AGNICO EAGLE

Water Quality Management and Optimization Plan Update

Round 2 Information Request Responses

Submitted to:

Nunavut Water Board

Submitted by:

Agnico Eagle Mines Limited – Meliadine Division

July 16, 2020

Table of Contents

ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC)

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-1**
Re:	**Receiving Environment – Mid-field Sampling**		

Recommendation Made by Interested Party:
ECCC recommends that the proponent increase the frequency and spatial coverage for the water quality monitoring in the mid-field. ECCC recommends that the proponent consider increasing sampling to twice monthly, and broadening the number of stations to three sampled across that channel of the lake.

ECCC Response to the Proponent:
The current sampling frequency under the Water Quality and Management Optimization Plan (WQMOP) is monthly, and the Aquatic Effects Monitoring Plan (AEMP) sampling is also monthly. The proponent's statement made in the response to ECCC-1 that this results in twice monthly sampling. ECCC thanks the proponent for this clarification, as it was not initially clear that the AEMP sampling and WQMOP sampling were not going to be done concurrently.

Agnico Eagle's Response to Recommendation:
Agnico Eagle acknowledge ECCC's response.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-4**
Re:	**Adaptive Management**		

Recommendation Made by Interested Party:
ECCC recommends that the proponent provide clarification of whether the referenced concentrations are measured or calculated TDS levels. ECCC continues to recommend the use of measured TDS instead of calculated TDS.

ECCC recommends that the proponent provide further details on what is intended by increasing sampling frequency in the plan, and what would trigger changes in discharge rates.

ECCC recommends that further details on management responses be developed and provided as an update to the plan.

ECCC's Response to the Proponent
The Proponent's response specifies that the trigger for increased effluent sampling frequency at the edge of the mixing zone would be two consecutive measurements above 75% of the 1000 mg/L threshold. ECCC requests that the proponent confirm that the measurements will include both AEMP and WQMOP sampling results to be evaluated as a trigger.

The proponent's response goes on to state that triggers that would results in changes to discharge rates would include greater than two consecutive exceedances of the triggers in the effluent or the edge of the mixing zone, i.e. 3 or more exceedances. The proposed threshold could effectively result in six weeks of exceedances in effluent released into Meliadine Lake. If edge of mixing zone total dissolved solids (TDS) concentrations are at or greater than the 1000 mg/L threshold by or before the second exceedance, this should be included as a "hard" trigger for action, without waiting for a third exceedance (unless it is in a confirmatory sample taken right away).

Agnico Eagle's Response to Recommendation:
Agnico Eagle confirms that the adaptive management triggers at the edge of the mixing zone would also apply to water quality results from the AEMP and WQ-MOP sampling programs if the AEMP sampling was offset from the WQ-MOP sampling. As per the WQ-MOP, water quality sampling following the ice cover melt on the lake for field physico-chemical and water chemistry parameters at the edge of the mixing zone sampling stations will be conducted weekly (weekly samples projected to begin around July 20 2020); the AEMP sampling results would not be considered if samples for the AEMP were conducted on the same day as the WQ-MOP sampling.

Agnico Eagle does not agree with ECCC that the TDS threshold for the edge of the mixing zone would result in a potential delay of up to six weeks for implementation of a management response to address the trigger. Preliminary laboratory results are typically sent to Agnico Eagle within one week of sample submission for total dissolved solids, which would mean Agnico Eagle would be aware if the TDS threshold based on laboratory confirmation was reached within two week.