end 2023 plus 31,000 tonnes of ore not milled in 2024 = 247,000 tonnes).

### Recommendation

(R-02) CIRNAC recommends that Agnico Eagle clarify the difference in the quantity of ore stored as listed for 2024 in Table 4.4 of Appendix 29-12 compared to what is calculated from the difference in ore mined and milled in 2024 and added to the 2023 year-end ore storage.

### Agnico Eagle Answer

Section 2.1.3 of the 2024 Annual Report states that 561,000 tonnes and 1,463,000 tonnes (instead of 1,436,000 tonnes) of ore were mined respectively from the Open Pit and Underground for a total of 2,024,000 tonnes (instead of 1,997,000 tonnes) in 2024.

Section 4.4.1 states that 1,966,000 tonnes of ore were processed; 1,534,000 were placed on the tailings pile and 423,000 were sent underground. Hence, 58 000 tonnes (2,024,000 - 1,966,000) are calculated to be placed on the ore stockpile.

At the end of 2023, 216,000 tonnes were on the stockpile. Therefore, at the end of 2024, the volume at the stockpile should arrive at 274,000 tonnes (216,000 end of year 2023 + 58,000 calculated differences between ore mined vs milled).

Agnico Eagle conducts a year-end survey of the ore stockpiles. The 2024 survey shows that 323,000 tonnes was stored in the stockpile as stated in Section 4 of Appendix 29-12 Ore Storage Management Plan of the 2024 Annual Report.

The difference between the 323,000 tonnes stockpiles surveyed and the calculated 274,000 tonnes is 49,000 tonnes, representing 2.4% of tonnes mined.

This difference of the reported years prior 2024 is compiled in the table below. These values are available in the relevant Annual Reports, Ore Storage Management Plan and Waste Management Plan.

Over the past six years, the discrepancy between reported and calculated stockpile balances has remained consistently low, under 1% of total mined ore, falling within an acceptable margin of error.

	Mined OP and UG ore tonnes	Milled Ore tonnes	Calculated end of year Balance	Cumulative Balance	Reported stockpile balance	Discrepancy Reported Stockpile balance vs calculated balance	Variance with Mined tonnes
2019	1,108,666	976,706	131,960	131,960	142,000	10,040	0.9%
2020	1,402,899	1,393,722	9,177	141,137	119,000	(22,137)	-1.6%
2021	1,960,544	1,714,892	245,652	386,789	365,000	(21,789)	-1.1%
2022	1,778,834	1,756,971	21,863	408,652	387,000	(21,652)	-1.2%
2023	1,725,644	1,918,143	(192,499)	216,153	216,000	(153)	0.0%
2024	2,024,000	1,966,000	58,000	274,000	323,000	48,847	2.4%

<b>Cumulative 6 years</b>	<b>(6,844)</b>	<b>-0.6%</b>
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To ensure consistency in our reporting, Agnico Eagle will continue to report historical information with the same quantities as previously reported.

### **CIRNAC-3: Saline Water Management and Reclaim Water for Mill Use**

#### Comment

Section 3.1.9 of the 2024 Annual Report states that in 2024, no contact water was reclaimed for milling purposes. It notes that at present, the Reverse Osmosis (RO) Plant is used to treat higher

salinity sources of water on site (described in Section 3.9.6 of the Water Management Plan). Thus, the permeate water salinity is not low enough for direct mill water feed, and the previous use of contact water for milling significantly increased tailings salinity.

Review of Appendix 29-19, Figure 6, shows that the inflow to the RO plant is saline water from SP1, which receives saline water from SP4 and P3. Review of Section 3.9.6 of Appendix 29-18 states that “a reverse osmosis (RO) treatment plant is used to treat marginally saline runoff water captured by site water management infrastructure that would otherwise be directed to saline water storage. The application of the RO through these means is intended to reduce storage requirements of saline water on site until the Waterline is operational.”

