



Impact Assessment
Agency of Canada

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July 15, 2021

Craig Hudson
Atlantic Mining NS Inc.
<email address removed>

SUBJECT: Outcome of completeness check of the responses provided by Atlantic Mining NS Inc. to Round 2 of the Information Requirements on the Environmental Impact Statement for the Beaver Dam Mine Project

Dear Craig Hudson:

On June 17, 2021, the Impact Assessment Agency of Canada (the Agency) received responses from Atlantic Mining NS Inc. to Round 2 Information Requirements (IRs) issued by the Agency on June 12, 2019, as well as a revised Environmental Impact Statement (EIS). The Agency developed the IRs based on a review of the EIS and associated EIS summary by the Agency, other federal authorities, the Mi'kmaq of Nova Scotia, and the public.

The Agency conducted a completeness check to determine if the information received is sufficient to enable the Agency to proceed with the federal Environmental Assessment (EA) and the draft EA Report. The completeness check is to also ensure that expert government departments, the Mi'kmaq of Nova Scotia, and the public are easily and clearly able to identify and assess the complete IR responses. Failure to provide clear and accessible responses reduces transparency and increases the risk that important information may be missed and, therefore, not considered during the Agency's analysis.

Complete responses are necessary for the Agency to provide advice to the federal Minister of Environment and Climate Change on whether the Project, taking into account the implementation of any mitigation measures, is likely to cause significant adverse environmental effects as described in Section 5 of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Round 2 of the IRs also includes several questions that will advise the Minister on the potential for the Project to impact Aboriginal and/or Treaty rights. The outcome of this completeness check, including this letter and Annex 1, will be shared with federal and provincial authorities and the Mi'kmaq of Nova Scotia and posted on the Canadian Impact Assessment Registry Internet Site.



Upon review, the Agency has concluded that the responses provided are not adequate. The responses were incomplete with respect to several topics, including but not limited to:

- effects on fish and fish habitat,
- changes to water quantity and quality,
- effects on human health,
- potential effects of accidents and malfunctions,
- effects on the current use of lands and resources for traditional purposes, and
- effects directly and indirectly associated with federal authorizations as described by subsection 5(2) of CEAA 2012.

For the Agency to confirm that the responses are complete, all deficiencies detailed in Annex 1 must be addressed prior to resubmitting the Round 2 IR response package. The IR responses should be contained within a stand-alone response document whenever possible to ensure they can be easily reviewed. If any of the responses need to reference the EIS, the exact location of the response (section and page number) must be provided and the referenced information must clearly respond to the IR (i.e., referring to an entire chapter or appendix is not sufficient).

You may wish to discuss certain IRs with the Agency or other government experts to obtain clarification or additional information as necessary, prior to resubmitting the responses. Working directly with government experts in this manner will help to ensure that IRs are responded to satisfactorily. The Agency can assist in arranging meetings with government experts, at your request.

Upon submitting a revised response to Round 2 of the IRs, the Agency will conduct another completeness check. For further information, please consult the Agency document on Information Requests and Timelines: <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/information-requests-timelines.html>

Following the next completeness check, the Agency will notify you in writing about the outcomes and next steps. For example:

- If the Agency determines that the revised response to Round 2 of the IRs addresses the deficiencies identified in Annex 1, the Agency will commence a technical review of the responses.
- If the deficiencies are not addressed, the Agency will notify you of the information required.

The Agency welcomes the opportunity to discuss the outcome of this completeness check with you and provide further advice on how to best address the IRs identified. The Agency recommends scheduling a meeting to discuss the findings detailed in Annex 1. Please contact me at 902-399-8834 or via email at bdmine-minebd@iaac-aeic.gc.ca to schedule a meeting.

Please confirm receipt of this message and contact me if you require further information.

Sincerely,

<Original signed by>

Kathryn MacCarthy
Project Manager, Impact Assessment Agency of Canada
Atlantic Region

Cc: Suzanne Wade & Stephen Zwicker - Environment and Climate Change Canada
Chris Burbidge, Matthew Baker & Janice Ray - Fisheries and Oceans Canada
Shelley Ball & Peter Unger - Natural Resources Canada
Jason Flanagan - Transport Canada
Jeff Reader & Beverly Ramos-Casey - Health Canada
Bridget Tutty – NS Environment and Climate Change

Attachment:

Annex 1 – Summary Table for Non-conforming Round 2 Information Requirement Response

Beaver Dam Mine Project
Annex 1 - Summary Table for Non-conforming Round 2 Information Requirement Responses
July 15, 2021

ACRONYMS AND SHORT FORMS

Agency	Impact Assessment Agency of Canada
CAAQS	<i>Canadian Ambient Air Quality Standards</i>
CCME	Canadian Council of Ministers of the Environment
COPC	contaminant of potential concern
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EEMP	Environmental Effects Monitoring Plan
EIS	Environmental Impact Statement
EOM	end of mine
ESFW	Eastern Shore Forest Watch Association
GCDWQ	<i>Guidelines for Canadian Drinking Water Quality</i>
GSC	Geological Survey of Canada
HADD	harmful alteration, disruption, and destruction
HC	Health Canada
HHRA	Human Health Risk Assessment
IR	information requirement
KMKNO	Kwilmu'kw Maw-klusuaqn Negotiation Office
LAA	local assessment area
ML/ARD	metal leaching/acid rock drainage
MPOI	maximum point of impingement
NRCan	National Resources Canada

NSDNR	Nova Scotia Department of Natural Resources
NSE	Nova Scotia Environment
PC	post closure
PM	particulate matter
PQRA	Preliminary Quantitative Risk Assessment
SAR	species at risk
SARA	<i>Species at Risk Act</i>
SOCI	species of conservation interest
TSP	total suspended particulate
TSS	total suspended solids
VC	valued component

Beaver Dam Mine Project - Summary Table for Non-conforming Information Requirement Responses (Round 2)
July 15, 2021

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
Project Overview						
CEAA-2-01	Agency, Indigenous groups	5 (1)(c)(iii) Current Use of Lands and Resources for Traditional Purposes 5 (1)(c)(ii) Aboriginal Physical and Cultural Heritage 5 (1)(c)(iv) Any Structure, Site or Thing of Historical, Archaeological, Paleontological or Architectural Significance	Section 2, Project Description Section 6.14 Indigenous People	<p>During consultation, Indigenous groups requested a visual representation of the Project that would clearly show landscape changes throughout all phases. The revised Environmental Impact Statement (EIS) states that the project area and its vicinity are used intensively by the Mi'kmaq of Nova Scotia.¹</p> <p>In the revised EIS, the proponent provided discussion and topographic mapping outlining the visual impacts of the Project (all phases) from three positions (in a canoe in Lower Beaver Lake at 0.8 m height; standing on a rooftop; and at 5 m above ground) in or near Beaver Dam IR 17.</p> <p>However, the proponent has not provided a virtual representation or model that provides Indigenous groups or the Agency with an understanding of the visual impacts of the Project. The required virtual representation or model should be 2D or 3D and, based on the significant current and traditional use in the project area, employ additional viewpoints beyond Beaver Dam IR 17. The rationale of viewpoint selection is to be provided.</p>	<p>a. Provide a 2D or 3D model or virtual representation of the project area (before construction, and during operation, decommissioning and post-reclamation) to facilitate a clearer understanding of the visual impact of the Project.</p> <p>b. Viewpoints of the model or representation should be based on nearest residences and proximal areas of close land users.</p> <p>c. Provide a rationale as to why these viewpoints were selected and how they adequately depict landscape change over time during all phases of the Project.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p> <p>c. Conforms.</p>
Environmental Assessment Methodology						
CEAA 2-02	All	Part 2, Section 6.6 Significance of Residual Effects	Section 5.10 Residual Effects and Determination of Significance	<p>The revised EIS provides an updated and improved methodology for the environmental assessment. However, as required in CEAA 1-11, CEAA 1-14 and CEAA 1-17, the EIS does not present adequate definitions of valued component-specific criteria and it does not provide sufficient rationale within significance conclusions for direct and cumulative effects.</p> <p>The significance determination criteria in Table 5.10-1 have been more clearly defined (e.g. magnitude, duration, timing, etc.) and describe the criteria rankings (e.g. low, medium, high). Where possible, quantitative information should be used (specifically for magnitude and timing). This information and clarity will allow reviewers to better follow and understand the proponent's assessment of individual valued components and the subsequent significance conclusions.</p> <p>The determination of significance for each valued component, (specifically noise, air, wetlands, fish and fish habitat, and Indigenous peoples) should be presented in a rational, defensible way that discusses the key criteria and provides a rationale if a particular criterion is deemed not relevant. The proponent may consider a decision tree or matrix which describes the combination of factors (magnitude, reversibility, frequency, duration, etc.) that would produce a significant effect.</p>	<p>a. Expand upon the revised valued component-specific criteria within the individual effects assessment chapters of the EIS, with a focus on quantitative definitions, specifically for magnitude and timing. If a quantitative criterion is not possible, provide a rationale as to why quantitative definitions are not appropriate.</p> <p>b. Provide an expanded analysis to support each significance determination in the direct and cumulative effects assessments (specifically noise, air, wetlands, fish and fish habitat, and Indigenous peoples) so that the reviewer understands how the conclusions were made in the revised EIS.</p>	<p>a. Conforms.</p> <p>b. Non-conforming. The response does not adequately address Part B of the information requirement (IR). The significance threshold provided for fish and fish habitat is partially based on DFO's No Net Loss Policy that was replaced by updates to the <i>Fisheries Act</i> in 2019. The significance threshold refers to water quality guidelines but does not state which guidelines on which the threshold is based. Revise the significance threshold to reflect <i>Fisheries Act</i> amendments made in 2019 and specify the relevant guidelines.</p>

