Environment and Climate Change Canada | Environnement et Changement climatique Canada

Agnico Eagle Mines Ltd. Meliadine Extension Water Licence Amendment Technical Hearing Presentation by Environment and Climate Change Canada

ᐊᖏᓂᔪᖅᑯᑦ ᓕᒫᑎᑦ. ᑕᓯᖏᓪᓗᐊᕐᒥᐅᑦ ᐊᖑᑎᓕᒻᒥᕐᑎᑐᑎᓕᓂᖏᓐᓂᖅᓴᖅᑐᑦ ᐃᒪᖏᓐᓂᑦ ᓕᐃᕐᓂᖅᓯᒪᔪᖅ ᐊᓯᔾᔨᖅᑎᓗᒍᓂᖅᓴᖅᑐᑦ ᓴᓇᖅᑭᑐᐊᖅᔪᓂᖅᓴᖅᑐᑦ ᑐᓴᕆᑎᑎᑐᐃᓐᓇᓂᖅᑐᓂᒃ ᐅᓂᒃᑐᑐᐊᕐᓂᖅ ᐊᓪᓚᑎᓕᓗᓴᐅᔪᓂᒃ ᔫᓕᒪᓕᕐᓗᒃ ᐊᓯᖏᓪᓕᐊᓂᖅ ᑲᓇᑕᒥ

October 12-13, 2023
Rankin Inlet, NU

ᐅᑐᐱᓗ 12-13, 2023

ᑲᖏᖅᓯᓂᖅ, ᓄᓇᕗᑦ

Canada

Overview

ᖁᒥᖁᑭᓂᖅ

- Mandate
- Relevant acts and regulations
- Technical Comments and Recommendations

- ᐱᓕᕆᐊᖅᓴᖅ
- ᐊᖅᑐᐊᓂᓪᓕᖅ ᐱᖁᔭᖅ ᐊᓚᒪ ᒪᓕᒋᐊᓕᖅ
- ᐱᓕᕆᑦᔾᕈᑎᓄᑦ ᐅᖃᐅᔨᓴᖅ ᐊᓚᒪ ᐊᑐᓕᖁᔭᐅᔾᔪᑦ

Environment and Climate Change Canada's Mandate

ᐊᐢᑎᑎᓕᔨᵇᑯᑦ ᑲᓇᑕ ᐱᔪᵇᓴᐅᑦ

- Preservation and enhancement of the quality of the natural environment, including water, air and soil quality;
- Coordination of the relevant policies and programs of the Government of Canada;
- Renewable resources, including migratory birds and other non-domestic flora and fauna;
- Meteorology; and
- Enforcement of regulations

- ᑲᒪᑭᑎᐊᖅᓗᒍ ᐊᒻᒪᓗ ᐱᐅᓯᓵᓕᓂᖅᑎᓕᒍ ᓄᓇᑦᑎᓂᓂ ᐊᐢᑎᑎ, ᑕᑯᓯᐊᓗ ᐃᒥᖅ, ᓯᓚ, ᐊᒻᒪᓗ ᐃᔨᔪᖅ;
- ᑲᒪᓗᑭᑦ ᐊᑐᑎᖅᖅᑐᑦ ᐊᑐᐊᒐᐃᑦ ᐊᓕᓇᑎᑦᑎᔨᔪᑦ ᑲᓇᑕᐅᑦ ᓴᓪᒪᑯᓂᓂᓂ;
- ᓄᓇᒧᑦ ᐊᓂᓇᐅᒪᔨᔪᑲᑦ, ᐃᓚᒋᔭᐅᓕᓄᑯ ᑎᑭᑦᑕᑐᑦ ᑎᖏᒥᐊᑦ ᐊᒻᒪᓗ ᐊᓯᖏᓐᓂ ᑕᒪᖏᓂᖅᑐᑦ ᓄᓇᐅᑦ ᐱᑭᖅᑐᖏᓐᓂ ᓄᓇᐅᑦᓗ ᐃᒪᐅᑦᓗ ᐱᑭᖅᑐᖏᓐᓂ;
- ᓯᓚᓂᓂᐊᑭᑎᑦ; ᐊᒻᒪᓗ
- ᒪᓂᖅᑕᐅᑎᓕᒋᑦ ᐱᖁᔭᕆᓪᓕᑦ

Relevant Acts and Regulations

ᐊᑐᑎᖏᖅᑐᑦ ᐱᖁᔭᕐᕕᐊᑦ ᐊᒻᒪᓗ ᐱᖁᔭᕆᓪᓕᑦ

- *Department of the Environment Act*
- *Canadian Environmental Protection Act*
- *Fisheries Act* – Pollution Prevention Provisions
- *Migratory Birds Convention Act*
- *Species at Risk Act*

- ᐊᐅᓪᓚᕆᔨᖅ ᐊᓂᑎᓕᓴᐅᒃᑯᑦ ᐱᖁᔭᕐᕕᐊᖅ
- ᑲᓇᑕᐅᐸᓪᓚᕆᔨᖅ ᐊᓂᑎᖅ ᓴᓗᒥᐊᕐᒥᓄᑦ ᐱᖁᔭᕐᕕᐊᖅ
- ᐃᖅᓚᓕᓴᓂᕐᒧᑦ ᐱᖁᔭᕐᕕᐊᖅ – ᓱᑭᖅᑕᐃᓕᓕᑎᑎᓂᕐᒧᑦ ᒪᓕᒐᑦ
- ᑎᑭᐸᐳᒃᑐᑦ ᑎᖏᒥᐊᑦ ᐱᖁᔭᕐᕕᐊᖅ
- ᑭᒪᔨᑦ ᐃᓅᓴᓐᓂᓗᐊᕐᓂᕐᒪᑦ ᐱᖁᔭᕐᕕᐊᖅ

ECCC-TRC-01: Meliadine Lake water balance
ᐊᐦᑎᑕᓇᓴᖅᑯᑦ-TRC-01: ᑕᓯᖏᐊᖅ ᐃᒪᖏᑕ ᐊᒥᐊᖅᑯᖏᓪ

- Meliadine Lake water levels and water volume could be impacted by mine water withdrawals and discharges. This could have an impact on the lake's water quality and assimilation capacity.
- ECCC recommends that the Proponent confirm if Meliadine Lake levels are modelled in the Water Balance and Water Quality Model.
  - if so, explain how lake levels were modelled without incorporating the effects of water withdrawals by the mine.
  - if not, clarify where mine impacts on the lake levels have been considered.

