Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale

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April 27, 2017

Sent by E-mail

Janis Rod
Manager of Environment and Community Relations
Atlantic Gold Corporation
6749 Moose River Rd.
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JRod@atlanticgoldcorporation.com

Dear Ms. Rod,

SUBJECT: Outcome of conformity review of the Beaver Dam Mine Project Environmental Impact Statement

On March 27, 2017, the Canadian Environmental Assessment Agency (the Agency) received the Environmental Impact Statement (EIS) and EIS Summary for the Beaver Dam Mine Project (the Project) from Atlantic Gold Corporation (the proponent).

The Agency reviewed the EIS in consideration of the requirements of the *Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environmental Assessment Act, 2012 for the Beaver Dam Mine Project* (EIS Guidelines), dated January 29, 2016. Fisheries and Oceans Canada, Environment and Climate Change Canada, Transport Canada and Natural Resources Canada also participated in the review. The Agency has determined that the EIS does not fully meet the requirements outlined in the EIS Guidelines, a requirement to proceed to the detailed technical review and public comment period.

Annex 1 (attached) identifies EIS deficiencies to be corrected prior to resubmission. Based on the nature of the deficiencies, please submit a fully revised EIS that includes insertions or changes made throughout the EIS main text, Addenda, and EIS Summary.

The outcome of this conformity review, including this letter and Annex, will be shared with federal authorities and Indigenous groups and will be posted on the Canadian Environmental Assessment Registry Internet Site found at http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80111 .

Upon receipt of a revised EIS, the Agency will conduct a second conformity review. If the Agency determines that the revised EIS has addressed the identified deficiencies, the Agency will begin a technical review of the EIS and a public comment period. If the deficiencies are not addressed, the Agency will identify what information remains outstanding.

The Agency welcomes the opportunity to discuss the outcome of this conformity review with you and provide further advice on how to best address the information requirements identified. I will contact you in the coming days to discuss further. In the interim, if you have any questions, please contact me at 902-426-8946 or via email at CEAA.BDMine-MineBD.ACEE@ceaa-acee.gc.ca.

Sincerely,

<Original signed by>

Cheryl Benjamin
Project Manager
Canadian Environmental Assessment Agency, Atlantic Region

Cc: B. Tutty, Nova Scotia Environment

Attachment (1)

1. Annex 1: Information required to conform with the EIS Guidelines

Annex 1: Information required to conform with the EIS Guidelines

Scope of Project

Context and Rationale

Part 1 of the EIS Guidelines describe the scope of the Project to include "changes to processes and infrastructure at the Touquoy Mine site related to the Beaver Dam Mine Project …" and includes a list of components and activities.

The EIS provides some information on the aspects of the Project to be carried at the Touquoy Mine site including the following:

- Chapter 2, Project Description, describes processing and tailings management for the Beaver Dam Mine Project at the Touquoy site;
- Chapter 5, Environmental Effects Assessment Methodology, identifies Touquoy processing and tailings management facility as a *physical component* and tailings management as a *physical activity* in the *Scope of the Environmental Assessment;* and
- Chapter 6, Environmental Effects Assessment, provides a *Potential Environment Interactions with Project Activities at Touquoy Processing and Tailings Management Facility* table for each valued component (VC).

While interactions between the Project components at the Touquoy site and the environment are acknowledged, they were not incorporated into the effects assessment for each VC.

C1. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, to include a robust effects assessment incorporating effects from components and activities related to the Project that are proposed at the Touquoy site. Clearly describe potential environmental effects that could arise from these components and activities, describe proposed mitigation measures for those effects, characterize the residual effects, determine significance of the residual environmental effects, and develop a follow-up program for applicable VCs. Ensure that the cumulative effects analysis is also updated, as appropriate.

Effects Assessment – Atmospheric Environment VC – air quality

Context and Rationale

Section 6.1.1 of the EIS Guidelines requires a baseline survey of ambient air quality in the project study area including but not limited to the following contaminants: total suspended particulates, fine particulates ($PM_{2.5}$), particulate matters up to 10 micrometers in size (PM_{-10}), sulfur oxides (SO_x), volatile organic compounds (VOCs) and nitrogen oxides (NO_x).