By contrast, the Executive Summary of Appendix 29-18 states that contact water from the Underground Mine will be collected in underground storage stopes and sumps, and some will be reused for underground operations. Excess saline contact water will be pumped to different Saline Ponds (SPs) on the surface, and then routed to Tiriganiaq Pit 02 (TIR02) (and then SP6 once constructed). All saline contact water will be eventually conveyed from TIR02 or SP6 to the SETP-WTC prior to discharge to Itivia Harbour via the waterline.

Based on the above statements, it is unclear whether the RO plant is treating water from higher-salinity sources or marginally saline water. It also appears that RO-treated underground saline water is being discharged to CP1 and thereafter discharged to Meliadine Lake.

#### Recommendation

CIRNAC recommends that AEM:

- a. Clarify if, and when, CP1 water has been tested for use as mill makeup.
- b. Clarify whether the RO plant is treating sources with higher salinity or those with marginally saline levels.
- c. Provide details on the saline water sources being treated.
- d. Clarify if the saline groundwater treated by the RO plant is
- e. discharged to CP1 and thereafter discharged to Meliadine Lake.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, the use of CP1 water as mill makeup water was tested during the 2020 open water season. This led to a noticeable increase in scale formation on equipment, and consequently, a noticeable increase in the amount of maintenance required. Moreover, recirculation of CP1 water to the Mill contributed to the tailing salinity exceeding the infrastructure design criteria that year. Ongoing monitoring results are still consistent with these findings. The RO plant is used to treat marginally saline water from various surface infrastructures, with Saline pond 1 as a repurposed feed pond. No underground contact water is pumped to SP1/RO, and therefore there is no discharge of treated saline groundwater to CP1 to be thereafter discharge to Meliadine Lake.

#### **CIRNAC-4: Lake B7 Arsenic Impacted Water Quality**

##### Comment

Lake B7 is located west of the Tailings Storage Facility (TSF). Water quality monitoring was conducted in 2024 in Lake B7 in July, August, September, and October as part of the Aquatic Effects Monitoring Program (AEMP). Monitoring results indicate that water quality changes are primarily driven by major ions (calcium, sodium, chloride, and sulphate), arsenic, and barium, with these parameters being the most significantly affected. During the August 2024 sampling, all three arsenic concentrations in Lake B7 exceeded the AEMP Action Level of 18.8 µg/L and two also exceeded the Site-Specific Water Quality Objective (SSWQO).

In the AEMP, AEM states that seasonal trends of arsenic concentrations in Lake B7 suggest that increased concentrations may be the result of arsenic release from the sediment.

AEM also states that “overall, current arsenic concentrations in Lake B7 pose a low risk of adverse effects to fish and other aquatic life”. CIRNAC finds this statement questionable given the reported exceedances of the SSWQO.

CIRNAC notes that the observed arsenic concentrations in the sediment may suggest another source from the mine other than dust.

##### Recommendation

CIRNAC recommends AEM:

- a. Carry out a comprehensive investigation into the potential source of arsenic in Lake B7.
- b. Based on investigation results, develop mitigation plans for the operational mine life.
- c. Indicate why the 2024 exceedances of the arsenic SSWQO in Lake B7 are not classified as a non-compliance event,
- d. Carry out a risk assessment of Lake B7 to assess post-closure risks and potential remedial requirements once the water body is reconnected to the surface water environment after being used as a saline pond (SP6) during operations.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments;