- ᑕᓯᖏᐊᕐᒥ ᑕᓯᖅ ᐃᒪᖏᑦ ᐃᒪᖏᓪᓗ ᐊᐅᑐᖅᑕᐅᔨᓇᖅᑐᑦ ᐅᓴᖏᖅᓂᐊᖏᖅᑎᒥ ᐃᒪᖏᐳ ᐊᑐᑭᓇᓂᖅᑐᓄᑦ ᑯᕕᑎᑦᑎᓂᖅᓗᓪᓗ. ᑕᒪᓇᓇ ᐊᐅᑐᐃᓂᖅᑭᓇᓇᖅᓴᖅ ᑕᓯᐅᐸ ᐃᒪᖏᑕ ᐱᐅᓂᖅᓂᐅᑦ ᐊᓚᒪ ᐃᓕᓴᐅᕐᓴᐅᔨᓇᖏᓂᖅᓂ.
- ECCC-ᑯᑦ ᐊᑐᓕᖏᐅᔭᓕᐸᑦ ᐱᓇᔨᐅᓯᒪᔨᖅ ᓇᓗᓇᐃᖅᓯᖏᑯᓕᓗᑐᓗᒍ ᑕᓯᖏᐊᖅ ᑕᓯᖅᓂᓂ ᑭᖑᓂᖏᑦ ᐊᑲᑭᐅᓯᒪᖏᖅᓂᑕ ᐃᒪᐅᐸ ᐊᓚᒪ ᐃᒪᑦᑎᐊᓂᕐᓗᑦ.
  - ᐃᖅᓱᐅᐸᑦ, ᓇᓗᓇᐃᖏᓗᑎᑦ ᖃᓄᖅ ᑕᓯᑦ ᐊᑲᑭᐅᒪᖏᖅᓂᑕ ᐃᓕᓴᐅᑦᔨᓕᐅᖓᓯᒪᔪᓗᑎᐅ ᐊᐅᑐᐃᓂᐅᓂᐅᑦᑐᓂᑦ ᐃᒪᖏᑦ ᓄᖅᑲᖏᓂᖏᓪᓗᑦ ᐅᓴᖏᐅᑕᐱᐊᒥᑦ.
  - ᐊᑲᑲᐅᔪᓂ, ᑐᑭᓯᓇᖅᓯᑎᑦᓗᔪ ᓇᓂ ᐅᓴᖏᐅᑕᐱᐊᓂ ᐊᐅᑐᐃᑦᔨᑕᐅᓯᑦ ᑕᓯᖏᓪᓗᑦ ᐃᓯᒪᑭᐅᓯᒪᖏᖅᓂᑕ.

ECCC-TRC-02: Water Balance and Water Quality Model calibration

ECCC-TRC-02: ΔLᐅᐸ ᐃᖅᑭᐅLσᖏᓚ ᐊᒻLᓗ ΔLᐅᐸ ᖃᓄΔᵒσᖏᓚᓄᑦ ᐃᖅᑭᐅLᔪᖅ ᖃᐅᔨᓴᖅᑕᐅσᖏᓚ

ECCC's recommendations to the Proponent regarding the Water Balance and Water Quality Model:

- provide a rationale as to what might cause natural catchment runoff volume to be halved for CP3, and clarify if/how this rationale was applied to other catchments; and
- provide a statistical measure of fit between modelled and measured pond volumes, and discuss how the variance could impact mine water management.

ECCC-ᓄᑦ ᐊᑐᓕᕐᓂᐊᖏᑦᑐᑦ ᑐᓴᔪᖅᑐᒍᒪᑦ ᐱᑦᔪᑎᖃᖅᓴᐅᓕᖅᓯᑎᓴ ΔLᐅᐸ ᐃᖅᑭᐅLσᖏᓚ ᐊᒻL ΔLᐅᐸ ᐱᐅσᖏᓚσᓴ:

- ᐱᑎᑦᑎᔪᖃᖅᕿᓗσ ᐱᑦᔪᑕᐅᔪᒥᓴ ᓭᓄ ᐱᑦᔪᑕᐅᑐᐃᓄᖅᓂᖏᓚσᓴ ᑕΔLΔᓪᓚᑦᑕᖅᑐᒥᓴ ᐊᖓᔪᐅᔪᓄᑦ ᖃᐸᔪᐊσᓗᓂᖏᑦᓄᑦ ᐃᖅᑭᓴᑕᐅσᐊᕿᓗᑎᓴ CP3-ᒧᑦ, ᑐᑭᔪᓇᖅᔪᑎᑦᑎᑦᑎᐊᕿᓗσᓗ ᑕᓪᓇ ᐱᑦᔪᑕᐅᔪᕿᖅᑐᐊᖅᑕᐅᓚᐅᕿᓚᖏᓐᓄᑦ ᐊᑐᖅᑕᐅᓚᐅᕿᒪᖏᓐᓄᑦ ᐊᔪᕐᑭᐅᓄᑦ ᐱᔪᐅᔪᓄᑦ; ᐊᒻLᓗ
- ᑐσᔪᓗσ ᓇᓴᐅᑎσᵇ ᐅᵇᑐᕋΔσᕿᒧᒪᑦ ᓇᑦLᵇᓗᑎᓴ ᐃᖅᑭᐅLᔪᒧᒪᑦ ᐊᒻLᓗ ᐅᵇᑐᕋᖅᑕᐅᔪᒧᒪᑦ ᑕᔪᕋᔭΔᑦ ᐊᖓᑕσᖏᑕᓵ, ᐊᒻLᓗ ᐅᖅᐅᔪᓂᓗᑕᑦ ᖅᓄᖅ ᐊᔨᑉᖏᑕᓵσᐅᔪᑦ ᐊᵇᑐᖅᔪσᖅᑭᖏᓐᓇᒪᖏᓕᑦ ᐅᔨᕋᖏσᐊᕿᖅᓇᖏᑦ ΔLᒋᑎᵇ ᐊᐅᓪᓚᑦᑎσᒧᒪᑦ.

ECCC-TRC-03: Water Balance and Water Quality Model results
ECCC-TRC-03: ᐃᒪᐅᐸ ᖃᓄᐃᓕᓐᓂᓂᓐᓂ ᐊᒻᒪ ᐃᒥᐅᐸ ᐱᐅᓂᓐᓂᓄᑦ ᖃᓄᐃᓐᓂᓂᓐᓂ

- The Water Balance and Water Quality Model indicates that that certain water quality parameters will exceed water quality guidelines for certain pits and lakes during post-closure. The proposed timeline for model updates would not allow for management actions to be implemented to avoid exceedances.
- ECCC recommends that the Proponent:
  - discuss management actions for the parameters of potential concern; and
  - propose timelines and updates to the . Water Balance and Water Quality Model to allow sufficient time for management actions to be put in place.

