

Federal Authority Advice Record Form

Eskay Creek Revitalization Project – Skeena Resources Ltd.

Response due by September 7, 2021

Please submit the form to: EskayCreek@iaac-aeic.gc.ca

Agency File: 005791 Registry Reference No.: 82839

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1. 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 the Act of Parliament and that power, duty or function.

Not applicable

2. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to the conduct of an impact assessment of the Project?

Specify as appropriate.

As a federal authority, HC 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 and cumulatively under the *Impact Assessment Act (IAA)*. The Department provides expertise in the areas described below; it does not play a regulatory role. How the expertise provided by HC will be used in the impact assessment process will ultimately be determined by the reviewing body(ies). It should also be noted that expertise related to assessing human health that are relevant to impact assessments may be held by other federal, provincial and municipal partners, reflecting the shared jurisdiction for environmental and human health within Canada.

There are many determinants of health, from the economic environment to a person's individual characteristics.

To support the implementation of the IAA, HC can provide expertise in the following areas:

- Air quality
- Recreational and drinking water quality

- Traditional foods (Country Foods)
- Noise
- Human Health Risk Assessment (HHRA)
- Methodological expertise in conducting Health Impact Assessment (HIA)
- Electromagnetic fields
- Radiological emissions
- Public health emergency management of toxic exposure events

Available HC guidance:

HC 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
- Drinking and Recreational Water Quality
- Country Foods
- Noise
- Radiological Impacts

<https://publications.gc.ca/site/eng/search/search.html?st=1&e=0&f=0&ssti=on&ast=Guidance+for+Evaluating+Human+Health+Impacts+in+Environmental+Assessment&cnst=&adof=on&hpp=10&psi=1&rq.ssp=-5>

Guidance prepared by HC on management of crude oil incidents is available through the following link:

- *Guidance for the environmental public health management of crude oil incidents: a guide intended for public health and emergency management practitioners:*
<http://publications.gc.ca/site/eng/9.849592/publication.html>.

Information on power lines and electrical appliances can be found at:

<https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/everyday-things-emit-radiation/power-lines-electrical-appliances.html>

3. Has your department or agency considered 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 that would allow the Project to proceed in whole or in part?

Specify as appropriate.

Not applicable

4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project? (for example, enquiry about methodology, guidance, or data; introduction to the project)

Provide an overview of the information or advice exchanged.

No

5. Does your department or agency have additional information or knowledge not specified, above?

Specify as appropriate.

No

6. From the perspective of the mandate and area(s) of expertise of your department or agency, what are the issues that should be addressed in the impact assessment of the Project, should the Agency determine that an impact assessment is required?

For each issue discussed, provide a concise, plain-language summary that is appropriate for inclusion in the Summary of Issues and Engagement.

Based on the limited information provided in the initial Project Description (iPD), HC has identified the following key issues and information requirements that are likely to be relevant to the Eskay Creek Revitalization Project (the Project). These are not to be construed as an exhaustive list of requirements pertaining to human health for the Project.

Human Health Setting/Receptors

The Project is located in a remote area, and is within the territory of the Tahltan Nation and the asserted traditional territory of the Tsetsaut Skii km Lax Ha (p. 93 of iPD). The closest First Nation community is Iskut, which is approximately 135 km to the north of the Project. As well, there are seasonal Tahltan cabins along the Eskay Creek Mine Road to support gathering activities. It will be essential that the locations of all potential human receptors (including any foreseeable future receptors) are identified, including residences, cabins and temporary/seasonal traditional use sites such as hunting, fishing, trapping, berry picking, and ceremonial or other uses (e.g., recreational) within the Project area. Sensitive human receptor locations, such as schools, hospitals, retirement complexes or assisted care homes, should also be included. Additionally, the distances between human receptor locations and the key components of the Project that may have potential impacts on these receptors should also be identified.

The iPD does not specify whether mine construction and/or operations would occur 24 hours a day/7 days a week per year. Assuming there may be at least some continuous operation of the mine site and/or continuous use of the worker camp, HC is of the opinion that potential health effects should be assessed for off-duty workers residing in the worker camp.

Health Impact Assessment (HIA)

The Project site is remote and there are Indigenous communities in the surrounding area, with the Tahltan community of Iskut being the closest community (approximately 135 km to the north of the Project). As well, the iPD (p. xi) indicates that one-third of people in the region are Indigenous, which is higher than the provincial average. A detailed HIA would be appropriate to capture the Project's potential positive and adverse effects on social, economic and health conditions, which would be in addition to the environmental (biophysical) conditions typically included in an impact assessment. An HIA emphasizes that physical, mental, and social well-being is determined by a broad range of conditions, or factors, from all sectors of society known as the determinants of health. The HIA would consider community concerns (e.g., employment, education, training, food security) and incorporate Gender-based Analysis Plus to reflect how Project activities can affect subgroups of the population in different ways. In addition, the social baseline study currently undertaken by the proponent for Tahltan Nation could form a data source for the HIA.

Traditional Foods/HHRA

The iPD describes the area surrounding the Project as having historical subsistence and other cultural and spiritual activities that are important to the nearby First Nations. The iPD (p. 81) states that "[t]here are seasonal Tahltan cabins along the Eskay Creek Mine Road to support gathering activities in the area". However, the iPD makes no direct linkage between the uptake of contaminants (e.g., metals) by fish or wildlife that may be consumed by people. Given the extensive trapping/guide outfitting that occurs in the Project area, and the Tahltan Nation's interest in minimizing impacts on the environment while also protecting the health of the community, it will be necessary to identify contaminants of potential concern (COPCs) and to understand the potential uptake of these COPCs into traditional foods consumed by residents in the area. Additionally, consideration should be given to contaminants emitted into the air that may deposit onto foods consumed by people. HC guidance supports the need for a multi-media HHRA when elevated levels of COPCs are identified in environmental media, and there are possible exposure pathways to humans (i.e., through the consumption of traditional foods, drinking water, etc.). A multi-media HHRA could inform part of the human health and ecological risk assessment that has been undertaken by the proponent.

