



Natural Resources
Canada

Ressources naturelles
Canada

CIAR File No.: 83495

May 6, 2022

Julie Lowry
Project Manager, Pacific and Yukon Region
Impact Assessment Agency of Canada

Sent via email: Julie.Lowry@iaac-aeic.gc.ca

Subject: Natural Resources Canada's Submission of a Federal Authority Advice Record for the Spanish Mountain Gold Project

Dear Colleague,

On March 30, 2022 the Impact Assessment Agency of Canada (the Agency) requested that Natural Resources Canada (NRCan) review the Initial Project Description and provide input to identify its responsibilities and expertise related to the impact assessment of the proposed Spanish Mountain Gold Project (the Project). The Agency provided NRCan with a Federal Authority Advice Record Form to facilitate the provision of this input.

NRCan is committed to improving the quality of life of Canadians by ensuring the country's abundant natural resources are developed sustainably, competitively and inclusively. It is probable that NRCan will be required to exercise a power or perform a duty or function under the *Explosives Act* to enable the Project to proceed. NRCan also possesses several areas of expertise that may be relevant for the conduct of an impact assessment for the Project, and has identified several issues for which additional information should be provided, should an impact assessment be required.

Please find attached NRCan's Federal Authority Advice Record submission for the Project.

If you have any questions, please contact me by email at anica.madzarevic@nrcan-rncan.gc.ca or by phone at 343-571-9873.

Sincerely,

<Original signed by>

Anica Madzarevic
A/Senior Impact Assessment Officer
Office of the Chief Scientist

cc: Peter Unger, Director, Impact Assessment, Office of the Chief Scientist

Attachment 1: NRCan Federal Authority Advice Record Form

Canada

Attachment 1: NRCan Federal Authority Advice Record Form

Spanish Mountain Gold Project – Spanish Mountain Gold Ltd.

Agency File: 005827

Registry Reference No.: 83495

Department/Agency	Natural Resources Canada (NRCan)
Lead IA Contact	Anica Madzarevic
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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?

NRCan may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed through NRCan's role in the administration of the [Explosives Act](#). Specifically, it is expected that a factory licence under s.7(1) of the [Explosives Act](#) will be required for explosive manufacturing and storage by a contracted explosives supplier.

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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?

NRCan possesses the following expertise that may be relevant to the conduct of an impact assessment for the Project:

- Explosives manufacturing and storage
- Economic and socioeconomic analysis related to mining
- Hydrogeology
- Terrain hazards
- Seismicity
- Geochemical characterization of mine components including acid rock drainage and neutral metal leaching (ARD/NML)
- Assessment of alternatives for mine waste management
- Forestry: vegetation and biodiversity, soils, forested land use change, reclamation/restoration, etc.

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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?

NRCan has not exercised a power or performed a duty or function in relation to the Project; and it has not taken any course of action that would allow the Project to proceed.

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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)

NRCan has not identified any previous contact or involvement with Spanish Mountain Gold Ltd. (the Proponent) or other parties in relation to the Project.

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

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?

NRCan reviewed the Spanish Mountain Gold Project Initial Project description ([CIAR#2](#)) (IPD) to identify issues that should be addressed in the impact assessment of the Project, should an impact assessment be required. The following are NRCan's comments on the IPD:

Explosives Manufacturing and Storage

- Sufficient information confirming the safe and secure manufacturing and storage of explosives should be provided.