- ᐃᒪᐅᐸ ᐊᖏᑭᐅᒪᓂᓐᓂ ᐊᒻᒪ ᐃᒪᐅᐸ ᖃᓄᐃᓐᓂᓂᓄᑦ ᐊᖏᑭᐅᒪᔪᖅ ᓇᓗᓇᐃᖅᓯᓐᓪᓗᑦ ᐃᒪᑦᑎᐊᕐᓐᓗᑦ ᑭᓚᒋᑐᐅᔪᑦ ᖃᓄᐃᓐᓂᓂᓐᓂᐊᖏᓪᓗᑦ ᖃᐅᔨᒪᑦᔪᑎᓂᒃ ᐃᓗᑦᑐᖅᑎᓂᐊᖏᔪᓄᑦ ᐊᒻᒪ ᑕᓯᖏᓄᑦ ᒪᑐᓯᒪᓂᒃᑎᓗᓂᒃ. ᑐᒃᓯᕿᐅᑕᐅᓯᒪᔪᖅ ᐱᕕᒃᓴᓚᑎᑕᐅᔪᖅ ᐱᓕᕆᓚᐅᑕᐅᔪᖅ ᓄᑖᖓᓚᐊᑭᑎᓄᑦ ᐱᕕᖅᑭᑕᐅᓇᒃᖠᓕᑐᑐᖅᑐᖅ ᐊᐅᓚᑦᑎᓂᖏᓪᓗᑦ ᐱᓕᕆᓚᐅᓄᑦ ᐊᑐᓕᖅᑎᑦᑎᓂᑦ ᖃᓄᐃᓐᓂᓂᓐᓂᖅᓯᓚᑦ.
- ECCC-ᓂᑦ ᐊᑐᓕᖅᓯᔨᐅᑦ ᐱᓇᔪᓂᒪᔪᑦ:
  - ᐅᖅᑲᐅᓂᓚᑦᑎᓂᑦ ᐊᐅᓕᑦᑎᓂᖏᓪᓗᑦ ᖃᓄᐃᓕᓐᐅᑭᑕᐅᔪᑦ ᐃᓂᒻᒧᑕᐅᔪᓄᑦ; ᐊᒻᒪᓗ
  - ᑐᓂᔪᖅᓗᑎᒃ ᐃᓂᓕᕐᓴᒃᖃᕐᓂᕐᓂᒃ ᓄᑖᖓᓚᐊᖅᓯᒪᔪᓂᒃᓗ ᓇᓕᒧᑦᓂᕐᓂᕐᓂᓄᑦ ᐃᒪᐅᓪᓗ ᐱᐅᓂᓐᓂᓄᑦ ᐱᓕᕆᓚᐅᖅᑎᑦᑎᓂᑦ ᐊᐅᓚᑦᑎᓂᖏᓪᓗᑦ ᐱᓕᕆᓚᐅᖅᑎᓂᑦ ᐊᐅᓚᑦᑎᓂᖏᓪᓗᑦ ᐊᐅᓚᑦᑎᓂᑦ ᐱᓕᕆᓚᐅᔪᖅᐸᑦᑐᑦ ᐊᖏᑭᒃᑐᐅᓗᓂᒃ.

ECCC-TRC-04: Water Balance and Water Quality Model uncertainty
ECCC-TRC-04: ᐃᒪᐅᑉ ᓇᓕᒧᒌᖕᓂᖓ ᐊᒻᒪ ᐃᒪᐅᑉ ᐱᐅᓂᖓᓄᑦ ᐋᖅᑭᒃᓯᒪᓂᖓ ᓇᓗᓇᖅᑐᖅ

- The accuracy of the Water Balance and Water Quality Model can be evaluated using validation or sensitivity analysis. Neither method is present in the model, nor is there a discussion of uncertainty within the model.
- ECCC recommends that the Proponent evaluate the uncertainty of the model to provide an understanding of the range of possible results, and how this may impact the planned mine water management.

- ᓈᒻᒪᖕᓂᖏᑦ ᐃᒪᐅᑉ ᐋᖅᑭᐅᒪᓂᖓ ᐃᒪᐅᓪᓗ ᐱᐅᓂᖓᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᖅᑐᖅ ᐊᑐᕐᓗᑎᒃ ᐊᑐᕈᓐᓇᑦᑎᐊᕐᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓴᕋᐃᓐᓂᕐᒧᓪᓘᓐᓃᑦ ᖃᐅᔨᓴᕐᓂᕐᒥᑦ. ᑕᒪᕐᒥᒃ ᐃᑕᖃᙱᑦᑐᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᒥ, ᐅᖃᐅᓯᐅᕙᙱᖦᖢᓂᓗ ᓇᓗᓇᕈᔪᒃᑐᒥᒃ ᑕᕝᕙᓂ ᐊᑐᖅᑕᐅᕙᒃᑐᒥ.
- ECCC–ᑯᑦ ᐊᑐᓕᕐᑯᔨᕗᑦ ᐱᓇᔪᒃᓯᒪᔪᖅ ᖃᐅᔨᓴᕐᑯᓪᓗᒍ ᓇᓗᓇᕐᓂᖓᓂᒃ ᐱᓕᕆᑦᔪᓯᐅᑉ ᑐᑭᓯᐊᑦᔪᑎᒃᓴᓂᒃ ᐊᑦᔨᒌᙱᑦᑐᓂᒃ ᖃᓄᐃᓕᖓᓕᕐᓂᐅᑐᐃᓐᓇᕆᐊᓕᖕᓂᒃ, ᖃᓄᕐᓗ ᑖᓐᓇ ᐊᒃᑐᐃᑦᔪᑕᐅᑐᐃᓐᓇᕆᐊᖅᒪᖔᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᒧᑦ ᐅᔭᕋᒃᑕᕆᐊᓂ ᐃᒪᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ.

ECCC-TRC-05: In-pit deposition modelling
ECCC-TRC-05: ᐃᓗᓕᑐᖅᑎᓯᒪᔨᓕ

- ECCC has three recommendations for the proponent regarding in-pit deposition modelling:
  - clarify additional water quantities required to create slurry tailings as opposed to filter tailings, specify from where this water would be sourced and confirm whether greater water withdrawals from Meliadine Lake would be required;

- ECCC–ძᑦ ᐱᖓᓯᓂᖅ ᐊᑐᓕᖅᑯᓴᓯᒪᔪᓕᐅᑦ ᐱᓇᔨᖅᓯᒪᔨᒧᑦ ᐱᑦᔦᑎᑭᓕᑦ ᑭᓇᐅᖅᓯᓇᕐᓂᖅᓱᒪᖅᓯᓂᖅᓗᑦ ᐊᖅᑯᑎᓇᖅᑐᑦ:
  - ᑐᑭᓯᓇᖅᓯᑎᓕᓕᑦ ᐃᒪᖅᓄᓂᓕ ᐱᖁᐅᖅᓇᐊᓂᑦ ᐃᒪᑦᑎᐊᓭᐅᖅᓂᐊᖅᓱᒪ ᓯᑕᑦᖃᐃᖅᑯᑎᓂᖅ, ᓇᓗᓇᐃᖅᓗᓕᑦ ᓇᑭᑦ ᐃᒪᖅᑦᖁᐅᓇᖅᒪᖅᓯᑦ ᓇᓗᓇᐃᖅᓗᓕᓕᓗ ᐃᒪᖅᑭᓄᖅᐸᓕᓭᐊᖅᒪᖅᓯᑐᑦ ᑕᓯᖅᔪᐊᕈᑎ ᐱᖁᐅᖅᓇᐊᖅᑲᖅᖃᖅᒪᖅᓯᑐᑦ;

ECCC-TRC-05: In-pit deposition modelling
ECCC-TRC-05: ᐃᓗᓕᑐᖅᑎᓯᒪᔪᓕ

- explain when tailings consolidation is expected to be complete, estimate the size and extent of diffusive fluxes from in-pit tailings, and describe the contribution of consolidated tailings to the Water Balance and Water Quality Model source terms of groundwater discharge through in-pit tailings or waste rock into pit lakes; and
- describe a proposal for monitoring water quality at the interface between water and tailings or bedrock, including a proposed schedule. The monitoring plan should also discuss how the results will be used to verify model predictions and/or trigger further updates to the model.