¹ Revised EIS, p752.

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
				<p>Furthermore, several of the valued components (e.g. noise, air, wetlands, fish and fish habitat, Indigenous peoples, etc.) throughout the EIS exceed thresholds and provide limited justification in concluding non-significance, or have an outcome of many maximum criteria rankings, and provide limited justification in concluding non-significance. For example, in the assessment of wetlands in section 6.8.9, the proponent concludes that effects will be high in magnitude, permanent and irreversible. The proponent offers little justification for the conclusions of non-significance.</p> <p>Additionally, in section 6.1, the predicted residual environmental effects of Project development and production on noise are assessed as adverse, but not significant. However, Table 6.1-9 notes that there is an exceedance of guidelines/threshold at the property lines. They extend beyond the project area, they extend beyond 3 years and they occur regularly during operations. A defensible rationale is required to justify the non-significance conclusion.</p> <p>The same comments apply for the cumulative effects assessments provided in section 8.</p>		
CEAA 2-03	Agency, KMKNO	Section 6.1.4; 6.2.2	Section 6.6.6.3 Appendix F.6	In order to provide reviewers with a comprehensive understanding of what is being proposed, the proponent is required to compile a list of all mitigation, monitoring and follow-up programs related to the Project.	a. Provide a summary table or document of all proposed mitigation measure, monitoring and follow-up programs.	a. Conforms
Light						
CEAA 2-04	Agency	Part 2, Section 6.6 Significance of Residual Effects	Section 6.3.5.2 Thresholds for Determination of Significance	<p>In the revised EIS, the proponent states that a significant impact for light is defined as “direct light trespass that according to the affected resident regularly interferes with the use and enjoyment of nearby residential properties on a permanent basis and/or evidence of unacceptable levels of bird mortality associated with Project lighting”.</p> <p>In accordance with the EIS Guidelines and the Agency's Reference Guide: <i>Determining Whether a Project Is Likely to Cause Significant Adverse Environmental Effects</i>, the definitions of significance and the criteria used to determine a significant effect must be quantifiable, to the extent possible, for each valued component (VC).</p>	a. Provide a quantitative definition of significance for light that can be used for the purpose of the environmental assessment. If this is not feasible, provide a reasoned rationale for the proposed definition of significance for light.	a. Conforms
CEAA 2-05	Agency, KMKNO, ESW, Save Caribou	Part 2, Section 6.6.10 Aboriginal Peoples	Map Book - Figure 6.3-2 Light Impact Analysis	<p>The revised EIS indicates that there is significant use of the Beaver Dam Mine site and its vicinity. Throughout consultation, Indigenous groups have expressed concern regarding light: specifically, how it may impact upon current use practices or may result in disturbance to wildlife, including species utilized by Mi'kmaq hunters.</p> <p>The revised EIS states that “the lighting effects from Beaver Dam would have a lower impact although it could be more widely experienced, especially if moisture or particulate matter are present in the atmosphere. The resulting halo of light above the mine might be seen from many locations.” The Agency understands that Figure 6.3-2 provided in response to CEAA 1-43 does not represent the extent to which project light can be seen. For the</p>	<p>a. Provide a light shed map in consideration of Beaver Dam IR 17 and areas identified for current use practices. The model should use a conservative value in estimating moisture or particulate matter in the atmosphere.</p> <p>b. Provide additional consideration of potential fauna behaviour and distribution effects in relation to project lighting – specifically on species utilized by Mi'kmaq hunters.</p>	<p>a. Conforms.</p> <p>b. Non-conforming. The response does not adequately address Part B of IR. The response discusses the effects on wildlife, but does not identify species utilized by Mi'kmaq hunters and address potential effects on behaviour and distribution. Revise the response to provide the information required in the original IR.</p> <p>c. Conforms.</p> <p>d. Conforms.</p>

Annex 1 - Summary Table for Non-conforming Round 2 Information Requirement Responses