Section 6.1 of the EIS identifies that only total particulate matter (TPM) and PM10 were measured on-site in developing a baseline. For the other contaminants of potential concern (including SO_x, VOCs, NO_x and $PM_{2.5}$), regional ambient air monitoring from Pictou and Cherry Brook (Dartmouth) were used as surrogates. Health Canada advises that given the industrial activities occurring in these surrogate

locations, it is not clear that these stations are appropriate representations of air quality in the project area and adequate to understand potential impacts to human health.

Sections 6.2 and 6.2.1 of the EIS Guidelines require predicted changes to the environment to be described in terms of the geographic extent of the changes, the duration and frequency of change, and whether the environmental changes are reversible or irreversible. The assessment of potential effects to air quality provided in Section 6.1.6.1 of the EIS is not sufficiently robust to support the prediction of effects on VCs such as effects on Aboriginal peoples' health and current use of lands and resources for traditional purposes.

C2. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, with the following:

1) baseline field data for the missing parameters, or an updated assessment with more relevant surrogates, or a strong rationale to support the use of the current surrogates; and
2) a robust assessment of predicted changes in air quality.

Based on the updates made to the air quality baseline information and assessment of changes to the environment, update the assessment of environmental effects of the VCs, particularly effects on Aboriginal peoples. Ensure that the cumulative effects analysis is also updated as appropriate.

<u>Effects Assessment – Atmospheric Environment VC - noise</u>

Context and Rationale

Section 6.1.1 of the EIS Guidelines requires a baseline ambient noise survey at key receptor points such as Aboriginal communities. Section 6.1.3.5 of the EIS provides information on baseline noise levels measured at the nearest cottages along the haul road; however, ambient noise was not evaluated at the Beaver Lake Indian Reserve 17.

Sections 6.2 and 6.2.1 of the EIS Guidelines require predicted changes to the environment to be described in terms of the geographic extent of the changes, the duration and frequency of change, and whether the environmental changes are reversible or irreversible. The assessment of potential effects to noise levels provided in Section 6.1.6.3 of the EIS is not sufficiently robust to support the prediction of effects on VCs such as effects on Aboriginal peoples.

Health Canada advises the Agency that noise modelling, including adjustments for evaluating noise in areas where there is a higher expectation of peace and quiet (e.g. quiet rural areas), should be considered to better understand effects. The proponent could consult Health Canada's *Useful Information for Environmental Assessments* to determine the methods for evaluating construction and operational noise (including calculating change in percentage highly annoyed as a result of project activities).

C3. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, with the following:

(1) baseline noise levels measured at the Beaver Lake Indian Reserve 17, or an updated assessment with more relevant surrogates, or a strong rationale to support the use of the current locations as surrogates; and
(2) a robust assessment of predicted changes in noise levels, including all project-related activities from blasting and crushing to hauling material.

Based on the updates made to the noise levels baseline information and assessment of changes to the environment, update the assessment of environmental effects of the VCs, particularly effects to Indigenous peoples. Ensure that the cumulative effects analysis is also updated as appropriate.

Effects Assessment – Atmospheric Environment VC - light

Context and Rationale

Sections 6.2 and 6.2.1 of the EIS Guidelines require predicted changes to the environment to be described in terms of the geographic extent of the changes, the duration and frequency of change, and whether the environmental changes are reversible or irreversible.

The assessment of potential effects to light levels provided in Section 6.1.6.4 of the EIS is not sufficiently robust to support the prediction of effects on VCs such as effects on Aboriginal peoples.

C4. Specific Conformity Information Requirement

Update the EIS and EIS Summary, as applicable, with a robust assessment of predicted changes in light levels, and the associated assessment of environmental effects of the VCs, particularly effects to Aboriginal peoples. Ensure that the cumulative effects analysis is also updated as appropriate.

Effects Assessment – Aboriginal Peoples; and Effects on Federal Land

Context and Rationale

The EIS Guidelines in Section 6.3.4 requires a description and analysis of how changes to the environment caused by the Project will affect each Aboriginal group's current use of land and resources for traditional purposes, human health and socio-economic condition. Section 6.4 of the Guidelines requires an analysis of potential effects directly on federal property (i.e. Beaver dam IR 17). The EIS appears to use a mix of methodologies that require clarification.