- ᓇᓗᓇᐃᔨᖏᓗᑦ ᖃᖓ ᑭᓪᓕᑦ ᑲᑎᒥᐅᓂᑦ ᐱᐊᓂᐳᓂᒪᖅᓯᐅᑉᐳᓂᖅ, ᓇᓕᐅᑦᑕᖏᓗᑦ ᐊᖏᓂᑦ ᖃᓄᑎᓗ ᑯᐃᖃᑦᑕᓂᓂᑦ ᑯᐃᑎᑦᑎᐊᖅᓂᓂᑦ, ᓇᓗᓇᐃᔨᐃᓗᑎᑦ ᐃᑲᔪᑕᐅᔪᓂ ᑲᑎᓯᔪᓂ ᐃᒪᖅᑎᐅᓕᓂᑦᑯᑦ ᑲᑎᒪᔨᓂᓂ ᓄᓇᐅᑦ ᐃᒪᖅᑕᐅᑎᓂᓂ ᑲᑎᒥᑯᓯᐃᖅᓂ ᐅᓗᑦᑐᖅᑎᓯᒪᔪᓂ ᐃᓗᑦᑐᖅᑎᓯᒪᔪᑦ ᑕᓯᖅᓄᑦ; ᐊᒻᒪᓗ
- ᐅᓂᖅᑲᐅᓯᑦᓗᔭ ᑐᑦᓯᖏᐅᑎ ᖃᐅᔨᖅᓂᓂᐊᖅᓗᓂ ᐃᒪᐅᑦ ᖃᓄᐃᓐᓂᓂᖅ ᐃᒪᐅᑦ ᐊᒻᒪ ᖃᐃᖅᓯᐅᓚᖅ. ᖃᐅᔨᖅᓂᖅᓗᑦ <ᖅᓇᐅᑦ ᐅᖃᐅᓯᖃᓇᐊᖃᕆᔪᖅ ᖃᓄᖅ ᖃᓄᐃᓕᓚᓂᖅᓂᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑎᓯᑕ ᓇᓗᓇᐃᖅᓯᓂᖅᓗᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓄᑦ ᓇᓕᐅᑦᑕᖅᓂᖅᓗᑦ ᐊᒻᒪᓗ/ᐅᓵᓚᓂᓂᑦ ᐱᕆᐊᖅᑎᑦᑎᓂᖅᓗᑦ ᓄᑦᖁᔭᓇᐊᖅᑎᑦᑎᐴᓂᓂᖅᓗᑦ ᐊᑐᖅᑕᐅᔪᓗᑦ.

ECCC-TRC-06: Integration of Meliadine Extension project in Aquatic Effects Monitoring Program Design Plan

ECCC-TRC-06: ᑲᑎᑕᐅᓂᖅᑐᑦ ᑕᓯᖏᐊᕐᓂᖅ ᐅᖃᓕᓴᐃᖅᑕᐅᓂᖓᓄᑦ ᐱᒋᐊᕐᓂᖅ ᐃᒪᖏᑎᑕᓂᒃ ᐊᓂᔪᐊᖅᑐᑦ ᓴᐅᔨᕕᖏᓂᖅᓯᖏᓐᓄᑦ ᐱᒋᐊᕐᓄᑦ ᐃᓱᖅᑭᑦᓯᐅᓂᖓᓄᑦ ᕿᖏᐅᑎᑎᓪᓗ

- The Aquatic Effects Monitoring Program Design has been updated for the Meliadine Extension project, but the extension project has not been integrated into the Design Plan.
- ECCC recommends that the Proponent integrate the Meliadine Extension project into the Aquatic Effects Monitoring Program, including referencing the Federal Environmental Impact Statement addendum, its findings and results.

- ᐃᒪᖏᑎᑕᑦ ᐊᐅᑐᐃᓂᕐᑐᑦ ᓴᐅᔨᕕᖓᑕᐅᓂᕐᑐᓗᓂ ᐱᒋᐊᕐᕕᐅᕆᑦ ᐊᓱᖅᑭᑦᓯᐅᓂᖅᕕᖓᓐᓄ ᓄᑖᖅᔭᒃᑲᖅᑕᐅᔨᒪᓕᖅᑐᖅ ᑕᓯᖏᐊᕐᓗᑦ ᐅᖃᓕᓴᐃᖅᑕᐅᓂᖓᓄᑦ ᐱᒋᐊᕐᓗᑦ ᑭᔨᐊᓂ ᐅᖃᓕᓴᐃᖅᑕᐅᓂᖓᓐ ᐱᒋᐊᕐᕕᖅ ᐃᓕᓴᐅᔪᖏᑐᖅᑐᖅ ᐊᓱᖅᑭᑦᓯᐅᓂᖅᕕᖓᓐᓄᑦ ᕿᖏᐅᑎᑎᓪᓗᑦ.

- ECCC-ᓂᑦ ᐊᑐᓕᖏᔪᓂᑦ ᐱᓇᔭᖅᓯᒪᔪᖅ ᐃᓕᓴᐅᔪᖏᑐᖅᑐᓂᒃᑯᑦ ᑕᓯᖏᐊᕐᓗᑦ ᐱᒋᐊᕐᓄᑦ ᐅᖃᓕᓴᐃᖅᑕᐅᓂᖓᓄᑦ ᐱᒋᐊᕐᒪᔪᓂᑦ ᐃᒪᖏᑎᑕᓄᑦ ᓴᐅᔨᕕᖏᓂᖅᓯᖏᑦᓗᑦ, ᐅᓂᓂᖓᓗ ᐅᖃᐅᔨᖃᖏᓪᓗᑎᒃ ᓱᓇᒪᑐᖃᖅᓂᒃ ᐊᐊᑎᑦᑎᓕᓂ ᐊᐅᑐᐃᓂᕐᑐᖅᑐᖅ ᐃᒪᖏᑎᑕᓄᑦ ᑎᑎᕋᖃᔨᖅᑐᖅ ᐃᓕᓐᓂᐊᕐᓂᖅᑐᖅ, ᖃᓄᖅᑲᖅᑕᐅᔪᖅᑐᖅ ᐊᓘᒻᒥ ᖃᓄᖅᓴᓕᖅᑐᖅ.