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
				<p>Agency and Indigenous groups to understand potential effects from light, a better understanding of the extent of light effects is required.</p> <p>Furthermore, in consideration of the Haul Road, the proponent indicated that trucking will occur “mainly under daytime and pre-curfew conditions and thus light impacts from trucks along the Haul Road are expected to be insignificant when compared to baseline daylight illuminance and screening provided by trees along the Road”. However, the proponent does not provide sufficient information on how Haul Road or mine operations may affect wildlife or specify how species utilized by Mi’kmaq hunters may be affected.</p> <p>Lastly, Table 6.11-6 states that “Project infrastructure and roads will have lights which are operational at all times.” Clarification is required because it is the Agency’s understanding that lighting will not be installed along the Haul Roads.</p>	<p>c. Indicate how predicted changes to fauna behavior/distribution may affect local hunting practices in the project area and its vicinity.</p> <p>d. Confirm whether lighting will be installed along the Haul Roads.</p> <p>e. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	<p>e. Non-conforming. The response does not adequately address Part E of IR. Although the response refers to Section 8 of the updated EIS, it is unclear where or how updates were made in consideration of information provided in Parts A-D.</p>
Fish and Fish Habitat						
CEAA 2-06	DFO, KMKNO	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.9.3.1 Fish Habitat Assessment, Table 6.9-4; 6.9.6.2 Fish and Fish Habitat Impact Extent, Table 6.9-27	<p>Section 6.3.1 of the EIS Guidelines requires “the identification of any potential harmful alteration, disruption or destruction of fish habitat, including the calculations of any potential habitat loss (temporary or permanent) in terms of surface areas”. The information is necessary for the Agency to properly understand potential effects to fish and fish habitat.</p> <p>Section 6.9.6.2 of the revised EIS does not provide an estimate of the surface area of all potential fish habitat alteration and destruction likely to result from the Project. Although Table 6.9-27 provides affected watercourse length, it does not provide an estimate of the total affected area.</p> <p>Section 6.9.6.2.2 of the revised EIS describes indirect impacts to fish and fish habitat within the Beaver Dam Mine site; however, Table 6.9-27 does not provide an estimate of the surface area of indirect impacts to fish habitat that are likely to result from the Project (e.g., substantial changes in hydrology to the section of WC-5 downstream of the waste rock storage site, as well as Crusher Lake, Mud Lake and associated wetlands). Table 6.8-1 indicates that the total size of Wetland-17 surrounding Mud Lake has not been calculated; however, the hydrological alterations upstream of this wetland are likely to result in a harmful alteration. The area of potential alteration and disruption should be provided.</p> <p>Table 6.9-4 describes fish habitat present within each wetland and its associated watercourse in the Beaver Dam Mine site. All wetlands are identified as fish habitat. Table 6.9-27 is not consistent with Table 6.9-4 because it indicates that a number of wetlands listed in Table 6.9-4 have low potential to be fish habitat. A detailed rationale for the low potential characterization has not been provided.</p> <p>In reference to Table 6.9-37 of the revised EIS, the proponent indicates that impacts to fish habitat will be quantified and confirmed through monitoring to determine if serious harm to fish is likely. Section 8.5.6.2.3.1 of the revised</p>	<p>a. Provide an estimate of the surface area (in square metres) of the potential serious harm to fish (i.e., destruction and permanent alteration of fish habitat) that may result from the Project for each affected waterbody, watercourse and wetland. The proponent should assume any waterbody, watercourse or wetland that has been identified as potential fish habitat, but not confirmed, is fish habitat for the purposes of the estimate.</p> <p>b. Update Tables 6.9-4 and 6.9-27, as appropriate, indicating which wetlands, or portions of wetlands, are considered to be fish habitat. Provide a detailed rationale for any waterbodies, watercourses or wetlands that are characterized as having a low potential to be fish habitat along with supporting technical and scientific information.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. An estimate of the surface area (in square metres) of the potential harmful alteration, disruption or destruction (HADD) of fish habitat that may result from the Project for each affected waterbody, watercourse and wetland was not provided. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. It is unclear if the requested tables were updated in addressing this response. The response did not provide a detailed rationale for waterbodies that were characterized as having a low potential to be fish habitat. Revise the response to provide the information required in the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
				EIS indicates that there is uncertainty as to Project effects on fish and fish habitat. The proposed approach to reduce this uncertainty is to implement monitoring programs and follow-up programs. Impacts to fish and fish habitat must be characterized and quantified during the environmental assessment so that appropriate avoidance, mitigation and offsetting measures, as well as follow-up monitoring programs, are considered during the environmental assessment.		
CEAA 2-07	DFO, KMKNO	6.5 Mitigation; 6.6 Significance of Residual Effects	6.9.5.2 Thresholds for Determination of Significance; 6.9.9 Residual Effects and Significance	<p>Section 6.9.5.2 of the revised EIS defines a significant adverse effect from the Project on fish and fish habitat as “an effect that is likely to cause serious harm to fish ... an adverse effect that does cause a permanent loss to fish habitat may be mitigated by replacement of lost habitat and removal/rescue of fish present prior to commencement of the activity. This may also allow for an adverse effect to be considered not significant”.</p> <p>Section 35 of the <i>Fisheries Act</i> prohibits <i>serious harm to fish</i> which is defined in the Act as “the death of fish or any permanent alteration to, or destruction of, fish habitat”.</p> <p>Project infrastructure and/or activities that result in the direct destruction of fish habitat are considered serious harm to fish. Substantial alterations to hydrological conditions in fish habitats over the long term that limit or diminish the ability of fish to use these habitats to carry out life processes are also considered to be serious harm to fish.</p> <p>DFO does not agree with the proponent’s prediction that direct and indirect impacts to fish and fish habitat from the Project will not result in serious harm to fish. Based on the information presented in the revised EIS, DFO has determined that the Project is likely to result in serious harm to fish and that a <i>Fisheries Act Authorization</i> is required. Based on the significance threshold for fish and fish habitat provided in section 6.9.5.2 of the revised EIS, additional information is needed about fish habitat offsetting measures to determine whether the Project is likely to result in a significant adverse effect to fish and fish habitat. The Agency requires that the proponent demonstrate that measures and standards have been fully applied to first avoid, then mitigate, residual harm to fish, as set out in DFO’s Fisheries Protection Policy Statement (http://www.dfo-mpo.gc.ca/pnw-ppe/pol/index-eng.html#ch84).</p>	<ul style="list-style-type: none"> a. Following the application of additional measures to avoid and mitigate impacts to fish and fish habitat (see DFO IR-3/CEAA 2-06), provide an estimate of the total surface area of residual serious harm to fish (in square metres) that is likely to result from the Project. This estimate must include fish habitats that will be directly destroyed by Project components, and fish habitats that will be permanently altered as a result of hydrological alterations from Project components. b. Provide a draft fish habitat offsetting plan that identifies specific measures that will be implemented to offset the likely residual serious harm to fish from the Project. The draft fish habitat offsetting plan should be developed in accordance with available guidance: <i>DFO’s Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting</i> (http://www.dfo-mpo.gc.ca/pnw-ppe/offsetting-guide-compensation/index-eng.html). Note that a final fish habitat offsetting plan and associated letter of credit is required to apply for a <i>Fisheries Act Authorization</i>. c. Update the direct and cumulative effects assessment of related valued components as appropriate. 	<ul style="list-style-type: none"> a. Non-conforming. The response does not adequately address Part A of the IR. An adequate response to CEAA 2-06 is required to respond to this IR. Revise the response to provide the information required in the original IR. b. Non-conforming. The response does not adequately address Part B of the IR. It is unclear what specific measures would be implemented to offset the likely death of fish and harmful alteration, disruption or destruction of fish habitat from the Project. Revise the response to provide the information required in the original IR. c. Non-conforming. The response does not adequately address Part C of the IR. Although the response refers to Section 8 of the updated EIS, it is unclear where the response can be found within this section. Revise the response to provide the information required in the original IR.
CEAA 2-08	DFO, KMKNO	Part 2, Section 2.2 Alternative Means of Carrying out the Project; Part 2, Section 6.5 Mitigation	Section 6.9.6.2 Fish and Fish Habitat Impact Extent	<p>Part 2, Section 2.2 of the EIS Guidelines requires the proponent to identify and consider the effects of alternative means of carrying out the Project that are technically and economically feasible. Part 2, Section 6.5 of the EIS Guidelines requires the proponent to identify technically and economically feasible mitigation measures for each environmental effect identified.</p> <p>As set out in DFO’s <i>Fisheries Protection Policy Statement</i> (http://www.dfo-mpo.gc.ca/pnw-ppe/pol/index-eng.html#ch84), proponents are required to demonstrate that measures and standards have been fully applied to first avoid, then mitigate, residual serious harm to fish before DFO will consider offsetting measures.</p>	<ul style="list-style-type: none"> a. Provide a description of any technically and economically feasible opportunities to redesign the Project in a manner that would avoid and mitigate impacts to fish and fish habitat. b. Provide a description of any additional technically and economically feasible measures that could be implemented to mitigate impacts to fish and fish habitat, including any site-specific measures that can be implemented to maintain pre-construction hydrological flows into and out of downstream surface water habitats. 	<ul style="list-style-type: none"> a. Conforms. b. Non-conforming. The response does not adequately address Part B of the IR. The response states: “<i>Minimizing the Project footprint while avoiding critical lichen and wetland habitat is one example that has been applied to reduce impacts to maintain pre-construction hydrology</i>”. However, the project footprint appears to have been expanded since this IR was issued. Revise the response to provide site-specific measures that can be implemented to maintain pre-construction