#### **a) Carry out a comprehensive investigation into the potential source of arsenic in Lake B7.**

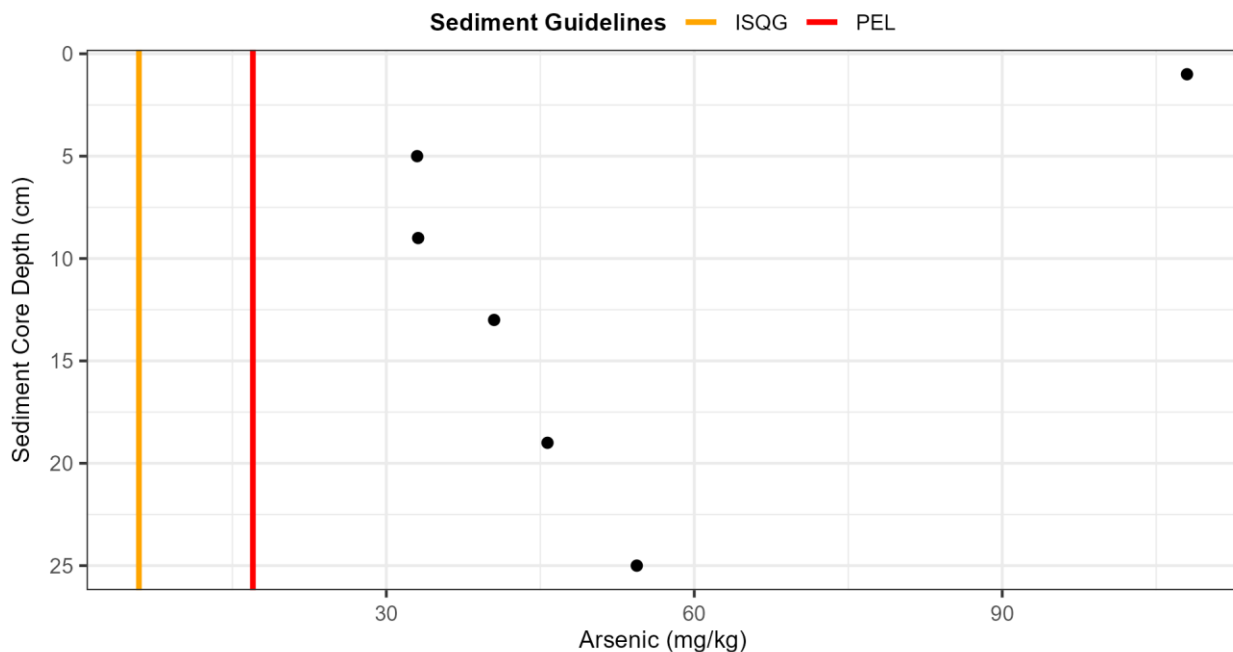
Given the proximity of Lake B7 to the TSF and the timing of the increasing temporal trend for arsenic, dust emissions from the TSF are considered the most probable source of arsenic to Lake B7. Surface contact water, including seepage, is actively managed by diverting flows to Collection Pond 3 (CP3), further supporting the conclusion that windblown dust is the primary pathway.

On August 21, 2024, Azimuth collected a sediment core from the depositional area of Lake B7 to delineate the vertical concentration profile of metals of interest in the sediment. This reconnaissance-level sampling program was designed to provide preliminary insight into whether recent dust deposition is evident in the sediment record. Evidence of dust deposition would be

reflected by elevated concentrations of arsenic and other metals in the upper sediment layers, coinciding with the development and operation of the TSF.

As shown in the figure below, arsenic concentrations in the top 0–2 cm of the sediment profile were 108 mg/kg, compared to 30–55 mg/kg in deeper core intervals. While the core chemistry results alone do not definitively confirm dust as the source, the approximately threefold increase between the 0–2 cm and 4–6 cm horizons suggest recent loadings consistent with a dust deposition.

**Figure 4. Arsenic concentrations in the sediment core collected from Lake B7 on August 21, 2024.**



**b) Based on investigation results, develop mitigation plans for the operational mine life.**

As indicated in response to ECCC-14, To minimize its impact on the environment and human health, Agnico Eagle implements a Dust Management Plan (Agnico Eagle 2025). Dust generation at the TSF is mitigated by minimizing disturbance through compaction of the fine tailings and limiting traffic. Monitoring includes daily visual inspections by TSF operators and weekly drone surveys during dry periods and high wind events. If there is poor visibility or high levels of dust near “significant waterbodies”, additional mitigation measures may be implemented including:

- application of water or approved dust suppressants to exposed tailings surfaces.
- wind fencing or other physical barriers (windbreaks, rock cap)
- reduced haul truck speeds during high wind events.

- temporary suspension of tailings deposition during high wind events.
- regular monitoring of dust suppression effectiveness.

Agnico Eagle will continue implementing the best practices within the Dust Management Plan to minimize impacts of dust to Lake B7 and other waterbodies located near the Mine.