ECCC-TRC-07: Changes to analysis methods and descriptions in Aquatic Effects Monitoring Program Design Plan

ECCC-TRC-07: ᐊᓯᑦᔨᖅᑐᑦ ᖃᐅᔨᓴᖅᓂᖅᓗᑦ ᐱᓕᕆᑦᔾᔪᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᔨᖅᓯᒪᔾᔪᑦ ᐃᒪᖅᑎᐅᑕᓂᒃ ᐊᒃᑐᐃᔾᓂᒃ ᖃᐅᔨᓴᖅᓂᖅᓗᑦ ᐱᓕᕆᐊᒧᑦ ᐋᖅᑭᒃᓯᒪᓂᖅᓱᓕᓂᒃ ᕿᖅᓇᐅᑎᑦ

- ECCC notes that certain modifications between versions 1 and 2 of the Aquatic Effects Monitoring Program Design Plan seem to reduce clarity or provide less analysis of the data.
- ECCC recommends that the Proponent justify the simplification of analyses and text between versions 1 and 2 of the Aquatic Effects Monitoring Program Design Plan or re-integrate what was included in the previous version of the Aquatic Effects Monitoring Program Design Plan.

- ECCC-ᓄᑦ ᐅᑦᔨᓚᖅᖃᖅᓴᑦ ᐃᓕᓴᒃᑐᑦ ᐊᓯᑦᔨᓚᐊᖅᑕᐅᔾᔪᑦ ᑎᑎᕋᖅᓯᒪᓂᕐᒥᒃ ᐅᓄᓕᓴᒃ, 1-ᓗ 2-ᓗ ᐊᓄᓂᓴᒃᓂᓂ ᐃᒪᖅᑎᐅᑕᓄᑦ ᐊᒃᑐᖅᓯᓂᓚᖅᐅᓕᖅᑐᓄᑦ ᓇᐅᑦᑎᖅᓯᖅᓯᓂᖅᓗᑦ ᐱᓕᕆᐊᖅᓱᓕᖅᑐᒃ ᑕᐅᑦᑐᒃᓴᖅᓱᓄᑦ ᐱᓕᖅᑭᖅᑕᐅᓯᒪᔾᔪᖅ ᒥᑭᓕᒥᐊᖅᑎᑦᑎᖅᓄᓴᖅᓱᖅ ᑐᑭᓯᓇᖅᓯᑎᑦᑎᑦᑎᐊᖅᓂᖅᒥᒃ ᐱᑎᑦᑎᓂᖅᒪᑦᓴᓂᒃ ᑎᑎᕋᖅᓯᒪᔾᔪᑦ.

- ECCC-ᓄᑦ ᐊᑐᓕᖅᓴᐅᓂᑦ ᐱᓇᓱᐊᖅ ᓇᓗᓇᐃᖅᓯᖅᓴᓕᓴᒃ ᐊᓯᖅᓇᖅᑐᓂᖅᓴᕐᒥᒃ ᖃᐅᔨᓴᖅᑕᐅᔾᔪᓂᒃ ᐊᒻᒪ ᑎᑎᕋᖅᓯᒪᔾᔪᓂᒃ ᑎᑎᕋᖅᓯᒪᔾᔪᓂᒃ 1 ᐊᒻᒪ 2-ᒥ ᐃᒪᖅᑎᐅᑕᑦ ᐊᒃᑐᐃᓂᖅᓴᓂᒃ ᖃᐅᔨᓴᖅᓂᖅᓗᑦ ᐱᓕᕆᐊᒧᑦ ᐊᓯᖅᑭᒃᓯᒪᐅᑎᒃᓴᓄᑦ ᐸᖅᓇᐅᑎᑦᑎᒃ ᐅᕐᓂᓚᓂᒃᓂᒃ ᐃᓕᓐᓂᐅᕐᓴᐅᓂᖅᓱᓕᓂᒃ ᑎᑎᕋᖅᓯᒪᔾᔪᓂᒃ ᐃᒪᖅᑎᐅᑕᑦ ᐊᒃᑐᐃᑦᓯᑕᐅᔾᔪᓂᒃ ᖃᐅᔨᓴᖅᓂᖅᓗᑦ ᐱᓕᕆᐊᒧᑦ ᐊᓯᖅᑭᒃᓯᒪᐅᑎᒃᓴᓄᑦ ᐸᖅᓇᐅᑎᓗᑦ.

ECCC-TRC-08: Aquatic Effects Monitoring Program reference areas

ECCC-TRC-08: ᐃᒪᖏᐅᑦᑕᑦ ᐊᖅᑐᐃᓂᖅᑎᑦ ᖃᐅᔨᓴᖏᓂᖏᓪᓗᑦ ᐱᓕᕆᐊᒧᑦ ᖃᐅᔨᑎᐊᖏᔪᖅᓯᖅᑐᑦ

- Reference areas monitored through the Aquatic Effects Monitoring Program help identify local changes to the aquatic environment due to weather and other factors that are not related to the mine. Typically, reference areas are located in different watersheds or upstream of the near field and mid field sites.
- ECCC notes that the three reference areas used are all in Meliadine Lake. Two are downstream, located at the lake outflows. The third is in a bay that is not likely in a flow path potentially affected by discharges to Meliadine Lake.

- ᖃᐅᔨᑎᐊᖏᓐᓇᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐃᒪᖏᐅᑦᑕᑦ ᐊᖅᑐᖅᑕᐅᓂᖅᑎᓂᖅᓴ ᖃᐅᔨᓴᖏᓂᖏᓪᓗᑦ ᐱᓕᕆᐊᖅᑯᑦ ᓇᓗᓇᐃᖅᓯᒋᐊᕐᓂᖅ ᓄᓇᕗᒻᒥ ᐊᓯᒋᔨᖅᐸᑦᓕᐊᔪᓂᖅ ᐃᒪᖏᐅᑦᑕᑦ ᐊᓂᑎᑎᖅᑐᓂᖅᓴ ᔪᓕ ᐱᑦᔪᑎᒋᑦᓴᔭ ᐊᓯᖅᑎᑦᓴᔭ ᐱᑦᔪᑕᐅᓯᑦ ᐊᖅᑐᐊᓂᓪᑦ ᐅᓴᖁᖅᑕᓇᐊᒧᑦ. ᐃᒪᓐᓇᐅᑲᔪᖅᐸᖅᓴᖅ, ᖃᐅᔨᑎᐊᖏᔪᖅᓯᖅᑐᑦ ᐃᓂᖃᖅᓴ ᐃᒪᖏ ᑯᓐᓴᖅᑎᑦᓴᓂ ᐃᓕᓴᕐᓂᑦᓴᓂ ᓄᓇᒥ ᖁᑎᐊᓵᑦᓴᓂᓗ ᐃᓂᓂ.