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				<p>Page 488 of the revised EIS states that there are “opportunities to further redesign the project to avoid/minimize the impacts” to fish and fish habitat. Table 6.9-36 on page 509 of the revised EIS includes a commitment from the proponent to “Maintain pre-construction hydrological flows into and out of down-stream surface water habitats, to the extent practicable, to limit indirect impacts to fish habitat.”</p> <p>Section 6.9.6.2 of the revised EIS describes a large area of residual serious harm to fish at the Beaver Dam Mine site from the Project. It is important to understand what technically and economically feasible measures may be available to avoid and mitigate impacts to fish and fish habitat from project infrastructure and activities, including opportunities to redesign the Project, as well as the potential environmental effects of any project redesign on fish and fish habitat and other valued components. The Agency requires the proponent to identify opportunities to further avoid and mitigate serious harm to fish. DFO will then evaluate the adequacy of the offsetting measures proposed in the preliminary fish habitat offsetting plan.</p>	<p>c. Indicate whether the proponent intends to implement any of the project redesigns and/or mitigation measures.</p> <p>d. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	<p>hydrological flows, including an explanation of how avoiding critical lichen and wetland habitat would accomplish this.</p> <p>c. Conforms.</p> <p>d. Non-conforming. The response does not adequately address Part D of the IR. No reference to direct or cumulative effects was found in the response. Revise the response to provide the information required in the original IR.</p>
CEAA 2-09	DFO, KMKNO	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.7.3.3 Surface Water Quantity; Section 6.9.6.2 Fish and Fish Habitat Impact Extent	<p>As indicated in section 6.7.5.5 of the revised EIS, the Mud Lake catchment area will be altered during site development. These alterations will affect runoff volume discharging into Mud Lake on an annual basis. The results of the surface water quantity modelling described in section 6.7.6.1.2 indicate that the Mud Lake catchment area will be reduced by approximately 43%. Furthermore, the catchment area of Crusher Lake will be reduced by 52%. Crusher Lake and Mud Lake are directly connected by Watercourse-5 (WC-5), which is the sole watercourse in the Beaver Dam Mine site that drains directly into Mud Lake. Flow rates within WC-5 are expected to decrease. The presumed reduction of flow is predicted to impact upon the ecological maintenance flow within WC-5.</p> <p>Mud Lake is a shallow body of water with a depth not exceeding approximately 2 m to 3 m and is bordered by Wetland-17. During certain months of the year, Mud Lake experiences natural reductions in water volume due to warmer temperatures and low-flow periods. The reduction in the catchment area is expected to further reduce the volume of water in Mud Lake.</p> <p>Mud Lake, WC-5 and Wetland-17 all provide fish habitat. These habitats may be used for overwintering, rearing, feeding, refuge and passage, and are directly connected to Cameron Flowage (Killag River) via the outflow of Mud Lake.</p> <p>Section 6.9.6.2.2 of the revised EIS indicates that mine infrastructure will directly affect the drainage area of Mud Lake and several watercourses that eventually empty into Mud Lake. DFO requires additional information regarding the Project’s potential to result in the permanent alteration of fish habitat in Mud Lake and Wetland-17.</p>	<p>a. Provide a description of how the reduction of water in Mud Lake will affect fish habitat in Mud Lake and the adjacent Wetland-17. The description should include, but is not limited to additional information on whether:</p> <ul style="list-style-type: none"> i. The quality or type of fish habitat in Mud Lake will be altered by predicted changes in water volume or changes in lake characteristics associated with water quantity (e.g., water temperature, dissolved oxygen, nutrient concentrations). ii. The availability or type of fish habitat in Wetland-17 will be altered by the predicted changes in water quantity in Mud Lake or the potential changes in the environmental characteristics of Mud Lake. iii. A vertical drop in water levels will exacerbate Mud Lake’s sensitivity to thermal stress during summer months. iv. Provide rationale for the conclusion provided in Table 6.9-37 that refers to the determination that the residual effects to Mud Lake will not be significant. <p>b. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The information required is not provided in Sections 6.9.7.4.4 or 6.9.4.2. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. No reference to direct or cumulative effects was found in the response. Revise the response to provide the information required in the original IR.</p>

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CEAA 2-10	DFO	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.7.6.1.2 Surface Water Quantity Modelling Results; Section 6.9.6.2 Fish and Fish Habitat Impact Extent	<p>As indicated in section 6.7.6.1.2 of the revised EIS, the catchment area to Crusher Lake is expected to be reduced by approximately 52%. Crusher Lake is bordered by Wetland-8 and Wetland-10, which are lacustrine wetlands that are permanently saturated.</p> <p>As referred to on page 408 of the revised EIS, runoff that would naturally flow through WC-5 from Crusher Lake will be diverted to Cameron Flowage (Killag River) via the north settling pond. Water levels in Crusher Lake are expected to experience less fluctuation than normal. The reduced water levels in Crusher Lake may impact upon WC-5 by reducing the flow below the ecological maintenance level.</p> <p>Flows in WC-5 may experience a reduction of approximately 43%. WC-5 flows through multiple wetlands, including Wetland-8, Wetland-14 and Wetland-17. WC-5 also has connectivity to other watercourses (e.g. WC-3) and wetlands (e.g. Wetland-20) north of Crusher Lake.</p> <p>The development of the waste rock stockpiles and low-grade ore stockpiles within the contributing area to Crusher Lake is expected to directly reduce the overall size of the drainage area and directly affect several watercourses that empty into Crusher Lake.</p> <p>As indicated on page 495 of the revised EIS, Crusher Lake is approximately 4 hectares in area and is known to support a variety of fish species.</p>	<ul style="list-style-type: none"> a. Provide rationale to support the determination on page 339, which informs Table 6.7-24, that reductions in flow into and out of Crusher Lake will result in minor changes (i.e. not significant) to fish and fish habitat. b. Provide additional information regarding the fish habitat in WC-5 and whether the reduction of Crusher Lake's catchment area may result in the permanent alteration of fish habitat present in Crusher Lake and WC-5 (e.g. alteration of habitat used for passage). c. Provide additional information and rationale to explain why any permanent alterations to Crusher Lake and WC-5 from the reduction of flow, reduction of Crusher Lake catchment area, diversion of runoff, development of mine infrastructure, etc. will not result in subsequent permanent alterations to watercourses or wetland habitat connected to WC-5 and Crusher Lake. d. Update the direct and cumulative effects assessment of related valued components as appropriate. 	<ul style="list-style-type: none"> a. Conforms. b. Conforms. c. Conforms. d. Conforms.
CEAA 2-11	DFO	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.9.6.2 Fish and Fish Habitat Impact Extent	<p>Part 2, section 6.3.1 of the EIS Guidelines requires estimates of fish mortality for various species and life stage (e.g. egg, larvae, juvenile, adult).</p> <p>Page 492, section 6.9.6.2 of the revised EIS states: "Mortality to fish is expected to be low, once mitigation measures are implemented including fish rescue of adult fish prior to commencement of construction activities in confirmed fish habitat and adherence to approved timing windows for construction to minimize impact to eggs, larvae, and juvenile fish."</p> <p>Fish rescue activities vary in effectiveness depending on how they are carried out. The revised EIS does not provide information on planned fish rescue (i.e. collection or release sites; fish handling, transport and release methods). The Agency therefore cannot assess the potential effectiveness of this proposed mitigation. Additionally, the planned movement of live aquatic organisms is regulated by DFO through the <i>National Code on Introductions and Transfers of Aquatic Organisms</i> under the <i>Fishery (General) Regulations</i> to ensure that environmental impacts of planned movements are limited. An introduction and transfer licence may be required for fish rescue activities. DFO evaluates the ecological and genetic risks of planned transfers and determines whether a licence can be issued.</p>	<ul style="list-style-type: none"> a. Provide a description of planned fish rescue measures. For example, detail capture, handling, transport, release methods, capture and release locations and timing. b. Predict the effectiveness of the planned fish rescue, including an estimate of fish mortality for various species and life stages from the Project in the event that fish rescue is ineffective or that an introduction and transfer licence cannot be obtained. 	<ul style="list-style-type: none"> a. Conforms. b. Conforms.