**c) Indicate why the 2024 exceedances of the arsenic SSWQO in Lake B7 are not classified as a non-compliance event**

The annual mean arsenic concentration in Lake B7 in 2024 was 18.7 µg/L, marginally below the early warning action level of 18.8 µg/L (75% of the SSWQO). Samples collected during the August 2024 sampling event exceeded the SSWQO of 25 µg/L and were reported as 'exceedances' in the 2024 AEMP Report (Azimuth 2025). These exceedances triggered additional sampling in September and October to confirm the August results. As expected, and consistent with the hypothesis that arsenic is mobilized from sediment in summer and sequestered in winter, arsenic concentrations declined in the subsequent sampling events, ranging from 14.4 to 17.8 µg/L in September and from 15.4 to 16.1 µg/L in October.

**d) Carry out a risk assessment of Lake B7 to assess post-closure risks and potential remedial requirements once the water body is reconnected to the surface water environment after being used as a saline pond (SP6) during operations.**

The need for post closure risk assessment will be assessed before SP6 is reconnected to the receiving environment if conditions at closure are predicted to exceed thresholds associated with risks to aquatic life. Based on the information currently available for Lake B7, risks to aquatic life at closure are unlikely for the following reasons.

- The CCME WQG of 5 µg/L is based on an EC50 of 50 µg/L for effects to green algae growth (CCME, 2001). Current concentrations (15-27 µg/L) are below the threshold associated with a 50% reduction in algal growth.
- Agnico Eagle proactively collected water from Lake B7 for toxicity testing on October 14, 2023 after the results from the August 2023 sampling event showed concentrations exceeded the early warning trigger of 18.8 µg/L and were approaching the SSWQO. Toxicity testing was carried out using green algae (72-hour growth inhibition test) and *Daphnia magna* (48-hour acute lethality test). No effects were observed for either test species (lab reports are provided in the appendices).
- Compared to algae and invertebrates, fish are relatively tolerant to the effects of arsenic from surface water exposure. The following toxicity data for fish were included in the CCME factsheet: a 28-d LC50 of 550 µg/L for Rainbow Trout, a 7-day lowest observed effect concentration (LOEC) of 500 µg/L for climbing perch (*A. testudineus*), and a 7-day LOEC of 970 µg/L for catfish (*Clarias batrachus*).
- Arsenic concentrations in the top 2 cm core sample from Lake B7 in 2024 was approximately 100 mg/kg. Arsenic concentrations in this range were also reported in



Meliadine Lake before the mine started discharging water in 2018 and during operations without any corresponding impairment to the benthic invertebrate community.

#### **CIRNAC-5: Discrepancies between Predicted and Actual Tailings Neutralization Potential Ratio (NPR)**

##### Comment

Section 4.2.4 of the Annual Report discusses the acid rock drainage (ARD) potential of the filtered tailings. It notes that monitoring results show that most tailings samples fall within the Uncertain category, with an average neutralization potential ratio (NPR) value of 1.93 for all 2024 samples. Similar to previous years, the average NPR value of the filtered tailings is significantly lower than that predicted in the FEIS (NPR = 2.7).

Despite the presence of samples classified as potentially acid generating (PAG) and Uncertain from 2019 to 2024 sampling, AEM believes that the tailings do not pose an ARD risk for the site because the generation of acidic water requires tailings exposure to air and water and sufficient timescales for neutralization potential to be consumed. Sufficiently warm temperatures to facilitate sulphide oxidation at meaningful rates.

While CIRNAC appreciates AEM's high level qualitative comments on the potential limiting effects of the site and tailings facility conditions as discussed above, CIRNAC is of the opinion that a rigorous quantitative technical assessment of the potential implications of the lower than predicted NPR value should be undertaken, particularly with respect to closure and long-term post-closure potential metal releases to the environment.

##### Recommendation

CIRNAC recommends that AEM undertake a detailed technical analysis of the potential acid rock drainage/metal leaching (ARD/ML) risks associated with the reduced tailings NPR to identify any potential concerns or changes that may be needed as a result of the geochemistry of the TSF. This analysis should also consider the latest Climate Change Forecast and should also consider that saline moisture from the underground ore elevates filtered tailings pore water salinity, as noted in Section 3.1.9 of the 2024 Annual Report.

##### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle has identified these as areas for further investigation and is currently working with a consultant to complete a 1D reactive transport model for the TSF from previous kinetic tests run by Okane (2022), as well as in-situ borehole and test pit samples collected in January and June 2025 by Agnico Eagle. The reactive transport model will test Agnico Eagle's conceptual understanding of the limitations on sulfide oxidation expected in the field. The full-scale model is presently being developed to capture current conditions. Following the current conditions model, cover system scenarios will be simulated to forecast Closure and Post-Closure conditions. In addition, work is currently ongoing by Agnico Eagle and Okane to investigate potential differences in the previous forecasted climate model.

(RCP-4.5) and the latest climate change forecast (using the SSP2-4.5 scenario) to investigate differences in moisture content and thermal performance of the TSF after cover placement. Okane will provide the updated climate scenario to TetraTech to update their thermal seepage coupled model. The thermal seepage coupled model will take into account the current in situ parameters, including observed temperatures and pore water salinity.

In addition to the above model updates, Agnico Eagle is working with Okane to develop a program for additional test work to improve understanding of the sources of effective NP and determine likelihood of onset of acidity

### **CIRNAC-6: Tiriganiaq Open Pit #2 (TIRI02) Water Quality Predictions**

#### Comment

Section 3.2 of the 2022 and 2023 Annual Reports and their respective appendices summarizing the water balance and water quality modelling tabular data, included figures with water quality measurements and forecasted concentrations of total dissolved solids (TDS), ammonia and radium-226 in Tiriganiaq Open Pit #2 (TIRI02).

In reviewing the 2024 Annual Report and Appendix 5, while figures showing observed and predicted volumes of water in TIRI02 are included, water quality figures depicting observed and predicted concentrations of TDS, ammonia and radium-226 have been omitted. The TIRI02 water quality figures help inform current and future site conditions and management decisions and should be included in the Annual Report.

#### Recommendation

CIRNAC recommends that AEM reinstate the inclusion of water quality figures with observed and predicted parameter concentrations for TIRI02 in the Annual Report.

#### Agnico Eagle Answer

As per answers to 2024 NIRB Annual Report Comments, Agnico Eagle thanks CIRNAC for their comment and will ensure the reintegration of TIRI02's water quality figures presenting observed and predicted TDS, ammonia and radium-226 concentrations.

### **CIRNAC-7: Sludge Disposal Studies**

#### Comment

The issue of sludge management was raised during the review of the 2023 Annual Report. In CIRNAC's reply to Agnico Eagle's response on the 2023 Annual Report review comments, CIRNAC noted the following:

- a) R-06(a), in the 2023 Annual report, TIRI02 water quality data were only provided for total dissolved solids (TDS), total ammonia and radium-226 in Figures 15, 16 and 17 of the main report and Appendix 4. However, Agnico Eagle indicated that the sludge is unlikely to negatively impact the pH, conductivity, total ammonia, copper, lead, nickel and zinc in saline contact water based on existing water quality data collected in TIRI02, but Agnico

Eagle did not provide the requested additional water quality data for TIRI02 in their response. Therefore, CIRNAC could not confirm Agnico Eagle's conclusions that sludge placed in the pit is unlikely to negatively impact the water quality in TIRI02.

- b) R-06(b), CIRNAC was looking forward to reviewing the Scenario Analysis report on alternative sludge management studies in the 2024 Annual Report.

CIRNAC's review of the 2024 Annual Report noted that Section 7.3.3 states that a scenario analysis was conducted in Q2 2024, concluding that both Geobags and centrifuges are technically viable but face practical challenges and safety concerns. However, the Scenario Analysis report was not provided for review, and the Annual Report did not include further details.

#### Recommendation

(R-07) CIRNAC recommends that Agnico Eagle provide:

- a) the additional data requested by CIRNAC during the 2023 review as noted above (pH, conductivity, total ammonia, copper, lead, nickel and zinc in saline contact water based on existing water quality data collected in TIRI02),
- b) the Scenario Analysis report on alternative sludge management studies referred to in the 2024 Annual Report, and
- c) confirm their intentions with respect to ongoing studies and sludge management going forward.