- ECCC-ᓄᑦ ᐅᑦᔨᓗᓴᖃᖅᓴᑦ ᑕᖅᓄᐊ ᐱᖓᓱᑦ ᖃᐅᔨᑎᐊᖏᔪᖅᓯᖅᑐᑦ ᐊᑐᖅᑕᐅᓂᖅᓯᓂᖅᓂᖅᑎᓂᖅᓴ ᑕᓱᕋᐊᖏᒥ. ᒪᕐᕉᒃ ᓄᓄᑦ, ᑕᓱᕋᑎᑦᓴᑦ. ᐱᖓᓱᖓᑦ ᖃᖅᓂᖅᓵᖓᑦᓴᖅ ᓄᖓᓂᖅᓄᕐᕉᑎᓴᖅ ᐊᖅᑐᖅᑕᐅᓴᐃᓐᓇᑕᖅᖃᖅᓵᓂ ᓄᐃᑎᑕᐅᔪᓄᑦ ᑕᓱᕋᒪᐸᑦ ᑕᓱᖓᓕᖅᓴᖅ ᐃᓕᖅᑎᑦᓴᓂ.

ECCC-TRC-08: Aquatic Effects Monitoring Program reference areas

ECCC-TRC-08: ᐃᒪᖏᑕᑦ ᐊᖅᑐᐃᓂᖅᑎᑦ ᖃᐅᔨᓴᖏᓐᓂᒃ ᐱᓕᕆᐊᒧᑦ ᖃᐅᔨᑎᐊᖏᓐᓇᖅᑐᑦ

- ECCC recommends that the Proponent demonstrate how the selected reference sites within Meliadine Lake will remain suitable reference areas over a prolonged period with the mine Extension. Consideration should be given to alternate reference areas and/or modifications to the study design.

- ECCC-ᓄᑦ ᐊᑐᓕᖏᓐᓄᑦ ᐱᓇᔪᖅᑐᖅ ᑕᓄᑎᑕᐅᓗᓂᓂᒃ ᖃᓄᖅ ᓂᕈᐊᖅᑕᐅᔨᒪᔪᑦ ᖃᐅᔨᑎᐊᖏᓐᓇᖅᑐᖅᑐᑦ ᐃᓂᖏᓐᓂ ᑕᔪᖏᐊᖏᑎ ᓇᒪᒪᐃᓐᓇᖏᐊᖏᖏᓐᓂᒃ ᖃᐅᔨᑎᐊᖏᓐᓇᖅᑐᖅᑐᓂᒃ ᐊᑯᓂᐅᔨᓄᑦ ᐅᔾᖏᖅᑕᑎᒥ ᐊᖏᑎᓕᒫᖅᑕᐅᓂᖏᓐᓄᓐᓂᒃ. ᐃᔨᒪᓵᖏᖅᔨᐅᕈᑕᐅᓕᓪᓗᐊᖅᓴᑦ ᖃᐅᔨᑎᐊᖏᓐᓇᐅᓴᖅᑐᖅᑐᓂᒃ ᐊᒻᒪ/ᐅᕐᓂᓗᓐᓂᑦ ᐊᓵᖅᑭᑎᐊᖅᑕᐅᔨᓄᑦ ᖃᐅᔨᓵᕈᑕᐅᔨᒧᑦ ᐊᓵᖅᑭᓵᔨᒪᓂᓕᖏᓐᓄᓐᓂᒃ.

ECCC-TRC-09: Closure of saline pond SP6 (Lake B7)
ECCC-TRC-09: ᒪᑐᓴᐅᓂᖏᓚ ᑕᓯᕐᕋᓴᐸ SP6 (Lake B7)

- The Extension Project proposes to use Lake B7 as a saline water storage pond for approximately 18 years. The mine plan of the Main Application document includes obtaining *Metal and Diamond Mine Effluent Regulation* Schedule 2 listing for Lake B7, so it can be fished out and dewatered.
- ECCC notes that sediment at the bottom will become enriched in salts from the contact with saline water over a prolonged period. If they are left in place uncovered at closure, the sediments will then become a source of salts and metals for the overlying water via diffusion. This enrichment would eventually reach Meliadine Lake through the connections with filled pits, lakes and streams.

- ᐊᖏᑭᓪᓕᐊᖅᑕᐅᓂᖏᓚᓄᑦ ᐱᓕᕆᐊᖅ ᐊᑐᑭᒪᔪᖅ ᑕᓯᖅ B7-ᒥᑦ ᐃᒪᑦᑎᐊᕙᖏᒥᑦ ᑕᓯᕐᓴᖏᒥᑦ ᐊᕐᕌᒍᓄᑦ 18-ᓄᑦ. ᐅᓴᕐᖅᑕᕆᐊᒍᑦ ᐸᕐᓇᐅᑦ ᑐᓴᓯᕐᐅᑎᓪᓗᐊᑕᕐᒥ ᑎᑎᕐᖅᓯᒪᔪᑦ ᐃᓕᖅᖃᑦᑐᑦ ᓴᖅᑭᖅᓂᖅ ᐊᒻᒪ ᐅᓴᖅᖃᓂᖅ ᓯᑎᓂᖅᐸᓂᖅ ᐅᑎᕐᓂᓂᐊᕐᓇᖅᑐᒥ ᐃᓕᓴᐅᑎᑦᓂᖅ ᑎᑎᕐᖅᓯᒪᓂᓕᖅ 2-ᒥ ᑎᑎᕐᖅᓯᒪᔪᑦ B7-ᒧᑦ, ᐃᖃᓗᖅᑕᐅᔪᓐᓇᕐᓂᐊᕐᒪᑕ ᐊᒻᒪ ᐃᒪᖃᓕᓂᕐᓗᑎᖅ.

- ECCC-ᓄᑦ ᓇᓗᓇᐃᖅᓯᓪᓚᐅᖅᑐᑦ ᐊᓪᓚᖅᐸᓲᓂᓂ ᑕᑯᐅᓪᓚᖅᑕᐅᖃᑦᑕᕐᓂᐊᕐᓂᓂᓂᖅ ᐃᒪᑦᑎᐊᕙᖏᒧᑦ ᐊᑯᓂᐅᓪᓚᖅᑐᒃ. ᖃᐅᒪᖅᑕᐅᖅᐸᑕ ᒪᑐᐃᐅᓪᓚᕐᓗᑎᒃᓗ, ᓴᓂᑦ ᓯᒥᖅᑕᐅᑦᑕᖅᑐᒃ ᓴᖅᑭᖅᖢᓂᓂᖅ ᐃᒪᑦᑎᐊᕙᖏᒧᑦ ᐃᒪᖅᑯᓂ ᑯᓯᑎᐊᕐᓂᖅᑯᓂ ᑕᑯᐅᓪᓚᖅᑕᐅᔪᖅ ᑎᑭᐅᑎᓇᖅᑐᒃ ᑕᓯᕐᔪᐊᕐᒧᑦ ᐊᖅᑐᐊᖅᑕᐅᑎᓂᖅᑯᑦ ᐃᓗᑦᑐᖅᑎᓯᒪᔪᓄᑦ, ᑕᓯᕐᓄᑦ ᑯᓘᓂᓗᑦᓗ.