The EIS appears to make a direct correlation between the biophysical effects of the Project and effects to Aboriginal current use of land and resources for traditional purposes, which is inconsistent with the methodology described in the Agency guidance document *Technical Guidance for assessing the Current Use of Lands and resources for traditional Purposes under the Canadian Environmental Assessment Act, 2012* (Current Use Guidance) https://www.canada.ca/en/environmental-assessment-

agency/services/policy-guidance/technical-guidance-assessing-current-use-lands-resources-traditional-purposes-under-ceaa-2012.html .

For example, Table 6.11-5 *Pathway and Potential Effect of Valued Components with the Mi'kmaq of NS* appears to suggest that where a VC is a pathway for effects to current use of land and resources for traditional purposes (e.g. fish) is not likely to have significant adverse environmental effects, then there would be no significant adverse effect on the current use of land and resources for traditional purposes. This method is similarly used for effects on Aboriginal human health and socio-economic conditions. However, as described in the Current Use Guidance, "There may be a relationship between the effects on the biophysical components of the environment and the effects on the current use of lands and resources for traditional purposes. Such relationships will exist when the use is related to a particular component (e.g., fish). The assessment of a biophysical VC may inform the assessment of a current use VC. However, effects to current use cannot always be entirely captured solely on an independent assessment of biophysical components."

Further to this, not all the links between biophysical effects and effects to Aboriginal peoples are considered in the analysis. For example, Section 6.11 of the EIS does not include a discussion about whether changes to air quality, noise or light may impact nearby receptors (e.g. migratory birds) or Indigenous peoples who use the area near the project site for recreational/subsistence activities such as hunting, fishing, plant collection etc. In addition, there is no discussion about whether air emissions may deposit on vegetation or contaminate local food sources, thus impacting Aboriginal health.

The conclusions drawn from the MEKS study as described in Section 6.11.6 of the EIS state "no effect is expected on the areas where the majority of hunting, gathering and trapping activities occur, i.e., Tent Lake and Cope Pond, Rocky, Otter, Como, Grassy and Beaver Lakes, the Killag River, the West River, and the West River Sheet Harbour." However, some of these waterbodies are located along the haul route; the EIS does not provide information to support the conclusion that "no effect is predicted." It is not clear if hauling could increase dust and noise levels, which in turn impact traditional uses such as fishing.

In addition, the EIS is missing an analysis of potential effects directly on federal property (i.e. on Beaver Dam IR 17) as required in the EIS Guidelines, Section 6.4. Section 6.14.2 of the EIS states the Project has limited potential to result in a change in environment on federal lands, while provided insufficient supporting analysis. The assessment of potential effects to the environment in (e.g.) EIS Sections 6.1.6 (air quality, noise and light) is not sufficiently robust to support the prediction of effects on federal land as provided in EIS Section 6.4.

Section 5 of the EIS Guidelines requires that views expressed by Aboriginal groups on the effectiveness of the mitigation or accommodation measures be documented in the EIS. Chapter 4 of the EIS and Appendix B describe engagement with the Mi'kmaq and summarize issues raised and the proponent's response. Mitigation measures are generally presented within each VC section, without reference to whether any comments were provided by the Mi'kmaq. It is unclear whether the mitigation measures or accommodation measures have been presented to the Mi'kmaq, and if any views were raised by the Mi'kmaq.

C5. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, to provide an analysis of how changes to the environment caused by the Project (as updated by above items C2, C3 and C4) will affect the current use of land and resources for traditional purposes by Aboriginal peoples, Aboriginal health, and Aboriginal socio-economic conditions, including evidence to support conclusions.

As updates are made to Section 6.11 clarifying the analysis used to predict effects on Indigenous peoples, update the corresponding Section 6.14.3.

Update the predicted effects on federal lands (i.e. Beaver Dam IR 17) with any updated analysis of potential changes to the atmospheric environment (air quality, noise or light), including in Section 6.14.2.

Update both the EIS and EIS Summary, as applicable, if views are or have been expressed by the Mi'kmaq on the mitigation measures proposed in the EIS, including any additional items identified through the updated analysis required in items above.

