

Mary River Phase 2

Final Hearing Presentation

Prepared for the Nunavut Impact Review Board

YOUR HEALTH AND SAFETY... OUR PRIORITY.





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Outline

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Health Canada's Mandate

- Health Canada is a federal department responsible for helping Canadians maintain and improve their health.
- The Department provides expert information and knowledge to the Nunavut Impact Review Board (NIRB) regarding potential impacts of the proposed Project on the health of Indigenous peoples.

Limitations to Health Canada's Review

Health Canada does not:

- Audit the Proponent's modelling; therefore the department assumes that the modelling yields correct results.
- Make any decisions or issue any licenses, permits or authorizations in relation to the Project.
- Provide comments on occupational health or on socio-economic impacts.

Health Canada's Review of Mary River Phase 2

Health Canada reviewed risk to human health in the following areas:

- **Air Quality**
 - Potential contaminants in ambient air
- **Country Foods**
 - Potential contaminants in country foods.
- **Water Quality**
 - Potential contamination of drinking water.
- **Noise**
 - Potential effects of noise.

Air Quality – Reducing Emissions

- Degraded air quality from gaseous emissions described in the Proposal has the potential to negatively impact land users in the area.
- Non-threshold air pollutants are those at which there are health effects at any level of exposure (e.g., $PM_{2.5}$, NO_2 , and ozone).
- HC acknowledges the importance of incorporating appropriate mitigations of gaseous emissions that can impact human health.

Health Canada Summary of Recommendation

HC-FC-01 – Air Quality – Reducing Emissions

- Investigate and propose further ways of limiting air pollutant emissions to reduce impacts on human health related to the Proposal.
- Some examples are:
 - Implementation of Tier 4 engines for all mine site vehicles;
 - Investigation of additional measures to reduce emissions from highest emitters of NO₂;
 - Additional measures to mitigate the air pollutant emissions associated with project- related shipping.

Air Quality - Nitrogen Dioxide (NO₂) Monitoring

- The Proponent's models predict that CAAQS will be exceeded at sites used regularly by local community members such as the Hunter and Trapper Organization (HTO) cabins.
- Monitoring data allows for a comparison to predicted values, and is important in conducting and verifying human health effects assessments
- HC acknowledges the importance of incorporating appropriate monitoring and reporting of NO₂ into the Proposal to allow for comparison to the CAAQS and Nunavut's *Environmental Guideline for Ambient Air Quality* (Nunavut ambient air guideline).

Health Canada Summary of Recommendation

HC-FC-02 - Air Quality – Nitrogen Dioxide (NO₂) monitoring

- Monitor NO₂ at sites relevant to human health.
- Fully report and compare the results of monitoring of air pollutants to Nunavut's *Environmental Guideline for Ambient Air Quality* and federal targets.
- Revise the risk assessment if monitored levels of air pollutants of concern are higher than model predictions, and develop adaptive mitigation and management plans where appropriate.

Resolved Topics of Concern

Air Quality:

- Health Canada raised concerns about emissions such as those associated with burning fuels from all phases of the Project.
- Further information was requested regarding model predictions.
- Health Canada investigated the possibility of dust inhalation through out the duration of the proposed Project as a source of potential impacts on human health.

Resolved Topics of Concern

Air Quality:

- Health Canada investigated potential human health risks from non-threshold air pollutants (Nitrogen Dioxide (NO₂) and fine particulate matter (PM_{2.5})).
- Health Canada requested additional information on access restrictions to the Designated Project Area.
- Health Canada requested additional information on potential human health effects from air quality at the Hunter Trapper Organization (HTO) cabins.

Country Foods Monitoring

- The Proponent's human health risk assessment (HHRA) indicates that risk levels for cadmium, methylmercury, and inorganic mercury from consumption of caribou organs, and narwhal, and/or seal liver, may be exceeded under the existing baseline as well as baseline + project conditions.
- An updated HHRA has concluded that the impact from the Proposal will be minimal.
- HC supports the implementation of monitoring programs for all identified contaminants of potential concerns in all environmental media during each project phase.

Health Canada Summary of Recommendations

HC-FC-03 - Country Foods Monitoring

- Monitor contaminants in all environmental media and for all project phases included in the human health risk assessment (HHRA). If levels are shown to be increasing, update the HHRA with additional information. If appropriate, include relevant country foods in the monitoring program.

Resolved Topics of Concern

Water Quality:

- Health Canada looked at project-related activities potentially impacting drinking water from dust and other contaminants being released by the Project.
- The Proponent provided a drinking water assessment to answer questions raised on this issue.
- If dustfall levels are substantially higher than predicted levels the Proponent agreed to revise the drinking water assessment.
- If more culturally relevant or important water bodies are identified, the Proponent will revise the drinking water assessment.

Resolved Topics of Concern

Health Canada reviewed many potential health concerns while completing our evaluation and considers the following resolved.

Noise:

- Health Canada requested more information on noise, and how noise travels over land related to the Project.
- Health Canada recommended that a noise complaints procedure be developed for the public.

Thank You!