ECCC-TRC-09: Closure of saline pond SP6 (Lake B7)
ECCC-TRC-09: ᒪᑐᓴᐅᓂᖏᓚ ᑕᓯᖁᖃᓱ SP6 (Lake B7)

- ECCC recommends that:
  - the proponent clarify if the Water Balance and Water Quality Model incorporates diffusion fluxes of salts and metals from saline sediment at the bottom of SP6. If it does not, the magnitude of this source should be described in relation to other fluxes so its impact can be evaluated; and
  - guidelines for the protection of aquatic life are used for SP6 to assess post-closure water quality.

- ECCC-ძᑦ ᐃᒪᓕᓇᐅᖅᑯᓗᒃᑐᓄᑦ:
  - ᑕᓕᓇ ᓇᓗᓇᐃᖅᓯᓪᓚᖅᖅ ᐃᒪᐅᐸ ᓇᓕᒧᑎᓂᓂᖏᓚ ᐊᓪᒪ ᐃᒪᐅᐸ ᐱᐅᓂᖏᓚᓄᑦ ᐊᑐᖅᑕᐅᓇᕆᖅᑐᖅ ᐃᓕᓕᐅᑦᔨᓯᒪᖏᓚᓱᑦ ᑕᑌᐅᓂᑲᓪᓚ ᐊᓪᒪ ᓴᕿᕋᖏᓂᓚᖅ saline-ᒥᑦ ᐊᑕᓂᓂ SP6-ᒥᑦ. ᑕᐃᒪᐃᓐᓚᓕᐸᐸᑦ, ᐊᖏᓕᓂᖏᓚ ᑕᕐᓯᒪ ᐱᕐᔪᑎᐅᐸ ᓇᓗᓇᐃᖅᑕᐅᔪᑌᐊᓕᓚᖅ ᐊᖅᑐᓚᓄᑦ ᓄᓇᖏᓇᓄᑦ ᐊᖅᑐᑎᓂᖏᓚ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖏᓕᑦ; ᐊᓪᒪᓗ
  - ᒪᓕᒋᐊᓕᑦ ᓴᓪᕆᐅᓂᖏᓚᓄᑦ ᐃᒪᖏᑎᐅᑕᑦ ᐊᑐᖅᑕᐅᔨᓇᖏᓂᓄᑦ ᐊᑐᖅᑕᐅᓯᖕᒪᒪᑕ SP6-ᒧᑦ ᖃᐅᔨᓴᕈᑕᐅᓕᓗᑎᖅ ᐃᒥᐅᐸ ᖃᓄᐃᓂᓂᖏᓄᑦ.

ECCC-TRC-10: Saline water disposal during closure
ECCC-TRC-10: ᐃᒥᖅᑕᕐᓂᖅ ᒪᑐᓱᒪᑎᓪᓗᒍ

- At closure, saline water stored on surface will have to be disposed of.
- Although it is indicated that there is sufficient underground void space for this saline water at closure, the Water Balance and Water Quality Model provides and alternative for saline water disposal.
- ECCC recommends that the Proponent confirm if they are still considering disposing saline water in pits.
    - if so, a description of what modelling would be done, data necessary for the modelling and proposed timelines should be provided.

- ᒪᑐᓱᒪᑎᓪᓗᒍ, ᐃᒪᖅ ᑐᖅᑯᖅᑕᐅᓱᒪᔪᖅ ᖃᖏᓴᓂᑐᖅ ᐃᓕᑕᐅᔨᓕᕆᖅᓂᐊᖅᑐᖅ
- ᓇᓗᓇᐃᖅᑕᐅᓱᒪᓕᓗᐊᖅᑎᓪᓗᒍ ᓄᓇᐅᓪ ᐃᑭᐊᖏᓴ ᐃᓂᖅᑎᐊᕐᓂᖏᓐᓄᑦ ᐃᒪᑦᑎᐊᓕᕆᓂᖏᓐᓄᓚᓪ ᒪᑐᔨᐅᑎᓪᓗᒍ, ᐃᒪᐅᓪ ᐱᐅᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐃᒪᐅᓪ ᐱᐅᓂᖏᓐᓄᑦ ᐊᑲᑭᑦᓱᒪᔪᒥᑦ ᐊᑐᐃᓇᐅᑎᑦᑎᐅᖅᖁᖅ ᐊᒻᒪ ᐊᑐᖅᑕᐅᖏᓐᓄᕐᓇᖅᑐᓂᓄᑦ ᐃᒪᑦᑎᐊᓕᖏᓐᓇᒪᓪᓚᑦ ᑯᐃᑎᑦᑎᓂᐊᖅᓗᓂᓄ
- ECCC-ᑯᑦ ᐊᑐᓕᖅᑯᐃᔪᑦ ᐱᓇᔭᖏᓱᒪᔪᖅ ᓇᓗᓇᐃᖅᓱᓂᓄ ᓭᓂ ᐃᓱᒪᒋᔭᖅᑎᒪᓐᓇᑦ ᐃᒋᑦᑎᓂᖅᒥᑦ ᐃᒪᖅᑎᑦ ᐃᓗᑦᑐᖅᑎᖅᓱᒪᔪᑦ
    - ᐊᖏᔪᑦᐸᑦ, ᐅᓂᒃᑲᖅᓱᒪᓗᓂ ᑭᓱᑦ ᐅᑦᑐᑎᑦ ᐱᓕᕆᐊᖏᓪᓗᒪᓐᓇᑦ, ᑎᑎᕋᖅᓱᒪᔪᑦ ᐱᒋᐅᒪᐊᓕᑦ ᐊᑲᑭᑦᓱᒪᓂᒃᓴᒍᑦ ᐊᒻᒪ ᑐᒃᓱᕋᐅᑕᐅᓱᒪᔪᓕᓂᑦ ᐱᙵᒃᓴᕆᑎᑕᐅᔪᓕᓂᑦ ᐊᑐᐃᓇᑭᖅᑎᑕᐅᓴᖅᑎᑕᖅᐳᑦ

ECCC-TRC-11: Uncertainty in thermal modelling for Discovery WRSFs
ECCC-TRC-11: ᓇᓗᓇᕈᔾᔨᖅ ᐅᓇᖅᑐᑎ ᐊᑲᑐᖃᐅᓂᖏᑦ Discovery WRSFs-ᓄᑦ

- Most of the waste rock at the Meliadine mine is classified as non-potentially acid generating and non-metal leaching.
- Waste rock associated with the Discovery Pit is different in that the majority has been classified as potentially acid generating or metal leaching, or uncertain with respect to acid generation and metal leaching. Discovery Pit waste rock must therefore be stored in a manner to prevent development of acid drainage or metal leaching which would negatively impact water quality.