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-12	DFO	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.9.6.2 Fish and Fish Habitat Impact Extent, Table 6.9-27	<p>Section 6.9.6.2 of the revised EIS describes potential effects to fish from blasting activities near watercourses, including death, injury and behavioural disturbance. Section 2.3.2.1 indicates that blasting will occur two or three times a week at the open pit. The eastern border of the open pit is located approximately 100 m or less from Cameron Flowage.</p> <p>The revised EIS does not provide a detailed analysis or assessment of the potential magnitude and extent of death, injury or behavioural disturbance to fish in Cameron Flowage that could result from blasting in the open pit.</p> <p>Table 6.9-36 of the revised EIS includes a commitment to follow DFO's measures to avoid causing harm to fish and fish habitat pertaining to blasting. These measures include avoiding the use of ammonium nitrate-based explosives in or near water due to the production of toxic by-products. However, section 2.4.2.2 of the revised EIS states that the construction and operation phases will use ammonium nitrate as a blasting agent. The Agency is unclear as to whether the proponent intends to implement DFO's measures to avoid causing harm to fish and fish habitat pertaining to blasting.</p>	<p>a. Clarify which of DFO's measures to avoid causing harm to fish and fish habitat pertaining to blasting are applicable to the Project and which measures the proponent intends to follow. Provide a detailed analysis and assessment of the potential magnitude and spatial extent of death, injury and behavioural disturbance to fish in Cameron Flowage that could result from blasting activities in the open pit, along with supporting scientific and technical information.</p> <p>b. Update section 6.9.6.2 of the revised EIS as appropriate.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The response refers to an Explosives Management Plan that has yet to be developed. Although the response provides general effects on fish from blasting, it does not provide a detailed analysis and assessment of the potential magnitude and spatial extent of death, injury and behavioural disturbance to fish in Cameron Flowage that could result from blasting activities. Therefore, there is uncertainty regarding the potential effects to fish and fish habitat. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. Based on the revisions to Part A, revise the response to Part B to provide the information required in the original IR.</p>
CEAA 2-13	DFO, KMKNO, ESW	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 2.3.3.2 Conceptual Reclamation Plan, page 59; Section 6.9.6.2 Fish and Fish Habitat Impact Extent	<p>The Killag River provides habitat for all life stages of salmonids, including the Southern Upland population of Atlantic salmon. This population has been designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Endangered and is currently under consideration for listing under Schedule 1 of the <i>Species at Risk Act</i> (SARA).</p> <p>The Killag River has been identified as important habitat for all life stages of Atlantic salmon in the West River Sheet Harbour system. The river also provides habitat for American eel which is designated by COSEWIC as Threatened and is currently under consideration for listing under SARA.</p> <p>Section 6.3.1 of the EIS Guidelines requires "the identification of any potential harmful alteration, disruption or destruction of fish habitat, including the calculations of any potential habitat loss (temporary or permanent) in terms of surface areas."</p> <p>Section 2.3.3.2 of the revised EIS states that during decommissioning, the pit will be filled with water, creating a lake, with the re-establishment of a connection between the filled open pit and Cameron Flowage.</p> <p>The release of suspended sediment into Cameron Flowage is a potential harmful alteration, disruption or destruction of fish habitat. Elevated levels of suspended sediments can harm fish and sedimentation can damage or destroy spawning habitat, bury and smother eggs, and affect survival and emergence. Additional information is needed to determine whether suspended sediments released into Cameron Flowage from the open pit post-mine closure will adversely affect fish and fish habitat in the Killag River.</p>	<p>a. Provide an assessment of the potential effects of suspended sediment released into Cameron Flowage from the open pit post-mine closure on fish and fish habitat within the Killag River.</p> <p>b. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. An assessment of the potential effects of suspended sediment must include particles finer than fine sand (0.15mm). Silt will be generated by project activities and poses a risk to Atlantic Salmon eggs and larval fish. It is not clear from the response whether silt particles would settle out in the open pit. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of IR. Although the response refers to Section 8 of the updated EIS, it is unclear where or how updates were made in consideration of information provided in Part A.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-14	DFO, KMKNO, ESW	Part 2, Section 6.3.1 Fish and Fish Habitat	Section 6.9.6.2 Fish and Fish Habitat Impact Extent; Section 6.6.6 Project Activities and Groundwater Quality and Quantity Interactions and Effects	<p>The Beaver Dam Mine site is located immediately adjacent to the Killag River, the main tributary to West River Sheet Harbour, which provides important habitat for all life stages of salmonids, including Southern Upland Atlantic salmon. Given the current status of Southern Upland Atlantic salmon and the importance of the Killag River to the survival and recovery of this species in the West River Sheet Harbour system, adverse effects from the Project on salmon habitat extending beyond the project area into the Killag River have potential to be significant.</p> <p>As such, the Agency requires the proponent to provide a thorough assessment of potential effects and to take all measures to avoid and mitigate adverse effects to fish and fish habitat within the Killag River.</p> <p>Groundwater inflow in rivers and streams serves an important function in sustaining aquatic ecosystems and salmonid habitat by providing stable water temperatures year-round and augmenting stream flows during periods of low flow. For these reasons, fish often seek areas of groundwater upwelling for spawning and egg incubation, overwintering, and refuge from warm water during summer.</p> <p>Section 6.6.6.1 of the revised EIS predicts base-flow reductions to Cameron Flowage and the Killag River and states that “Effects will range from locally significant to insignificant. No adverse groundwater impacts from the Beaver Dam Mine Site are predicted beyond the boundary of the RAA [regional assessment area], and in general, the majority of impacts do not extend beyond the LAA. [local assessment area]”</p> <p>Page 246 of the revised EIS states that the simulated change in base flow throughout the Cameron Flowage watershed is presented in Table 7.4 of Appendix F.1 (Beaver Dam Model Report); however, there is no Table 7.4 in Appendix F.1 and there is no report titled Beaver Dam Model Report in the list of Appendices. Page 246 of the revised EIS also states that further analysis of the potential effects of this base-flow reduction to Cameron Flowage is discussed in Section 6.7 (Surface Water Section); however, it is not clear where there is a discussion of the potential effects of this base-flow reduction in Section 6.7.</p> <p>Section 6.9.6.2.2, page 497 of the revised EIS states that “There is a predicted increase in runoff volume discharged to the Killag River of 0.91% and 0.03% during end of mine (EOM) and post closure (PC), respectively. Additionally, a 5 to 7% reduction in baseflow is predicted for the Killag River (Appendix G.5). Together, the impact to fish and fish habitat within the Killag River was deemed negligible.” The revised EIS does not include a detailed assessment of the potential effects of the reduction in base flows to fish habitat due to changes in groundwater, nor does it include an explanation of how the impacts to fish and fish habitat were deemed negligible.</p> <p>The Agency is of the view that impacts to salmonid habitat in the Killag River have potential to be a significant adverse environmental effect. Additional information is needed to understand the potential effects of groundwater reductions on fish and fish habitat within the Killag River.</p>	<ul style="list-style-type: none"> a. Provide an assessment, with supporting scientific and technical information, of the potential effects of reductions in groundwater inflows on fish and fish habitat within the Killag River, including the potential effects to salmonid habitat. b. Update the direct and cumulative effects assessment of related valued components as appropriate. c. Provide the specific location in the revised EIS (e.g. document title, page number) where additional information about the simulated change in base flow throughout the Cameron Flowage watershed has been presented. d. Provide the specific location in the revised EIS where the predicted reduction in base flows to Cameron Flowage are discussed in section 6.7. 	<ul style="list-style-type: none"> a. Non-conforming. The response does not adequately address Part A of the IR. The response refers to Section 6.9.7.2 of the updated EIS which provides information about the net change in total flow at a point in Killag River downstream of the mine site. However, the IR requires an assessment of the effects of groundwater reduction on fish habitat in Cameron Flowage/Killag River, which was not provided. In addition, the information provided in Section 6.9.7.2 of the 2021 EIS and associated appendices is inconsistent with information provided in the 2019 EIS and no explanation has been provided for these inconsistencies. For example: <ul style="list-style-type: none"> o Section 6.9.6.2.2, page 497 of the 2019 EIS predicts an annual reduction in Killag River baseflow of 5 to 7%. Section 6.6.6.1 of the 2019 EIS predicts baseflow reductions of 1,414 to 1,634 m3/d at EOM and from 1,287 to 1508 m3/d at PC. Section 6.9.7.2 of the 2021 EIS predicts an annual reduction of 2 to 3% and reductions of 677 to 754 m3/d at EOM and from 446 to 620 m3/d at PC. Provide a detailed explanation for the new predictions and inconsistencies (e.g., changes to project, changes to data inputs into the model, changes to model assumptions, etc.). o Section 6.6.3.3 of the 2019 EIS describes how Cameron Flowage and other waterbodies in the mine site are likely to be areas of groundwater discharge based on the site geology, topography, and observations from groundwater drilling. The 2021 EIS states that groundwater upwelling locations in Cameron Flowage are not likely, but no supporting baseline information is provided to explain the new description of surface water-groundwater interactions. Provide a detailed explanation for this inconsistency relying on collected baseline data. <p>In addition, Appendix H of Appendix P.4 states that the hydrogeologic model was used to estimate that at EOM Cameron Flowage will experience a reduction in baseflow from baseline conditions of between 38% and 42% for dry and wet conditions, respectively. This information should be directly referenced in the IR response as it is fundamental to the information requested.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
						<ul style="list-style-type: none"> b. Non-conforming. Based on the revised response to Part A, update the response to Part B to provide the information required in the original IR. c. Non-conforming. The response does not adequately address Part C of the IR. Although the response refers to Sections 6.9.7.2 and 6.9.8 of the updated EIS, these sections refer to several appendices. It is unclear where the response can be found within the referenced EIS sections and appendices. Revise the response to provide the information required in the original IR. d. Non-conforming. The response does not adequately address Part D of the IR. Although the response refers to Sections 6.9.7.2 and 6.9.8 of the updated EIS, these sections refer to several appendices. It is unclear where the response can be found within the referenced EIS sections and appendices. Revise the response to provide the information required in the original IR.
CEAA 2-15	DFO	Part 6, Section 6.7.1 Effects of Potential Accidents or Malfunctions	Section 6.18.3.2 Stockpile Slope Failure, Table 6.18-3 Fish and Fish Habitat	<p>Section 6.7.1 of the EIS Guidelines states: “The proponent will therefore conduct an analysis of the risks of accidents and malfunctions, determine their effects, and present a preliminary emergency measures.”</p> <p>Section 6.18.3.2 of the revised EIS indicates that a “Worst-case scenario resulting from stockpile slope failure would be disturbance to surrounding area, including the potential for mine rock and low-grade ore to enter nearby watercourses, damage to infrastructure, and worker safety.”</p> <p>Table 6.18-3 also states that the potential for adverse effects to fish and fish habitat is low, although the worst-case scenario of the disturbance of a watercourse or waterbody from a stockpile slope failure has not been carried forward into the Potential Interactions and Effects section of 6.18.3.2.</p> <p>It is unclear why the worst-case scenario of mine rock and low-grade ore entering a nearby watercourse has been excluded from the definition of a significant event. The Agency requires a reasoned explanation as to why it has also been excluded from Table 6.18-3 and the Potential Interactions and Effects section. Given the proximity of soil and till stockpiles to Cameron Flowage and the Killag River, a slope failure of mine rock, low-grade ore, and/or soil stockpiles could potentially result in materials entering this watercourse. Due to the importance of Cameron Flowage and the Killag River to salmonid species, principally the Southern Upland population of Atlantic salmon, any such disturbance could result in significant adverse effects to fish and fish habitat as defined in section 6.9.5.2 of the revised EIS.</p>	<ul style="list-style-type: none"> a. Provide an effects assessment for potential stockpile slope failure on fish and fish habitat given the importance of fish habitat within and adjacent to the project area, after mitigation has been applied. 	<ul style="list-style-type: none"> a. Conforms.

