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July 3

SENT BY EMAIL

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Subject: NRCan Initial Project Description Review and Federal Authority Advice Record – 15-Mile Processing Hub Project

On April 2, 2026, Natural Resources Canada (NRCan) submitted to the Impact Assessment Agency of Canada (IAAC) a preliminary Federal Authority Advice Record (FAAR) for the Initial Project Description for the 15-Mile Processing Hub Project, northeast of Halifax, Nova Scotia. On June 17, 2026, IAAC requested that NRCan review responses provided by St Barbara (the Proponent) on the preliminary FAAR (submitted April 2) and revise the comments in light of new information provided by the Proponent.

Overall, NRCan experts are satisfied with the additional information and approach outlined by the Proponent. Comments in Table 1 (attached) have been updated to reflect where NRCan is satisfied with the additional information provided by the Proponent at this stage.

NRCan is participating in this assessment as a subject matter expert providing expertise in mine rock, waste rock and tailings storage and disposal facilities, mining effluent treatment, Acid Rock Drainage and Metal Leaching, groundwater quantity and flow and economics. NRCan also has expertise on specific species at risk, including lichens, and is willing to support ECCC as required.

Furthermore, the Proponent should be made aware of the [Open Science and Data Platform](#) (OSDP), a centralized data hub led by NRCan that provides access to diverse science, data and regulatory information to support the assessment. The OSDP can help guide the Proponent in early planning and align project proposals with regulatory expectations to contribute to more efficient reviews. For example, the dataset [Water quality in Canadian rivers – Water quality at monitoring sites](#) produced by Environment and Climate Change Canada may be of interest to the Proponent. NRCan is available to meet and provide more details about what the OSDP has to offer and can be contacted at osdp-psdo@nrcan-rncan.gc.ca.

Details of NRCan's review can be found in the Federal Authority Advice Record document attached. If you have any questions, please contact me via e-mail at alice.tremblay@nrcan-rncan.gc.ca.

Thank you,

Alice Tremblay

Senior Impact Assessment Officer, Impact Assessment Division
Science and Innovation Branch, Strategic Policy and Innovation Sector
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CC: Christina Clarke (christina.clarke@nrcan-rncan.gc.ca), Acting Director, Impact Assessment Division

Attachment: Federal Authority Advice Record (FAAR)

Federal Authority Advice Record (FAAR)

15-Mile Processing Hub Project – 15-Mile Minerals and Renewables.

Registry File: 90533

Department/Agency	Natural Resources Canada
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1. Will your department or agency exercise a **power, perform a duty or function**, or provide **financial assistance**, related to the project to enable it to be carried out in whole or in part?
 - Based on the information provided to date, it is likely that NRCan will be required to exercise a power or perform a duty or function related to the Project, as NRCan may issue a licence, under the *Explosives Act*, for explosives storage.

As relevant,

- a) Specify the power, duty or function, or financial assistance, and the likelihood that it will be required to construct the project, based on the Initial Project Description, as either Required, Potential, Likely, Unlikely or Not Required
 - A licence for explosives storage issued by NRCan under the *Explosives Act* is likely to be required to construct the Project. Rationale: Based on the information provided and similar mining projects, NRCan is of the view that for the construction phase of the Project, the proponent will not use enough explosives to require explosives manufacturing on site. The Proponent would then only require a license for explosives storage on the mine site. To be confirmed by the proponent.
 - b) Describe any associated Indigenous or public consultation, including timelines
 - The licencing by NRCan under the *Explosives Act* would likely not trigger additional Indigenous or public consultation.
 - c) Describe any associated information requirements (e.g., alternative means assessment, habitat offsetting), and specify those that may be coordinated with the impact assessment process, if an impact assessment is required
 - Not applicable.
 - d) Identify any associated project-specific guidance or issues of which the proponent should be aware, or information the proponent should provide
 - The Proponent should provide details of plans for explosives storage and explosives manufacturing, if any, once this information becomes available.
 - e) Indicate whether your department or agency has identified any power that it will not be exercising or may not be able to exercise to allow the project to be carried out, in whole or in part.
 - Not applicable.
2. **Using Table 1**, identify project- and context- specific **key issues**, based on the expertise within your mandate¹ and the information in your possession, including the Initial Project Description, any exchanges with the proponent or others related to the project and known means to address the effects of the project. For each key issue:
 - a) Specify the key issue (e.g., specific species and location)
 - b) Specify the project component or activity linked to the key issue
 - c) Explain why it's a key issue based on:
 - i. biophysical effect pathway(s) from the specific project component or activity
 - ii. concern unique to the project or a priority within your mandate

¹ Refer to the [Memoranda of Understanding with IAAC](#).