#### Agnico Eagle Answer

a) In section 7.3.3 of the 2024 Annual report, Agnico Eagle presents the key findings of a study conducted to validate the conclusions shared in the 2023 Annual report regarding the potential impact of sludge from the Effluent Water Treatment Plant (EWTP-WTC) on the water quality of saline contact water stored in TIRI02.

The study assessed a range of water quality parameters, including dissolved aluminum, total arsenic, total copper, total cyanide, total lead, total nickel, pH, total radium-226, and total zinc. Results indicate that, for most parameters of concerns, no increasing trend was observed over time as cumulative sludge volumes in TIRI02 increased.

A paired increase was observed in concentrations of total aluminum and total suspended solids (TSS). However, these increases are attributed to undissolved particulates and are not considered problematic, as the Saline Effluent Treatment Plant (SETP-WTC) is designed to effectively remove these constituents prior to discharge to Itivia Harbour.

It is important to note that sludge produced by SETP-WTC is stored in TIRI02, and any water subsequently discharged from TIRI02 is treated again through the same SETP-WTC process prior to release. As the SETP-WTC is designed to remove the constituents present in the sludge during initial treatment, it is equally capable of removing those same constituents when the water is retreated. This closed-loop approach ensures that water quality remains compliant with regulatory discharge criteria.

These findings support Agnico Eagle's conclusion, as stated in the 2023 Annual Report, that sludge disposal in TIRI02 does not negatively impact water quality. The results are provided here for CIRNAC's review.

b) Agnico Eagle acknowledges CIRNAC's interest in reviewing the Scenario Analysis report referenced in Section 7.3.3 of the 2024 Annual Report. We appreciate the opportunity to clarify the scope and intent of this analysis.

The scenario analysis conducted in Q2 2024 was an internal engineering and financial evaluation of alternative sludge management technologies, including geotextile dewatering and mechanical dewatering (e.g., centrifuges). The purpose of this study was to assess the technical feasibility, operational practicality, and cost implications of implementing such technologies at the Meliadine site.

While the report does reference environmental considerations in a general sense (e.g., sludge dryness, handling, and disposal logistics), it is not an environmental impact assessment and does not include site-specific environmental modeling or predictions.

Due to the inclusion of confidential financial data, vendor quotations, and commercially sensitive infrastructure planning, Agnico Eagle is unable to share the full report externally.

However, the key findings of the scenario analysis were transparently summarized in Section 7.3.3 of the 2024 Annual Report. These include:

- Confirmation that both geotextile and mechanical dewatering are technically viable.
- Identification of practical and safety challenges associated with implementation.
- A decision not to pursue these alternatives at this time, based on the effectiveness of current treatment infrastructure and the limited environmental impact of sludge disposal in TIRI02.

We trust that the summary provided in the Annual Report, combined with the detailed water quality analysis of TIRI02 (also included in Section 7.3.3), offers sufficient context to support our conclusions.

c) Agnico Eagle intends to continue internal monitoring of water quality in TIRI02 to support operational decision-making and ensure effective management of saline contact water. While TIRI02 itself is not a regulated discharge point, compliance with discharge criteria is confirmed through monitoring at MEL-26, the designated final discharge point under the Licence.

As such, Agnico Eagle considers that ongoing internal monitoring of TIRI02, combined with monitoring at MEL-26, provides sufficient assurance that water quality remains protective of the receiving environment. Any water discharged from the facility will continue to meet the applicable regulatory criteria.

### **CIRNAC-8: Management of OP2 Salinity and TDS Loading to CP1**

#### Comment

Section 3.1.9, Use of Reclaimed Water from Contact Water Management Facilities, of the 2024 Annual Report states that previous use of contact water for milling significantly increased tailings salinity, and that “saline moisture from the underground ore elevates filtered tailings pore water salinity”. Agnico Eagle also notes that pore water salinity of the filtered tailings can negatively impact the tailings storage facility’s (TSF’s) thermal performance. As such, monitoring will continue throughout 2025 to confirm the downward trend in salinity of tailings and protect the TSF’s thermal stability.