- ᑕᒪᖏᒃᓴᒃ ᐊᑲᑕᔪᐃᑦ ᐅᔾᕋᐃᑦ ᑕᓯᖏᓚᐅᖅ ᐅᔾᕋᖅᑲᑕᐱᐊᒥ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᐱᑐᕋᓚᐅᖅᓯᖏᓐᓂᔪᑎᒃ ᐅᑕᖏᓇᖅᑐᒥᒃ ᐊᓱᒪ ᓴᓇᕋᔾᐅᖅᓯᒪᓕᕐᓂᒃ.
- ᐊᑲᑕᔪᐃᑦ ᐅᔾᖅᑲᑦ ᐊᑲᑐᐊᓂᓪᓕᑦ Discovery Pit-ᒧᑦ ᐊᑦᔨᒪᓯᒪᓪᓕᐅᒃ ᐊᒥᓱᓂᖅᓴᖅᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᓱᑦ ᐅᑕᖏᓇᑐᐃᓇᖅᑲᖏᖅᓂᖓᓂᒃ ᐅᕐᓂᓵᓂᓕᑦ ᓴᓇᕋᖏᓐᓂᒃ ᑯᓇᑎᑦᑎᑐᐃᓇᖅᑲᖏᖅᓂᖓᓂᒃ, ᐅᕐᓂᓵᓂᓕᑦ ᓇᓗᓀᕐᑐᓂᓕ ᐱᑦᔨᑎᑦᓪᓗᒍ ᐅᑕᖏᓇᖅᓄᓕᑦ ᐊᑲᒪ ᓴᓇᕋᖅᐃᑦ ᑯᓇᑎᑦᑎᑦᔨᑎᑦ. Discoverᐊᑲᑕᔪᐃᑦ ᐅᔾᕈᐃᑦ ᑐᖅᑯᖅᑕᐅᓯᒪᔾᓀᐊᖅᖅᓴᑦ ᐱᓂᓕᐊᖏᑯᓚᑦ ᑯᓇᑎᑦᑎᑦᔨᑎᑦ ᐅᕐᓂᓵᓂᓕᑦ ᓴᓇᕋᖅᐃᑦ ᑯᓇᑎᑦᑎᑦᔨᑎᑦ ᐱᐅᖅᓯᒪᑐᑯᑦ ᐊᐅᑐᐊᖅᓂᒃ ᐃᒪᑦᑎᐊᓂᖅᓗᒍ.

ECCC-TRC-11: Uncertainty in thermal modelling for Discovery WRSFs
ECCC-TRC-11: ᓇᓗᓇᕈᔾᔨᖅᑐᖅ ᐅᓇᖅᑐᑎ ᐊᒃᑐᕿᐃᓂᕐᑎᑦ Discovery WRSFs-ᓄᑦ

- A thermal cover made of non-potentially acid generating and non-metal leaching waste rock is proposed for the Discovery waste rock storage facilities. Uncertainty in the thermal model of the waste rock storage facilities is not discussed.
- ECCC recommends that the Proponent:
  - discuss uncertainty in the Thermal Modelling of Meliadine Discovery waste rock storage facilities through a sensitivity analysis or comparison to measured data at other waste rock storage facilities; and
  - consider including a safety factor in the design of the thermal cover thickness.

- ᐅᓇᕐᓂᖏᓐ ᓴᓇᔭᐅᓪᓚᕆᔾᔪᖅ ᐅᑕᖅᓪᓚᖏᓪᑕᒍᑎᒃ ᐅᑕᕐᓇᖏᓪᑕᒍᑎᒃ ᓴᐃᕐᔭᐅᖏᓪᓕᖅᑐᑦᑕᒍᑎᓗᒃ ᐊᑐᑕᔪᓂᒃ ᐅᔨᖅᑲᓂᒃ ᑐᑦᓯᕐᓗᑕᐅᔪᖅ Discovery ᐊᑐᐃᓐᓇᑦᓂᖅᑐᓂ ᐅᔨᖅᑲᓂᒃ ᑐᖅᔪᖅᓯᓚᕐᔪᓄᑦ. ᓇᓗᓇᕈᔾᔨᖅᑐᖅ ᐅᓇᖅᑐᒥ ᐊᑐᖅᑕᐅᔪᖅᑐᒥᑦ ᐊᑐᑕᔪᓄᑦ ᐅᔨᖅᑲᓂᒃ ᑐᖅᔪᖅᓯᓚᕐᔪᓄᑦ ᐅᖃᐅᓯᐅᓚᖅᑐᖅ.
- ECCC-ᔪᑦ ᐊᑐᓕᖅᔪᕐᓂᒃ ᐱᓇᔾᔨᓚᓕᕐᑎᑦ:
  - ᐅᖃᐅᓯᕆᓗᒍᑦ ᓇᓗᓇᖅᑐᑦ ᐅᓇᖅᑐᑦ ᐊᖅᑭᐅᒪᔾᔪᑦ ᑕᓯᐅᔨᖅᔪᐊᖅ Discovery-ᒥ ᐊᑐᑕᔪᓂᒃ ᐅᔨᖅᑲᓂᒃ ᑐᖅᔪᖅᓯᓚᕐᔪᓄᓂ, ᐊᑐᑐᖅᑕᐅᕆᕿᐃᑦᑐᑲᔪᑦ ᖃᐅᔨᕆᖅᓂᑲᔪᑦ ᐅᕝᕙᓚᓐᓂᑦ ᐊᑦᓯᑭᖅᑕᓐᓂᖅᑕᓐᓂᒃ ᐅᑲᑐᕿᐃᓂᖅᓗᑦ ᓇᕆᐅᑎᓂᒃ/ᑎᑎᖅᑲᓂᒃ ᐊᓯᖅᑕᓐᓂᒃ ᐊᑐᑕᔪᓂᒃ ᐅᔨᖅᑲᓂᒃ ᑐᖅᔪᖅᓯᓚᕐᔪᓄᓂᒃ; ᐊᓕᒪᓗ
  - ᐃᓱᒪᑎᓗᒍ ᐃᓕᐅᑎᑦᓗᒍ ᐱᓂᕐᓗᑲᑕᐃᓕᒪᓂᕐᓗᓄᑦ ᐱᑦᔪᑕᐅᔪᖅ ᐊᖅᑭᐅᓯᒪᓂᖅᓄᓂ ᐅᓇᖅᑐᑉᐸ ᖃᐅᖅᓱᐃᓐᓇᖅᑐᖅ ᐃᓕᑦᔪᓂᒃ.

Thank You ᒪᑦᓇ / ᓇᐃᔮᖅ

Environment and Climate Change Canada
Environnement et Changement climatique Canada

Canada

Annex I: Environment and Climate Change Canada's Technical Review Comments

ECCC-TRC-01	Meliadine Lake water balance
ECCC-TRC-02	Water Balance and Water Quality Model calibration
ECCC-TRC-03	Water Balance and Water Quality Model results
ECCC-TRC-04	Water Balance and Water Quality Model uncertainty
ECCC-TRC-05	In-pit deposition modelling
ECCC-TRC-06	Integration of Meliadine Extension project in Aquatic Effects Monitoring Program Design Plan
ECCC-TRC-07	Changes to analysis methods and descriptions in Aquatic Effects Monitoring Program Design Plan
ECCC-TRC-08	Aquatic Effects Monitoring Program reference areas
ECCC-TRC-09	Closure of saline pond SP6 (Lake B7)
ECCC-TRC-10	Saline water disposal during closure
ECCC-TRC-11	Uncertainty in thermal modelling for Discovery WRSFs