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August 26, 2022

Colin Webster  
Vice President, Sustainability and External Affairs  
Brookfield Place, 181 Bay Street, Suite 3910  
Toronto, ON M5J 2T3

Sent via email: [CWebster@alamosgold.com](mailto:CWebster@alamosgold.com)

**SUBJECT: Technical Review of Round 3 Information Request Responses for the Lynn Lake Gold Project – Round 4 Information Requests**

Dear Colin Webster:

The Impact Assessment Agency of Canada (the Agency), with input from federal authorities, Indigenous nations, and the public, conducted a technical review of the responses to the Round 3 Information Requests (IRs) submitted by Alamos Gold Inc. on August 9, 2022 for the Lynn Lake Gold Project (the Project).

Upon review of the information, the Agency determined that there are areas where information is still required to assist the Agency's understanding of the potential adverse environmental effects that the Project may cause and to inform the Agency's preparation of the Environmental Assessment (EA) Report under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). It will also support continued engagement and consultation with the potentially affected Indigenous groups and assist the Crown to fulfill its duty to consult. Attached is the Round 4 IRs to address the remaining information requirements identified to date. Please note that additional comments from Indigenous nations are expected based on the responses to the Round 3 IRs. The Agency will notify Alamos Gold Inc. the week of August 29, 2022 if additional Round 4 IRs are identified based on these comments.

All submissions with respect to the technical review of Alamos Gold Inc.'s Round 3 IR responses will be made publicly available on the Canadian Impact Assessment Registry (Reference #80140). Alamos Gold Inc. is encouraged to review all of the comments submitted as they include detailed information and advice to support Alamos Gold Inc. in responding to the Round 4 IRs.

When responding to Round 4 IRs, the Agency requests that Alamos Gold Inc.:



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- consider the context and rationale for the required information for every question;
- present thorough discussions of any areas of uncertainty, applying a precautionary approach, given that some studies and plans may not be complete at this time;
- where uncertainty remains, provide clearly defined, detailed follow-up program measures, including proposed further mitigation measures; and
- present complete or summarized information and discussion within the IR responses, rather than limited responses and references to applicable reports.

The Government of Canada is integrating consultation with Indigenous Peoples into the EA process for the Project, to the extent possible, to fulfill its duty to consult, and where appropriate, accommodate. As noted in the Environmental Impact Statement (EIS) Guidelines, the Crown will rely on information collected for the purposes of the EA to fulfill its duty to consult and inform its assessment of potential impacts on the exercise of Aboriginal or Treaty rights.

In accordance with subsections 23(2) and 27(6) of CEAA 2012, the period of time used by Alamos Gold Inc. to provide the required information is not included in the legislated time limit within which the Minister of Environment and Climate Change must make the EA decision about the Project. Issuance of this IR package will pause the timeline at day 195 of 365.

The Agency is available to discuss the outcome of this review with Alamos Gold Inc. and provide further advice on how best to address the information required to move forward with the assessment process. If you have any questions, please contact me at [stephanie.krysa@iaac-aeic.gc.ca](mailto:stephanie.krysa@iaac-aeic.gc.ca) or 587-340-2082.

Sincerely,

<original signed by>

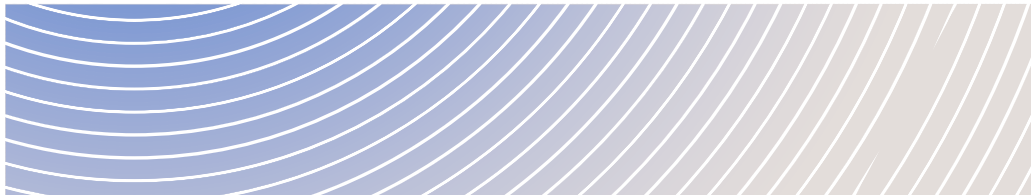
Stephanie Krysa  
A/Project Manager

Enclosures (1):

- Lynn Lake Gold Project - Technical Review - Round 4 Information Requests

c.c.: Michael Raess, Senior Environmental and Community Relations  
Coordinator, Alamos Gold Inc.  
Karen Mathers, Project Manager, Stantec Consulting Ltd.