- iii. the issue being material² to decision making under the *Impact Assessment Act*
- d) Identify how the issue could be resolved, including through means other than an impact assessment
- e) Identify additional information the proponent could provide including to give confidence on how the issue can be addressed through other means.

Alice Tremblay, Senior Impact
Assessment Coordinator, Natural
Resources Canada

Name and title of Departmental /
Agency Responder

July 3, 2026

Date

² An issue is material to decision making if its analysis is anticipated to affect the conclusions on (1) whether adverse effects within federal jurisdiction or direct and incidental adverse effects (collectively adverse federal effects) are likely not significant, or of low, medium or high significance; (2) appropriate mitigation measures for significant adverse federal effects; or (3) justification in the public interest.

Table 1: Key Issues to inform the impact assessment process

This table should outline key issues to inform the impact assessment process, including whether an impact assessment is required and, if so, the scope of the assessment and tailoring of the Tailored Impact Statement Guidelines.

Key issues are the major concerns directly related to a project component or activity, the analysis of which is anticipated to be material to decision-making under the *Impact Assessment Act*.

Federal authorities' advice should be guided by the identification and resolution of key issues. If an impact assessment is required, it will be focused on key issues.

Comment ID	a) Key issue	b) Project component or activity	c)(i) Biophysical effect pathway(s)	c)(ii) Concern unique to the project or a priority within your mandate	c)(iii) Material to federal decision-making	d) Means for issue resolution	e) Additional information from the proponent
NRCan-01	Groundwater quantity and historical tailings	Mining activities	Altered groundwater quantity may affect fish and fish habitat	Uncertainty remains regarding hydrogeological data and analyses, mitigation measures and monitoring.	Altered groundwater quantity may affect fish and fish habitat	<i>Comment addressed by the proponent.</i> NRCan sought clarifications around how past comments have been integrated into project planning and design. The proponent indicated that the requested hydrogeological data and analyses, mitigation measures and monitoring will be documented in the provincial Environmental Assessment Registration Document (EARD).	NRCan is satisfied with information provided by the proponent at this stage.
NRCan-02	Groundwater quantity. IPD 2026, section 3.6.5 pg. 71, 5.4.5 pg. 108	Impacts related to mining activities	Altered groundwater quantity may affect fish and fish habitat	Uncertainty remains regarding hydrogeological data and analyses, mitigation measures and monitoring.	Altered groundwater quantity may affect fish and fish habitat	<i>Comment addressed by the proponent.</i> NRCan sought additional details and site-specific information on: hydrogeological conditions, dewatering impacts, domestic, communal or municipal water wells, sources of potable groundwater, groundwater characterization, hydro stratigraphy (surficial and bedrock geology), faults and fractures, groundwater flow, seepage, groundwater divides, and relevant groundwater data. The proponent indicated that the requested hydrogeological data and analyses, mitigation measures and monitoring will be documented in the provincial EARD.	NRCan is satisfied with information provided by the proponent at this stage.
NRCan-03	Historical Mine Tailings IPD 2026, section 5.4.4, pg. 107.	Contaminated historic tailings	Contamination due to historic tailings may impact fish and fish habitat	Uncertainty remains regarding management of historic contaminated tailings	Contamination due to historic tailings may impact fish and fish habitat	<i>Comment addressed by proponent.</i> NRCan sought additional information on how the proponent intends to manage contaminated site tailings. The proponent provided a substantially expanded geochemical dataset (700+ ABA samples, 26 HCTs, field bins, saturated columns, additional tailings and overburden testing) and committed to updated material	The response demonstrates that representative characterization and updated classification work is well underway, which is appropriate for the initial project description stage.