As shown in Appendix 29-18, Figure 6 Conceptual Site Water Management Flow Diagram for the Site, runoff from ore stored in Ore Storage Pad 2 (OP2) presently discharges to Containment Pond 1 (CP1) directly and via Channel 1 and will continue to do so to end of mine life as illustrated in Figure 7 of Appendix 29-18.

As shown in Appendix 29-12 Table 4.4, annual year-end stockpiled ore quantities range from a 323,000 t at end of 2024, to 460,000 t and 424,000 t in 2025 and 2026, respectively, and then increase dramatically to 2,607,000 t in 2027, 4,126,000 t in 2028, 5,466,000 t in 2029, 5,938,000 t in 2030, and 7,661,000 t in 2031.

It is noted that results from Agnico Eagle’s 2023 assessment of OP2’s potential contribution to CP1 total dissolved solids (TDS) loading ranged from 3% to 7%, which Agnico Eagle 13 believes is not a material concern, and as such Agnico Eagle indicates they will not pursue further mitigations to control TDS seepage from the ore stockpile.

However, in light of the statements made above with respect to salinity impact of ore on tailings, and the significant planned increase of ore storage over the next seven years, CIRNAC suggests that management of ore storage runoff be revised to divert ore storage runoff to the saline water collection system to mitigate potential salinity TDS issues at CP1.

#### Recommendation

(R-08) CIRNAC recommends that Agnico Eagle review its approach in managing OP2 runoff and consider diverting it to the saline water system for discharge into the marine environment.

#### Agnico Eagle Answer

Agnico Eagle acknowledges CIRNAC’s concern regarding the potential impact of increased ore stockpiling at Ore Pad 2 (OP2) on total dissolved solids (TDS) loading to Collection Pond 1 (CP1).

With respect to the Tailing Storage Facility (TSF), redirecting OP2 runoff away from CP1 would not materially improve the suitability of CP1 water for mill use, as OP2's contribution to CP1 TDS loading is minimal (3-7% based on the 2023 assessment). As such, the proposed mitigation of diverting OP2 runoff to the saline water system would not enhance the practicality of reclaim water use from CP1 in mill operations.

Regarding the planned increase of ore storage, Agnico Eagle maintains that the projected increase in year-end ore stockpile volumes will not result in a proportional increase of the percentages in OP2's contribution to CP1 TDS loading. In fact, the contribution is expected to remain stable or decrease, based on the shift in future ore stockpile volumes being primarily driven by expanded mining in surface open pits. In 2023 and 2024, open pit ore represented 21% and 28% of total milled volumes, respectively. From 2027 onward, this proportion is forecasted to rise between 31% to 53%, and averaging 45% through the life of mine. Per Section 7.2.2.5 of the FEIS, groundwater from shallower depths has significantly lower TDS concentrations than deeper sources. As a result, the runoff and seepage from open pit ore is expected to have lower TDS loading than underground ore.

CP1's TDS mass balance is governed by the interaction of multiple water sources with varying TDS concentrations. As the mine expands, new contact water infrastructure with lower TDS loading will contribute to CP1, maintaining or improving the overall dynamics of the mass balance. Therefore, coupled with the shift in ore stockpile composition towards higher proportions of open pit ore, the increase in predicted volumes of surface contact water with low TDS that will report to CP1 is expected to further reduce OP2's relative contribution of TDS loading to CP1.

Agnico Eagle will continue to ensure that all discharge from CP1 to Meliadine Lake through the EWTP-WTC remains fully compliant with the discharge criteria outlined in the Licence. Agnico Eagle will also continue to report annually on the behaviour of TDS concentrations in surface contact water reporting to contact water ponds, including identification of any observed peaks and potential contributing sources.