# Lynn Lake Gold Project



TECHNICAL REVIEW INFORMATION REQUESTS – ROUND 4

August 26, 2022

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## List of Acronyms and Short Forms

<b>Acronym or Abbreviation</b>	<b>Definition</b>
Agency	Impact Assessment Agency of Canada
EIS	Environmental Impact Statement
EIS Guidelines	Environmental Impact Statement Guidelines
Project	Lynn Lake Gold Project
Proponent	Alamos Gold Inc.
RQD	Rock Quality Designation
VC	Valued component

**Round 3 Information Requests (IAAC-R4-XX):**

Reference IR#	Expert Dept. or Nation	EIS Guidelines Reference	EIS Reference	Context and Rationale	Information Requests
<b>Surface Water and Groundwater</b>					
IAAC-R4-01	Natural Resources Canada – Technical Review of Round 3 Information Request Responses	6.1.5 Groundwater and Surface Water	Federal Information Request Responses, Round 3, IAAC-R3-01	<p>The Environmental Impact Statement Guidelines (EIS Guidelines) require Alamos Gold Inc. (the Proponent) to provide an appropriate hydrogeological model for the Lynn Lake Gold Project (the Project) area, which discusses the hydrostratigraphy and groundwater flow systems. The model should include the delineation of key stratigraphic and hydrogeological boundaries and the physical properties of the hydrogeological units. The Proponent is also required to perform a sensitivity analysis to test model sensitivity to hydrogeological parameters (e.g. hydraulic conductivity).</p> <p>In its response to IAAC-R3-01, the Proponent presented data and sensitivity analysis results to support the conceptualization presented as the base case scenario for effects to groundwater at the MacLellan site. Natural Resources Canada noted that the data provided did not support the conceptualization presented as the base case scenario. Though the Proponent indicated that the rock quality designation (RQD) increases (i.e. corresponding to a decrease in hydraulic conductivity) with depth in the conceptual groundwater model, based on existing literature, the data presented in Figure IAAC-R3-01-1 did not support a differentiation in RQD between the intermediate bedrock unit (i.e. the hydrostratigraphic unit from approximately 50 metres to 200 metres below the top of bedrock) and deep bedrock unit (i.e. the hydrostratigraphic unit deeper than 200 metres below the top of bedrock). The data presented in Figure IAAC-R3-01-2, which depicted the measured hydraulic conductivity as a function of depth at the MacLellan site, included limited hydraulic conductivity data for the deep bedrock unit. The hydraulic conductivities presented for the deep bedrock unit are within the range of hydraulic conductivities presented for the intermediate bedrock unit, which did not support a 40% decrease in hydraulic conductivity with depth at the MacLellan site.</p> <p>As the hydraulic conductivity of the deep bedrock unit can affect the amount, timing, and location of groundwater discharges to surface water features, and</p>	<ul style="list-style-type: none"> <li>a. Provide the results of an updated calibrated groundwater model using a uniform hydraulic conductivity for all bedrock units more than 50 metres below the top of bedrock for the MacLellan site, to represent a conservative scenario for the groundwater assessment relative to baseline.</li> <li>b. Compare the results of the updated model referred to in a) with the original modelling results presented in response to IAAC-R3-01 and clearly describe any differences in the amount, timing, and location of groundwater discharges to surface water features.</li> <li>c. Provide an updated assessment of potential Project effects, including residual and cumulative effects, for all relevant VCs to account for any changes identified in question b. Include a description of any changes to the predicted residual effects criteria and extent of significance for each relevant VC.</li> </ul>

				<p>therefore effects to other valued components (VCs), updated modelling using a more conservative hydraulic conductivity value for the deeper bedrock unit is required.</p> <p>This information is required to support the Impact Assessment Agency of Canada’s (the Agency) understanding of potential effects of the Project to fish and fish habitat, migratory birds, species at risk, Indigenous Peoples, and other VCs that may be affected by changes in groundwater and, through groundwater-surface water interactions, surface water quality and quantity.</p>	
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