						classification and an ML/ARD Assessment Report.	
NRCan-04	Geochemical characterization and representativeness of mine materials	Characterization of mine materials across multiple open pits and associated infrastructure, including waste rock, overburden, tailings, and historically disturbed materials.	Incomplete or non-representative characterization of mine materials leads to uncertainty in metal leaching and acid rock drainage (ML/ARD) potential, contaminant release, and water quality predictions affecting fish and fish habitat	Uncertainty remains regarding whether sampling captures full spatial and compositional variability, including historic and newly disturbed materials	Uncertainty in the representativeness of geochemical characterization limits confidence that all mine materials and conditions contributing to contaminant release have been identified. This creates uncertainty in source term development and water quality predictions, and limits the ability to determine whether predicted effects on fish and fish habitat are complete and conservative.	<i>Comment addressed by proponent.</i> NRCan provided resources to the proponent (e.g. MEND Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials) and sought additional information related to the characterization of source terms and water quality predictions. The proponent's response described how arsenic is being incorporated into the updated classification approach, including consideration of mineralogical controls and CaNPR, with results to inform material management decisions.	The response demonstrates that arsenic is being explicitly considered in material classification and management. Detailed thresholds are appropriately deferred to the ML/ARD Assessment Report.
NRCan-05	Management of historic mine materials (tailings and waste rock)	Excavation and re-management of historic tailings and waste rock from previously mined areas.	Disturbance of historic tailings and waste rock may cause rapid oxidation and release of acidity and metal(loid)s, affecting water quality and fish habitat.	Historic materials at Fifteen Mile Stream are expected to be reactive and contain elevated contaminants. Uncertainty remains in delineation, characterization, and integration into waste management and predictions.	Historic mine materials may generate elevated contaminant loading upon disturbance that is not reflected in baseline conditions or current predictions. This introduces uncertainty in the magnitude and timing of contaminant release to receiving waters and limits the ability to assess potential effects on fish and fish habitat and the effectiveness of mitigation measures.	<i>Comment partially addressed by proponent (see updated response).</i> NRCan had sought clarification on historic mine materials and their management as well as geochemical information for these materials. The proponent indicated further characterization and management of historic tailings and waste rock, with details to be included in the ML/ARD Assessment Report and Management Plan.	The response is high level, which is acceptable for this stage of the review. Future ML/ARD documentation is expected to clearly describe how historic mine materials are incorporated into source-term development, water quality predictions, and long-term management.
NRCan-06	Arsenic leaching behaviour and conceptual geochemical model	Extraction and management of ore and waste rock containing arsenic-bearing sulphide minerals across multiple lithologies.	Uncertainty in arsenic leaching could lead to inaccurate contaminant release estimates and uncertainty in water quality predictions and aquatic effects.	Arsenic mobility in regional deposits is complex and not directly correlated with solid-phase concentrations. Uncertainty remains across lithologies and material types, including non-acid generating materials.	Uncertainty in arsenic leaching behaviour affects the accuracy of contaminant release predictions, particularly where mobility is not directly linked to acid generation, limiting confidence in water quality predictions and effects on aquatic receptors.	<i>Comment addressed by the proponent.</i> NRCan sought additional information on the distribution of arsenic across all mine materials and conditions.	The response demonstrates that the classification methodology has evolved since previous submissions and is appropriate for this stage.
NRCan-07	Metal leaching and acid rock drainage (i.e. source terms) and water quality predictions	Development of geochemical source terms regarding ML/ARD for waste rock, tailings, and other mine materials used in water quality predictions.	Uncertainty in ML/ARD source terms leads to uncertainty in contaminant loading and water quality predictions affecting fish and fish habitat.	ML/ARD source terms rely on laboratory data scaled to field conditions. Previous reviews show challenges in developing representative and conservative assumptions. Uncertainty remains in scaling and variability representation.	Uncertainty in ML/ARD source terms limits confidence in predicted contaminant concentrations and loading used in water quality models, affecting the assessment of proposed mitigation measures and potential residual effects on fish and fish habitat.	<i>Comment addressed by the proponent.</i> NRCan sought additional information related to ML/ARD source terms. The proponent's response described the development of updated geochemical source terms using expanded static and kinetic datasets, revised classification, updated mine	The response adequately explains how new characterization data will be incorporated into source-term development and future water quality predictions for this stage of the review.