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-16	DFO	Part 6, Section 6.7.1 Effects of Potential Accidents or Malfunctions	Section 6.18.3.3 Settling Pond Failure, Table 6.18-4 Fish and Fish Habitat	<p>Section 6.7.1 of the EIS Guidelines states: “The proponent will therefore conduct an analysis of the risks of accidents and malfunctions, determine their effects, and present a preliminary emergency measures.”</p> <p>The Agency notes that in section 6.18.3.3 of the revised EIS, a worst-case scenario “would be complete failure of the settling pond, resulting in uncontrolled discharge of sediment laden water into the surrounding environment.” The revised EIS further states that “Should a settling pond failure result in an uncontrolled discharge of sediment laden water to Cameron Flowage the event will be considered significant” and that the potential for adverse effects to fish and fish habitat is high (Table 6.18-4).</p> <p>The Agency also notes that in section 6.18.3.3, Potential Interactions and Effects, “Inadequate settling pond capacity and water level monitoring, combined with a significant precipitation event may cause a settling pond failure and thus, pose a risk to surface water quality, wetlands, fish and fish habitat, and species of conservation interest / species at risk (SOCI/SAR) through all phases of the Project.” Furthermore, in section 6.18.3.3, Mitigation and Emergency Response, the statement is made: “In the event of a 1 in 100 year precipitation event that creates volumes in excess of the capacity available in ponds and ditching, or infrastructure failure, a spillway into the water diversion structure will be used for overflow. In the case of a storm event or infrastructure failure, settling ponds will be monitored regularly ... Generally, settling pond failure emergency response includes raising the alarm and evacuation of all equipment and personnel from the area.”</p> <p>Given the potential effects to Southern Upland Atlantic salmon in the Killag River, further assessment of a settling pond failure is warranted. The potential effects of a settling pond failure and the impacts of sediment-laden water on fish and fish habitat are not fully discussed.</p>	<p>a. Provide a detailed assessment of the potential effects of siltation and increased total suspended solids (TSS) on fish and fish habitat from a settling pond failure with reference to relevant and recent scientific literature.</p> <p>b. Provide clarification on monitoring versus evacuation procedures. The proponent indicates that in the event of a storm event which creates volumes in excess of the capacity of the settling ponds or infrastructure failure, the spillway into the water diversion structure will be used for overflow and the settling ponds will be monitored regularly. In the event of settling pond failure, emergency response plans indicate that all personnel will be evacuated from the area. Portions of these mitigation and emergency response plans contradict one another and do not give a sense of confidence in mitigation procedures (i.e. the commitment to monitor and evacuate simultaneously).</p> <p>c. Clarify the capacity of the settling pond. It is inferred in the revised EIS that in the event of a 1 in 100-year storm, the settling pond will reach capacity and over flow into the spillway.</p> <p>d. The capacity of the spillway is unclear. Clarify whether the spillway is capable of negating potential effects to Cameron Flowage (i.e. sediment-laden water entering fish habitat) in the event of a settling pond failure or overflow. Confirm the total volume (i.e. 1 in 100-year, 1 in 200-year storm events) that the entire system can hold prior to release into Cameron Flowage. Given the effects of climate change and the potential for high volume rain events to occur more frequently than in the past, and the potential effects on fish and fish habitat in the Killag River should a failure occur, provide additional information about settling pond design considerations.</p> <p>e. Conduct an effects assessment on residual effects in the event of a settling pond failure after mitigation measures have been implemented, and provide a significance determination.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. An effects assessment of siltation and TSS on fish and fish habitat from a settling pond failure was not provided. The Agency needs to understand the potential impacts to Atlantic Salmon and their habitat from suspended sediment releases during construction, operation, and end-of-mine. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response to Part B of the IR is unclear and does not provide clarification on monitoring versus evacuation procedures. Revise the response to provide the information required in the original IR.</p> <p>c. Conforms</p> <p>d. Non-conforming. The response does not adequately address Part D of the IR. The response does not discuss whether the spillway is capable of negating potential effects to Cameron Flowage. Revise the response to provide the information required in the original IR.</p> <p>e. Non-conforming. The response does not adequately address Part E of the IR. An effects assessment of a settling pond failure was not provided. The effects criteria of magnitude, duration, reversibility, frequency, and geographic extent were not considered. Revise the response to provide the information required in the original IR.</p> <p>f. Non-conforming. Based on the revisions to Parts A, D, and E, revise the response to provide the information required in Part F of the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
					f. Update the direct and cumulative effects assessment of related valued components as appropriate.	
CEAA 2-17	DFO	Part 6, Section 6.7.1 Effects of Potential Accidents or Malfunctions	Section 6.18.4.2 Fuel Spills, Table 6.18-6 Fish and Fish Habitat	<p>Section 6.7.1 of the EIS Guidelines requires the proponent to “conduct an analysis of the risks of accidents and malfunctions, determine their effects, and present preliminary emergency measures”.</p> <p>Section 6.18.4.2 of the revised EIS states that a “Worst-case scenario would be a transportation collision causing the entire amount of material being transported to be spilled into a water body. The effects of the spill would vary depending on the material spilled; diesel fuel and gasoline are toxic to aquatic life and would have the greatest impact to the environment.” Table 6.18-6 also states that the potential for adverse effects to fish and fish habitat is high.</p> <p>The effects of a fuel spill scenario in which fuel either from a vehicle accident or fuel delivery truck accident entering a waterbody has not been sufficiently assessed. There is potential for this scenario to occur along the Haul Road and thus impact watercourses which provide habitat for salmonids, principally Southern Upland Atlantic salmon in West River Sheet Harbour. Given the potential effects to fish and fish habitat, the Agency requires further assessment of potential fuel spills.</p>	<p>a. Conduct an assessment on the effects of hydrocarbon spills on fish and fish habitat.</p> <p>b. Assess the potential for a large fuel spill to enter the West River system and disperse to the Eastern Shore Islands Area of Interest. Investigate impacts to fish and fish habitat within this Area of Interest.</p> <p>c. Update the direct and cumulative effects assessment of related valued components as appropriate.</p> <p>d. Based on the updated assessment, provide mitigation measures that will mitigate adverse effects to fish and fish habitat.</p>	<p>Non-conforming. The response does not adequately address Parts A, B, C, or D of the IR. The response describes avoidance and mitigation measures, and emergency response procedures, but an assessment of hydrocarbon spills on fish and fish habitat is not provided. The response does not include an assessment of the potential for a large fuel spill to enter the West River system and disperse to the Eastern Shore Islands Area of Interest, or an investigation of the impacts to fish and fish habitat within this area. Revise the response to provide the information required in the original IR.</p>
CEAA 2-18	DFO	Part 6, Section 6.7.1 Effects of Potential Accidents or Malfunctions	Section 6.18.6 Risk Assessment, Table 6.18-12	<p>Section 6.7.1 of the EIS Guidelines requires the proponent to “conduct an analysis of the risks of accidents and malfunctions, determine their effects, and present a preliminary emergency measures”.</p> <p>Section 6.18.6 of the revised EIS provides an overview of the risk assessment process in which the proponent assigned a risk rating to each potential accident or malfunction. The section describes the definition of each likelihood of occurrence, as well as the magnitude ratings for accidents and malfunctions. It is unclear how the proponent assigned these values to each accident and malfunction scenario.</p> <p>Given the fact that the proponent uses these risk ratings to determine significance, the Agency requires a rationale for each value.</p>	<p>a. Provide evidence and/or explanation as to how the proponent concluded the likelihood of each accident or malfunction. It is unclear how values were assigned to likelihood of occurrence or probability for each accident and malfunction.</p> <p>b. Provide the same level of evidence and/or explanation for how the proponent reached magnitude ratings for each accident or malfunction.</p> <p>c. Provide further evidence or rationale, citing peer-reviewed literature, as to why each accident or malfunction is not considered significant, even if the qualitative risk rating is low or moderate for fish and fish habitat, particularly Southern Upland Atlantic salmon in the Killag River.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The response did not clarify how values were assigned to the likelihood or probability of occurrence. Statistical analysis of accidents and malfunctions at other gold mine sites could be used to support the response. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. The response does not clarify how values were assigned to the magnitude of each accident and malfunction. Revise the response to provide the information required in the original IR.</p> <p>c. Non-conforming. The response does not adequately address Part C of the IR. Further evidence or rationale as to why each accident or malfunction is not considered significant is not provided. Revise the response to provide the information required in the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-19	DFO	Part 6, Section 6.1.6 Effects Assessment: Fish and Fish Habitat	Section 6.9 Fish and Fish Habitat; 6.9.2 Baseline Program Methodology; 6.9.3 Baseline Conditions; Tables 6.9-2, 6.9-3 and 6.9-4	<p>Section 6.1.6 of the EIS Guidelines requires that the proponent include the following in the EIS: “a description of the habitat by homogeneous section, including the length of the section, width of the channel from the high water mark (bankful width), water depths, type of substrate (sediments), aquatic and riparian vegetation, and photos”.</p> <p>Section 6.9.2 of the revised EIS provides an overview of the baseline program methodology, with section 6.9.3 indicating baseline habitat results. However, the proponent has not provided detailed results as prescribed in the EIS Guidelines. These results would aid in verifying fish habitat found in each watercourse, as well as confirm fish habitat descriptions/classifications given to each watercourse in Tables 6.9-3 and 6.9-4.</p>	<p>a. Provide a description of the habitat by homogeneous section as described in section 6.1.6 of the EIS Guidelines.</p>	<p>a. Non-conforming. The response does not adequately address the IR. Habitat information is only useful if the exact locations of where the information was collected is known. GPS coordinates of each of the reaches/transects must be provided in the tables and shown on a figure to enable an assessment of the data.</p>
CEAA 2-20	DFO	Part 6, Section 6.1.6 Effects Assessment: Fish and Fish Habitat	Section 6.9 Fish and Fish Habitat; 6.9.6 Project Activities and Fish and Fish Habitat Interactions and Effects; Table 6.9-28, Figures 6.7-3A - 6.7-3L	<p>Section 6.9.6.2 of the revised EIS gives an overview of potential direct and indirect impacts within the Haul Road project area. Widening and re-alignment within the Haul Road to support upgrades for the Project will be required. Table 6.9-28 provides an overview of the potential or confirmed impact to fish habitat (m²) within wetlands along the Haul Road. Figures 6.7-3A to 6.7-3L visually depict potential impacts to fish habitat within streams and wetlands along the Haul Road.</p> <p>It is unclear how the proponent calculated the potential/confirmed impact to fish (m²) in Table 6.9-28. Figures 6.7-3A-6.7-3L show differing areas of wetlands affected around the Haul Road. Some wetlands are only impacted directly within the Haul Road footprint, while others have an equal buffer of impact north and south of the road, and some have an irregular buffering of impact around the road.</p>	<p>a. Clarify the procedures utilized to calculate impacts to fish habitat (m²) in wetlands along the Haul Road. Explain why affected wetland areas in Figures 6.7-3A to 6.7-3L are not consistent on either side of the Haul Road for each wetland.</p>	<p>a. Conforms.</p>
CEAA 2-21	DFO, KMKNO, ESFW, Save Caribou	Part 6, Section 6.1.6 Effects Assessment: Fish and Fish Habitat	Section 6.9 Fish and Fish Habitat; 6.9.7 Preferred Alternative Haul Road; Table 6.9-32; Figure 6.8-1	<p>Section 6.9.7 of the revised EIS provides an effects assessment of the newly added Preferred Alternative Haul Road route. Construction of the Preferred Haul Road section will require the alteration of wetlands which provide habitat for fish. Table 6.9-32 gives an overview of the fish habitat within wetlands along the Preferred Alternative Haul Road. Figure 6.8-1 visually depicts watercourses and wetlands along the Preferred Alternative Haul Road.</p> <p>It does not appear that the proponent calculated the potential/confirmed impact to fish (m²) within wetlands from the Preferred Alternative Haul Road. Figure 6.9-32 also fails to show areas of wetlands affected around the Preferred Alternative Haul Road.</p>	<p>a. Calculate impacts to fish habitat (m²) in wetlands along the Preferred Alternative Haul Road and indicate the methods for their calculations; maintain consistency with section 6.9.6.</p> <p>b. Update Figure 6.8-1 to include potential impacts to fish habitat.</p>	<p>a. Conforms.</p>
CEAA 2-22	DFO	Part 6, Section 6.1.6 Effects Assessment: Fish and Fish Habitat	Section 6.9 Fish and Fish Habitat; 6.9.7.3.2 Preferred Alternative Haul Road - Electrofishing; Table 6.9-33	<p>Section 6.9.7.3.2 of the revised EIS provides an overview of the contiguity between watercourses within the Preferred Alternative Haul Road route and electrofishing results from the original Haul Road surveys. Table 6.9-33 provides an overview of the contiguity between the Preferred Alternative Haul Road watercourses and original Haul Road watercourses. The description of the contiguity between the two routes as described in Table 6.9-33 and the text below are not consistent.</p>	<p>a. Clarify if the text or table is correct with respect to contiguity and make the appropriate corrections to ensure consistency throughout the revised EIS. Base any conclusions on these correlations.</p>	<p>a. Conforms.</p>