Effects Assessment – Fish and Fish Habitat VC

Context and Rationale

Section 6.1.6 of the EIS Guidelines outlines the requirements for the description of baseline conditions for fish and fish habitat, including:

- photos in support of habitat description; and
- maps, at a suitable scale, indicating the surface area of potential or confirmed fish habitat for spawning, nursery, feeding, overwintering, migration routes, etc. This information should be linked to water depths (bathymetry) to identify the extent of a water body's littoral zone.

The EIS does not include this information.

Section 6.3.1 of the EIS Guidelines also requires identification of any potential harmful alteration, disruption or destruction of fish habitat, including calculations of any potential habitat loss. DFO has advised the Agency that there are gaps in information on the predicted footprint of direct effects to fish habitat in the mine footprint and along the haul road.

C6. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, with the following:

(1) photos of representative sections of watercourses including fish habitat in wetlands;
(2) updated effects predictions with estimated area footprints of anticipated direct impacts to confirmed and potential fish habitat in watercourses and wetlands in the mine footprint and WC-13, just downstream of existing settling pond. This information could be captured in Table 6.6-25 *Potential Direct and Indirect Fish and Fish Habitat Impacts within the Mine Footprint*; and
(3) updated effects predictions with estimates of direct impacts to confirmed and potential fish habitat in the footprints of any potential watercourse re-alignments associated with the haul road. This data

could be placed in Table 6.6-27 *Watercourse Locations within Haul Road PA and Culvert Condition and Plan for Upgrade*.

Effects as a Result of Federal Decisions

Context and Rationale

Section 6.4 of the EIS Guidelines requires that if there is the potential for a change to the environment arising as a result of a federal decision(s) (e.g. an authorisation under section 35 of the *Fisheries Act*) the EIS should include a description of the specific project components for which a federal authorisation/decision is required. The Guidelines also require an assessment of effects including those to any other VCs not already included that may be affected by the changes to the environment caused by these specific project components. It is not clear in the EIS what authorizations could be required, nor what effects could arise from those authorizations.

Section 6.14.4 and 6.14.5 of the EIS provide contradictory information as to whether a federal authorization will be required for project components. Specifically, Section 6.14.4 states "any physical activities in wetlands, watercourses or waterbodies may require authorization in accordance with the Fisheries Act", while Section 6.14.5 states "the project is not anticipated to require a federal authority to exercise a power or perform a duty, such as granting a permit."

If federal permits/decisions could be required, associated changes to the environment should be described in accordance of 5(2) of CEAA 2012.

C7. Specific Conformity Information Requirement

Update both the EIS and EIS Summary, as applicable, with the following:

(1) describe the specific project components for which a federal authorisation/decision may be required;

(2) describe potential changes to the environment that are directly linked or necessarily incidental to potential federal authorities' exercise of a power, performance of a duty or function, related to the Project, as described in Section 5(2)(a) of CEAA 2012 (i.e. beyond those described in Section 5(1)(a) of CEAA 2012).

For example, if a component of the Project could require a *Fisheries Act* authorization, provide a robust effects assessment of the specific project component on the relevant VC (e.g. on surface and groundwater quality and quantity).

(3) provide a robust description of potential effects (or rationale for why no predicted effects) of these potential changes described in (2) on non-Aboriginal health and socio-economic conditions, physical and cultural heritage, and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, as required by Section 5(2)(b) of CEAA 2012.

For example, if a component of the Project could require a *Fisheries Act* authorizations, describe associated environmental effects on socio-economic conditions (e.g. from loss of hunting and fishing activity).

Effects of Potential Accidents and Malfunctions

Context and Rationale

Section 6.7.1 of the EIS Guidelines requires the EIS to identify the plausible worst-case scenarios and the effects of these scenarios. It is not clear that accidents described and assessed in the EIS include the worst-case scenario. For example, while the EIS identifies possible scenarios such as a bank structure failure of the settling pond (Section 6.15.3.3) or fuel spills through failure of storage tanks or refueling truck accidents (Section 6.15.4.1), the maximum capacity of these components and equipment units is not provided, nor are the effects of these amounts assessed.

C8. Specific Conformity Information Requirement

Update the EIS with descriptions of plausible worst-case accident and malfunction scenarios and the effects of these scenarios.