						design, and validation through operational monitoring.	
NRCan-08	Use of mine materials for construction and potential for metal leaching	Use of mine materials for construction (e.g., roads, pads, infrastructure) outside engineered containment.	Use of mine materials for construction (e.g., roads, pads, infrastructure) leads to exposure to atmospheric and hydrological conditions, resulting in potential ML/ARD and potential residual effects on water quality and fish habitat.	Materials used for construction must be appropriately classified based on ML/ARD characterisation described in MEND Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials . Previous reviews identified that materials classified as non-acid generating may still release contaminants such as arsenic under neutral conditions. Uncertainty remains in how construction materials are identified and managed.	Uncertainty in the identification and classification of construction materials limits confidence that materials used outside of controlled storage facilities will not generate metal leaching. Materials classified as non-acid generating may still release contaminants under neutral conditions, which may not be captured in source terms or water quality predictions.	<i>Comment addressed by the proponent.</i> NRCan sought information related to material classification (including those used during construction). The proponent's response described that construction materials will be selected based on both acid generation and metal leaching potential, with verification criteria currently being developed using the expanded dataset.	While the final criteria have not yet been developed, the overall approach is appropriate for an IPD and commits to developing defensible construction material selection criteria.
NRCan-09	Management of potentially metal leaching and acid generating materials	Management of potentially metal leaching and acid generating materials through segregation, backfilling, and storage, including partial backfilling of PAG materials into open pits and surface storage of remaining materials over the mine life and closure.	Incomplete segregation, backfilling, or containment of metal leaching and acid generating materials leads to sulphide oxidation and release of contaminants, resulting in loading to surface water and potential effects on fish and fish habitat.	Management of all potentially metal leaching and acid generating materials must be informed by geochemical characterization and consider the full range of material behaviour as prescribed by MEND Acid Rock Drainage Prediction Manual . The project proposes partial backfilling of PAG materials; however, not all metal leaching and acid generating materials will be backfilled. Uncertainty remains in how all materials will be segregated, managed, and contained over the mine life and closure period.	Uncertainty in the management of all potentially metal leaching and acid generating materials limits confidence that contaminant release will be adequately mitigated over the full mine life and post-closure period, particularly for materials not backfilled. For such material managed on surface, adequate conservative release rates from metal leaching and acid rock drainage material is needed to assess the conservativeness in long-term water quality conditions and potential effects on fish and fish habitat resulting from proposed surface mitigation measures (i.e. engineering cover design).	<i>Comment addressed by the proponent.</i> NRCan sought information related to surface management practices, particularly for potentially metal leaching and acid generating materials. The proponent provided additional details on segregation, temporary storage, backfilling, subaqueous disposal, engineered stockpiles, closure concepts, source-term development, and monitoring/validation.	This response addresses the intent of our original comment and demonstrates that the ongoing ML/ARD assessment will guide management decisions during mine planning, construction, operation, and decommissioning.
NRCan-10	Economic conditions – Project feasibility Potential effects of the project			The positive economic impact of mining projects is a key issue within NRCan's mandate, as it directly supports the federal government's priorities related to economic growth, critical mineral development, regional development, and reconciliation with Indigenous Peoples.	The positive economic impact of a mining project is material to decision-making as a factor in the justification in the public interest under the Impact Assessment Act. It can represent a likely positive effect that contributes to sustainability, supports Canada's climate and environmental objectives—particularly through the responsible development of critical minerals—and aligns with federal priorities such as advancing regional economic development and reconciliation with Indigenous Peoples. Economic benefits, including employment, infrastructure investment, and local and Indigenous business opportunities, are often key to the long-term viability and acceptability of a project. These benefits	<i>Comment addressed by proponent.</i> NRCan sought a clarification on the positive economic impact of the project. The proponent indicated the initial assessments of the economic impact of the Project have been undertaken, using Statistics Canada's Input-Output model, to predict economic benefits, including job creation and GDP contribution.	NRCan is satisfied with the clarifications provided by the proponent.

					can offset or contextualize potential adverse effects, provided they are transparently assessed and equitably distributed. As such, the economic dimension is integral to a balanced determination of whether a project is in the public interest.		
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