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CEAA 2-23	DFO, KMKNO, ESWF	Part 2, 6.3.1 Fish and Fish Habitat	Table 6.9-37 Residual Environmental Effects for Fish and Fish Habitat on page 511; Biological Monitoring Studies ii in Appendix O.1	<p>In reference to Table 6.9-37, the proponent indicates that impacts to fish habitat will be quantified and confirmed through monitoring to determine if serious harm to fish is likely.</p> <p>The preliminary Environmental Effects Monitoring Plan (EEMP) was prepared to outline the proposed monitoring to support the Project.</p> <p>Section 8.5.6.2.3.1, indicates that there is some uncertainty as to Project effects on fish and fish habitat. The proposed approach to reduce this uncertainty is to implement monitoring programs and follow-up programs. It is critical to accurately characterize and quantify the impacts to fish and fish habitat prior to the issue of an Environmental Assessment approval so that the appropriate avoidance, mitigation, monitoring and counterbalancing measures are included as terms and conditions of the approval.</p> <p>DFO cannot provide an accurate determination of the area of serious harm to fish if the proponent has yet to characterize and quantify the impacts of the Project on fish and fish habitat. If monitoring is required to accurately assess the potential impacts to fish and fish habitat, monitoring should be undertaken prior to the Environmental Assessment.</p>	<p>a. Provide a rationale as to why no monitoring approaches for fish and fish habitat have been provided in the preliminary EEMP.</p>	<p>a. Non-conforming. The response does not adequately address the IR. The EEMP was not provided; therefore, the monitoring approaches for fish and fish habitat could not be evaluated. Revise the response to provide the information required in the original IR.</p>
Migratory Birds, Fauna and Species of Concern						
CEAA 2-24	ECCC	Section 6.1.5; Section 6.1.7; Section 6.1.8; Section 6.2; Section 6.3.2; Section 6.3.3; Section 6.4; Section 6.5; Section 8	Section 6.10, 6.12, 6.13; Section 8.5; Section 9.2	<p><i>Wetland Habitat for Migratory Landbird Species At Risk (SAR)</i> The Project as proposed will result in the loss of wetland function (i.e. habitat for landbird SAR). For those wetlands that cannot be avoided and for those where direct and indirect effects cannot be entirely minimized, conservation allowances should be considered as a compensation. However, it is unclear whether the proponent's proposed wetland compensation would include conservation allowances for affected habitat for wetland function loss (landbird SAR).</p> <p><i>Bank Swallow</i> While it was not detected during surveys of the project area, bank swallow is another migratory bird SAR, which nests in Nova Scotia and may be attracted to un-vegetated stockpiles of soil with faces at 70 – 90° slopes during the months of May to July.</p> <p><i>Greater Yellowlegs</i> The Project as proposed will result in the loss of breeding habitat for greater yellowlegs, and may cause disturbance to migratory birds in areas where habitat is not directly affected by the Project. Pairs establishing territories, nesting birds and chick-rearing birds shall not be disturbed, as per the <i>Migratory Birds Convention Act</i>. For this reason, ECCC generally recommends a minimum setback of 300 m from greater yellowlegs from mid-April until chicks have naturally left the area.</p>	<p>a. Provide details on the conservation allowance for loss of wetland function (habitat for landbird SAR) that will be implemented.</p> <p>b. Provide details on a landbird SAR monitoring program that would be implemented that includes adaptive management measures to be implemented in the event that unanticipated effects are detected.</p> <p>c. Confirm that measures similar to those proposed for common nighthawk will also be implemented for bank swallows due to potential attraction to the project area as a result of project-related changes in habitat.</p> <p>d. Provide details on the measures that will be implemented to avoid effects of habitat loss of greater yellowlegs. Clarify whether buffers would be established if greater yellowlegs nest near, but not within, the project footprint.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p> <p>c. Conforms.</p> <p>d. Conforms.</p>

