

**ATTACHMENT:** July 28, 2021

**Federal Authority Advice Record: Designation Request Under IAA**

**Response due by August 18, 2021**

Touquoy Mine Expansion Project

Department/Agency	Health Canada
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1. Has your department or agency considered whether it has an interest in the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action (including provision of financial assistance) that would allow the Project to proceed in whole or in part?  
Specify as appropriate.

[Not applicable.](#)

2. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

If yes, specify that power, duty or function and its legislative source.

[Not applicable.](#)

3. If your department or agency will exercise a power or perform a duty or function under any Act of Parliament in relation to the Project, will it involve public and Indigenous consultation?  
Specify as appropriate.

[Not applicable.](#)

4. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to any potential adverse effects within federal jurisdiction caused by the Project or adverse direct or incidental effects stemming from the Project?  
Specify as appropriate.

[As a federal authority, Health Canada will provide specialist or expert information and knowledge in the Department's possession \(expertise\) to support the assessment of impacts on human health from projects considered individually or cumulatively under the \*Impact Assessment Act\* \(IAA\). It should also be noted that expertise related to assessing human health that is relevant to impact assessment \(IA\) may be held by other federal, provincial, and municipal partners, reflecting the shared jurisdiction for environmental and human health within Canada. For example, the Public Health Agency of Canada \(PHAC\) has expertise in the social determinants of health approach and health equity, and may](#)

provide that expertise through Health Canada, upon request from the reviewing body(ies). How the expertise provided by Health Canada and PHAC will be used in the IA process will ultimately be determined by the reviewing body(ies).

Health Canada can provide human health expertise in the following areas:

- Air quality;
- Recreational and drinking water quality;
- Contamination of country foods;
- Noise;
- Methodological expertise in human health risk assessment;
- Methodological expertise in conducting health impact assessment;
- Electromagnetic fields;
- Radiological emissions; and,
- Public health emergency management of toxic exposure events

5. Has your department or agency had previous contact or involvement with the proponent or other parties in relation to the Project?

Provide an overview of the information or advice exchanged.

No.

6. From the perspective of the mandate and area(s) of expertise of your department or agency, does the Project have the potential to cause adverse effects within federal jurisdiction or adverse direct or incidental effects as described in section 2 of IAA? Could any of those effects be managed through legislative or regulatory mechanisms administered by your department or agency? If a licence, permit, authorization or approval may be issued, could it include conditions in relation to those effects? Specify as appropriate.

The information provided is not sufficient to definitively confirm whether a potential to cause adverse effects on human health exists, in areas under federal jurisdiction (i.e., effects to Indigenous peoples). Health Canada is not a regulatory body and does not issue any approvals or make any regulatory decisions with respect to development projects.

The provincial Environmental Assessment Registration Document (EARD) references a Mi'kmaq Knowledge Study (MKS) commissioned in 2005 to evaluate the cultural and heritage resources in the region to inform planning for the Touquoy Gold Project. The MKS concluded that historic land use occurred pre- and post-contact in the region and is ongoing, with Mi'kmaq of Nova Scotia using the region as part of their Aboriginal and Treaty rights for hunting, trapping, fishing, collecting of medicinal plants, ceremonial purposes, gathering or habitation purposes. However, the EARD does not provide specific information about Indigenous resource and land use practices within Touquoy Mine Expansion Project (the Project) local and regional assessment areas.

The EARD reports that three Indigenous Engagement Meetings with the Millbrook First Nation and Kwi'mu'kw Maw-Klusuaqn Negotiation Office (KMKNO) about the 2021 EA Registration occurred in March and April 2021. While the Proponent has identified the concerns of Indigenous communities regarding potential adverse effects, the steps taken to address the broad scope of potential project-related health impacts have not been detailed. Little consideration has been given to human health impacts of the Project in the documents provided. Appropriate mitigation and monitoring measures

to maintain acceptable environmental quality are not included, and there is no mention and/or reference to whether a human health risk assessment was completed as part of the assessment process.

Should a federal IA be required, Health Canada has identified several human health issues and information requirements below that may be relevant to the Project. This list is based on information that was provided and is not an exhaustive list.

#### The potential for human health risks associated with noise

The EARD provides a brief overview of noise emissions associated with the Project and indicates that construction will result in temporary elevated levels of localized noise. However, the EARD does not assess in detail the potential Project-related noise impacts, including effects on hearing, sleep, and annoyance. Health Canada's preferred approach to assessing noise-related health effects in federal environmental assessments of proposed major resource and infrastructure projects (such as mines) is to consider a variety of internationally recognized standards for acoustics in accordance with Health Canada's guidance document on noise (as outlined below in question 9). Health Canada considers the following noise-induced endpoints as health effects: noise-induced hearing loss, sleep disturbance, interference with speech comprehension, complaints, and change in percent highly annoyed. Health Canada advises that a noise assessment also identify and describe all existing and reasonably foreseeable human receptors in the Project area who may have a heightened sensitivity to noise exposure (e.g., Indigenous peoples). Consideration should also be given to receptors in rural areas, who have been shown to have a greater expectation for, and value placed on, "peace and quiet".