## **CIRNAC-9: Tailings Placement**

### Comment

Section 4.4.1 of the 2024 Annual Report states that active tailings placement to the tailings storage facility (TSF) occurred throughout the year resulting in a total of 935,000 m<sup>3</sup> (1,543,000 t) of tailings placed in the facility in 2024 for a remaining design capacity of 1,960,000 m<sup>3</sup> (3,240,000 t) as shown in Table 11. It is unclear what is meant by "remaining design capacity". As shown in Table 4.1 of Appendix 29-09, seven additional years of tailings deposition are planned for the TSF, requiring storage of approximately 19 million tonnes. In that regard it is also noted that the last sentence in Section 4.3 of Appendix 29-09 states: "Based on the above design criteria, the TSF has a capacity for 12.5 Mm<sup>3</sup> (20.6 Mt) of filtered tailings. Detailed design of an expanded TSF is expected to be completed in 2025."

In addition to a lack of clarity regarding the remaining capacity of the TSF, the body of the 2024 Annual Report is silent on the fact that tailings are deposited underground and provides no quantities of tailings placed underground. This information is only provided in Appendix 29-09 Table 4.1, which states that 423,000 tonnes of tailings were placed underground in 2024.

#### Recommendation

(R-09) CIRNAC recommends that Agnico Eagle:

- a) includes a statement in the body of the Annual Report on tailings deposition underground and a reference to the Mine Waste Management Plan, and
- b) clarify what is meant by “remaining design capacity” as stated in Section 4.4.1 of the 2024 Annual Report, and
- c) provide updates on the status of detailed designs for an expanded TSF and clarify the timing for expanding the TSF capacity and what regulatory authorizations are necessary.

#### Agnico Eagle Answer

- a) The quantity of tailings sent underground is tracked and report in the 2AM-MEL16 monthly report under section 3.2. Agnico Eagle agrees to include this information in future Annual Report.
- b) Remaining design capacity refers to the available volume within the TSF for additional tailings placement as per the design.
- c) Agnico Eagle would like to clarify that the detail design of an expanded TSF is expected in 2026, not 2025. The correction will be made in the next update of the Mine Waste Management Plan.

### **CIRNAC-10: Improvements to Annual Report**

#### Comment

From review of the 2024 Annual Report, it was noted that limited or no information was provided in the main body of text with respect to:

- Details on planned 2025 mining activities:  
The information provided in Section 2.2 states that the 2025-2026 Mine Plan prepared for KivIA is included in Appendix 3. The 2025 mining plan is to continue operating the Tiriganiaq Underground Mine and Open Pit 1 (TIRI01), and mining at the Pump deposit area will commence, utilizing open pits Pump01 and Pump02. Appendix 3 provides general comments on surface construction as well as details of new equipment. No information is provided on planned open pit or underground mining activities in the body of the Annual Report.
- Discussion of total tailings generated during the year:  
The text in the body of the 2024 Annual Report only discusses tailings sent to the tailings storage facility. Information on tailings placed underground is provided in Appendix 29-09.
- Discussion of non-reportable spills:  
There is no discussion of non-reportable spills in the body of the 2024 Annual Report; it only references Appendix 16. Appendix 16 provides a comprehensive list (presumed to



be 118, as shown in Figure 13 of the Annual Report) that includes dates/times, contaminant, estimated quantity, Exact location of the incident, Description of the incident, and description of the immediate corrective action.

Recommendation

(R-10) CIRNAC recommends that Agnico Eagle consider potential additions to the body of the Annual Report, including:

- additional details of actual and planned mining for the next two years such as location and quantity of ore and waste expected to be mined, additional summary information on mine performance (actual/planned ounces produced, production cost, etc., as per information provided in Meadowbank Complex 2024 Annual Report Section 2.1 that would also enhance understanding of site performance and challenges),
- a statement on total tailings generated by the mill during the reporting period, and
- a high-level summary on the nature and location of non-reportable spills (as provided in the Meadowbank Complex 2024 Annual Report).

Agnico Eagle Answer

Agnico Eagle thanks CIRNAC for the recommendation and will consider it for future Annual report. As answered to CIRNAC-9 Comment, the quantity of tailing placed underground will be added to future Annual report.

Agnico Eagle believes that all the information requested by CIRNAC regarding the non-reportable spills is already available in Appendix16 of the 2024 Annual Report.