Economic and Socioeconomic Analysis Related to Mining

- The IPD indicates that an electric line will serve the Project site. The Proponent should clarify whether there will be electricity to mine, and provide additional information on the potential impacts associated with the exclusive use of diesel (or other) power. Current plans are for diesel to only be used in mobile equipment, with liquid propane for building heat.
- Rather than using "person years" for employment, a breakdown of the number of employees/contracts/etc. and their tenure by project phase should be provided. This allows for a clearer understanding of employment flows over the life of the project.
- As primary commercial activities are from outdoor recreation, information on the potential impact of the Project operation on these activities should be provided.
- The Proponent indicates that they will provide training and skills development. Additional information regarding when (i.e., related to phases) this training/skills development will take place, as well as the types of skills/training development that will be offered, should be provided.
- Given that the Proponent has identified several major industries which support the economy of the Cariboo Regional District (including mining, forestry, oil and gas, agriculture and tourism), the assessment of the baseline economic environment should address the historical contribution of the mining industry to the regional economy, a detailed projection of potential mining activity in the region, and a projection of economic activity in the region across industries. This will allow the Proponent to analyze the potential positive and negative economic and socioeconomic effects of the project in the context of the industry's overall economic contributions to the region.

Hydrogeology

- Groundwater monitoring will be required to determine groundwater elevations and flow directions. Groundwater flow modelling will be required to assess groundwater elevations, flow directions, fluxes, seepage rates and groundwater-surface water (GW-SW) interactions for baseline conditions and during key project phases (e.g., operation and closure phases). The proposed Spanish Mountain Gold Project includes many components such as the tailings storage facility (TSF), open pit, groundwater supply wells, re-routed streams, waste rock storage facilities and drainage infrastructure that may influence groundwater flow directions and fluxes and GW-SW interactions. Groundwater model boundaries will need careful consideration as Quesnel Lake, 2.5 km to the west of the TSF, has the lowest water elevation in the region, which may influence groundwater flow directions and receiving water bodies.

Terrain Hazards and Seismicity

- Information on both the effects of the environment on the Project (e.g., terrain hazards and seismic effects) and the effects of the Project on the environment and public safety (e.g., physical infrastructure) should be provided.

- For terrain hazards, both naturally occurring events and events that may arise as a result of Project activities should be assessed. The potential for project activities to effect debris flow/flood risks along Cedar Creek should be addressed.
- With regard to seismicity, this information should include information on both natural and induced seismicity (if applicable), information on mapped faults within the local study area or region, and an assessment of the potential and expected shaking from local and distant earthquake sources. Volcanic hazards should also be considered.

Acid Rock Drainage, Metal Leaching, Mine Waste Management

- Information on the potential for acid rick drainage and metal leaching from mine waste (i.e. tailings, rock material, overburden) and pit walls is required to identify mitigation measures to limit impacts from these potential sources to the receiving environment during the entire life-cycle of a proposed mining operation (i.e., site preparation, construction, operations, closure, decommissioning and post-decommissioning).
- With regard to neutral metal leaching, the characterisation of mine waste should not only include Metal and Diamond Mining Effluent Regulation parameters, but also any other elements (i.e. Se, Cr, etc...) that may pose a risk to the receiving environment.
- A proper assessment of alternatives for mine waste management is required to ensure best practise in waste management are proposed to mitigate impacts during the entire life cycle of the mining operation and in the post-closure.
- A mine waste (i.e. tailings, waste rock and overburden) and pit walls management plan is important to provide commitments and compliance measures to the Impact Assessment Agency, which can then be included in the Impact Assessment report and transferred to the provincial and federal regulatory bodies if the project is deemed not to lead to significant environmental effects.

Forests and Biodiversity

- Details on the potential impacts of the Project with regard to forest vegetation and biodiversity, changes in land use, recovery of forested land, and the forest industry in the region have not been provided. Additional information on these topics is needed to assess potential impact(s)/effect(s) on valued components and the potential need for any mitigation and/or monitoring measures, if applicable.
- A description of the potential changes in soil quality, loss, compaction, erosion etc. that could result in reduced soil productivity should be provided. Descriptions of the methods used for tree clearing and potential impacts on biodiversity and species with cultural values should also be provided.
- A description of how the use of forested lands will be impacted by the Project, and the identification of appropriate mitigation measures to address these impacts, should be provided.
- A description of how forested land impacted by Project activities will be reclaimed in the future should be provided.

Anica Madzarevic
Name of Departmental / Agency Responder

A/Senior Impact Assessment Officer
Title of Responder

May 6, 2022
Date