The EARD also states that the Proponent has been conducting blast monitoring for air concussion and ground vibration at the Project site since 2017. However, it is not clear if monitoring of sound levels due to background sources or other operational activities at the Project property boundaries is being currently undertaken, as noise data was not provided. Health Canada suggests that noise management and noise monitoring plans, including a complaint resolution process, as appropriate, be included as part of the Environmental Protection Plan.

#### The potential for human health risks associated with air quality

The EARD states that construction vehicles and machinery will result in the localized and temporary emission of air contaminants, including sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds, and particulate matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>). However, it does not address other potential air pollutants such as polycyclic aromatic hydrocarbons and diesel particulate matter. Furthermore, only ambient air quality monitoring data for dust (i.e., total suspended particulates) was provided. Upon review of the Environmental Protection Plan, it is not clear if effects monitoring and/or mitigation measures have been considered for other criteria air pollutants (e.g., PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>). Diesel exhaust emissions from vehicles and other mine equipment and fugitive emissions from other project-related operational processes are likely to be the primary contaminant sources for the Project. It is important to identify a complete inventory of all potential air pollutants for the proposed project, in combination with effects from existing and reasonably foreseeable future projects within the same area of influence (cumulative effects).

#### The potential for human health risks associated with country foods

The EARD does not identify or describe any past/current/future country food harvesting by Indigenous or non-Indigenous people within either the local or regional assessment areas of the Project.

Scraggy Lake is the existing main receiving water body for the mine site. Although fish from Scraggy Lake are not identified as a source of country food, they could serve as one in the future and therefore, the impact of effluent on contaminant levels in fish should be noted as an area of uncertainty. According to the EARD, baseline mercury concentrations in whole body and fillet samples of yellow perch collected from Scraggy Lake prior to the deposition of mine effluent were above Health Canada commercial fish consumption guidelines for human health. No information is provided on the current concentrations following the deposition of mine effluent, or what the predicted concentrations could be following the closure of the mine.

The EARD does not discuss other potential effects of project activities on country foods, such as food insecurity, which may be a key determinant of health.

The potential for human health risks associated with water quality

The EARD describes several potential project activities that may negatively impact water quality in the Project area, including potential drinking water sources (groundwater or surface water) and recreational water bodies. However, there remain several areas of uncertainty related to human health risks:

- No information is provided regarding potential recreational water resources that could be impacted by Project activities, within the Project's Local or Regional Assessment Areas;
- Limited information is provided regarding potential groundwater well users that could be impacted by Project activities within the Project's Local or Regional Assessment Areas;
- No new water management plans to mitigate potential water quality related impacts were provided for federal authorities to review;
- The selected water quality guidelines for the Project (the Canadian Council of Ministers of the Environment Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life, the Metal and Diamond Mining Effluent Regulations) are not intended to be used as criteria to screen contaminants that may pose a risk to human health;
  - No contingency plan is provided for discharge of mine effluent stored in the Open Pit if it is not of an acceptable quality for the Moose River; and,
  - No information is provided regarding the potential for uncontrolled seepage of mine effluent stored in the Open Pit or runoff associated with the Waste Rock Storage Area to nearby waterbodies.

7. Does your department or agency have a program or additional authority that may be relevant and could be considered as a potential solution to concerns expressed about the Project? In particular, the following issues have been raised by the requestor: The potential to cause adverse effects in areas of federal jurisdiction, including water quality, fish and fish habitat, species at risk, migratory birds, and Mi'kmaq of Nova Scotia.

If yes, please specify the program or authority.

No.

8. Does your department or agency have information about the interests of Indigenous groups in the vicinity of the Project; the exercise of their rights protected by section 35 of the Constitution Act, 1982; and/or any consultation and accommodation undertaken, underway, or anticipated to address adverse impacts to the section 35 rights of the Indigenous groups?

If yes, please specify

Not applicable.

9. If your department has guidance material that would be helpful to the proponent or the Agency, please include these as attachments or hyperlinks in your response.

To date, Health Canada has published the following guidance documents for evaluating human health impacts:

*Guidance for Evaluating Human Health Impacts in Environmental Assessment:*

- Human Health Risk Assessment
- Air Quality
- Water Quality
- Country Foods
- Noise
- Radiological Impacts

<https://www.canada.ca/en/services/health/publications/healthy-living.html#a2.5>

Beverly Ramos-Casey

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Name of departmental / agency responder

A/Regional Manager, Environmental Health Program –  
Atlantic Region

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Title of responder

August 18, 2021

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Date