Air Quality

The iPD (p. ix) indicates that the Project may emit air pollutants such as carbon dioxide (CO₂), nitrogen

oxides (NO_x), sulphur oxides (SO_x) and particulates from vehicles, heavy machinery, blasting, ore processing solid waste incineration and other Project related activities. With respect to the potential for fugitive dust to be generated, the iPD currently does not indicate whether the overland conveyor from the primary crusher stockpile to the processing plant (approximately 1.0 km in length) will be covered during operation, and this should be confirmed in the detailed Project Description.

Given there are human receptors near the Project area including off-duty workers and seasonal cabin residents, HC recommends that an air quality assessment be conducted to assess scenarios such as: baseline; Project alone; baseline plus Project; and cumulative. HC is of the opinion that the most stringent air quality objectives or standards (e.g., CAAQS¹) should be used when undertaking the air quality assessment. HC acknowledges the studies carried out by the proponent in 2020 to obtain recent baseline information (in addition to the historical baseline), could form part of the air quality assessment.

In addition, HC recommends the air quality assessment consider nitrogen dioxide (NO₂), sulphur dioxide (SO₂), carbon monoxide (CO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), particulate matter (e.g., PM_{2.5}, PM₁₀), metals and diesel particulate matter (DPM). Given diesel exhaust and DPM from diesel generators and heavy equipment are likely emitted from the Project, it is important that carcinogenic and non-carcinogenic health impacts of DPM be assessed (separately from PM_{2.5}). Consideration could also be given to secondary pollutants such as ground level ozone (O₃) and secondary fine particulate matter (PM_{2.5}) that may be formed by reactions in the atmosphere, when precursors such as NO_x, SO_x, and VOCs are emitted. Furthermore, there should be consideration of any chemicals associated with ore extraction (e.g., emissions from ammonium nitrate/fuel oil explosives used for blasting) and processing (such as ammonia, hydrogen cyanide, etc.).

Finally, HC recommends the air quality assessment also consider emissions during construction and operation for all transportation-related activities that may be scoped into the Project assessment.

Water Quality

The iPD (p. 69) indicates that currently there are no known drinking water users within or near the Project area, and that potable water for the Project and the associated accommodation camp would be supplied from groundwater wells and would be treated. The proponent should confirm whether the drinking water source(s), and selected water treatment technology and capacity would adhere to applicable water quality standards or guidelines (e.g., Guidelines for Canadian Drinking Water Quality). As well, HC recommends the proponent identifies all drinking water sources and water bodies that are used for traditional purposes, and confirms whether Indigenous users consume treated or untreated water from the Project site.

Furthermore, surface and ground water quality may be affected by sedimentation or spills, which may impact human health through dermal contact. HC therefore suggests identifying water bodies that are currently being used, or may be used in the future, for recreational and ceremonial purposes (e.g., swimming, fishing) and that may be affected by Project activities.

Noise

The Project is located in a sparsely populated area. The land uses surrounding the Project area include activities such as trapping, hunting, fishing, hiking and camping, and includes seasonal Tahltan cabins along the Eskay Creek Mine Road to support gathering activities. HC recommends a noise assessment be conducted in accordance with HC guidance. The noise assessment should identify and describe human receptors who may have a heightened sensitivity to noise exposure (e.g., Indigenous peoples, schools, child care centres, places of worship, etc.). It should be noted that human receptors in rural areas could have a greater expectation of "peace and quiet". Particular attention will need to be given to the potential for sleep disturbance to local residents, including off-duty workers residing in, or near, the Project area.

¹ The Canadian Ambient Air Quality Standards (CAAQS) consider nitrogen dioxide, fine particulates and ozone to be "non-threshold" air pollutants; meaning that health effects may occur at any level of exposure to these air pollutants.

HC acknowledges the noise measurement studies carried out by the proponent in 2020, and the proponent's intention to undertake a noise assessment on human health (as part of a human health risk assessment).

Accidents and Malfunctions

HC supports an assessment regarding the potential for environmental effects caused by accidents and malfunctions. This would include the types of accidents and malfunctions, their likelihood and severity and the associated potential environmental and health impacts. HC notes that mining operations may result in contamination of drinking/recreational water and traditional foods due to spills of chemicals (e.g., hydrogen cyanide used to extract ore for gold mine projects), fuel (e.g., diesel fuel, gasoline), and wastewater that could be caused by tailings pipeline/dam failure, fuel/chemical storage tank leak, explosives accident, etc. Such spills may also produce chemical fumes that can temporarily affect local air quality. Also, given Indigenous concerns noted in Section 9.1 (p. 93) of the iPD, HC supports an assessment of the potential for accidents and malfunctions (e.g., hydrocarbon spills and environmental health effects) resulting from increased industrial traffic on Highway 37 and Highway 37A.

Assessment Scope

HC suggests that all transportation routes into and out of the mine site be scoped into all relevant assessments, including those for air quality, human health, and community health and well-being. HC is also supportive of including any proposed ancillary infrastructure which the Project cannot proceed without, being considered in the Project assessment (e.g., the construction of the electric transmission line), such that there can be a full understanding of potential impacts (both positive and negative) on human health.

Lucille Lukey (for Herbert Antill)

Name of Departmental / Agency Responder

Acting Manager
Environmental Health Program, Health Canada

Title of Responder

September 3, 2021

Date