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CEAA 2-25	ECCC	Section 5.0; Section 6.1.1; Section 6.1.10; Section 6.2.1; Section 6.5; Section 8.0	Section 6.2.6.2; Appendix C-1, Figure 5	The revised EIS (page 165) notes the potential of PM ₁₀ criteria being exceeded up to 57% of the time. Even given the conservative estimate of a background concentration, this is still a high frequency in an area with demonstrated Indigenous land and resource issues. The scale of Figure 5 in Appendix C and the limited description of the extent of the exceedances found on page 161 of the revised EIS make it difficult to identify any interactions between the higher ambient concentrations in the vicinity of the Haul Road and the identified sensitive receptors.	a. Provide a more detailed description of the geographical extent of any ambient air quality exceedances and their interaction with any potential sites important for use by Indigenous people.	a. Non-conforming. The information provided does not adequately address the IR. It is unclear what updates were done to the ambient air modelling or where the updated modelling can be found in the EIS. The response refers to a "figure 2", but does not specify where this figure is located. The response references CEAA-2-48-1 for quantifying the amount of "direct loss for access", however the CEAA-s-48-1 response does not discuss the updated air modelling. Revise the response to provide the information requested in the original IR.
CEAA 2-26	ECCC	Section 6.10 Section 6.13	Section 6.10, 6.13; Section 8.5; Section 9.2	<p><i>Boreal Felt Lichen</i></p> <p>A proposed boreal felt lichen critical habitat polygon may be present in the path of the Preferred Alternative Haul Road, but this is not clear in the revised EIS. Critical habitat includes any occurrence documented between 2005 and 2015, even if individuals are thought to be lost. Young boreal felt lichen are difficult to see, and it is therefore important to leave potential habitat where it is known that the building blocks of these lichens for critical habitat.</p> <p>In the <i>Amended Recovery Strategy for the boreal felt lichen (Erioderma pedicellatum), Atlantic population, in Canada (Proposed)</i>, critical habitat for boreal felt lichen is identified as:</p> <ul style="list-style-type: none"> the substrata/porophyte for growth of boreal felt lichen (i.e. the host tree); the wetland in which the substrate/porophyte occurs, or is adjacent to; and a critical function zone around the substrate/porophyte (500 m radius) and associated wetland (100 m radius if <100 m²; 50 m radius if >100 m²). The critical function zone is necessary to maintain the hydrology of the wetland, microhabitat characteristics required for the survival of the lichen, and to allow for colonization. <p><i>Blue Felt Lichen</i></p> <p>Blue felt lichen was observed at 30 locations: Haul Road (1), Beaver Dam Mine site (14), broader LSA (10), adjacent to the Haul Road (3), Preferred Alternative Haul Road (2). Micro-siting of project infrastructure (minus the Preferred Alternative Haul Road) has reduced the number of individuals of blue felt lichen directly affected by the Project from 3 to 1. Micro-siting has not yet been done for the Preferred Alternative Haul Road, and while the proponent expects to avoid priority lichens, this has yet to be confirmed, thus two individuals may be directly affected. Blue felt lichen individuals not directly affected by the Project may be indirectly affected by changes in air quality, or changes in hydrology of the site.</p> <p><i>Frosted Glass Whiskers Lichen</i></p>	<p>a. Provide shapefiles for the entire project footprint (i.e. including the Preferred Alternative Haul Road) and LAA so that the Project can be mapped in relation to boreal felt lichen critical habitat polygons. ECCC can provide the boreal felt lichen proposed map package to the proponent upon request, with the expectation that a copy of the mapped project in relation to the critical habitat polygons would subsequently be provided to ECCC. If there is an overlap, demonstrate how measures have been taken to avoid, minimize or mitigate effects to boreal felt lichen.</p> <p>b. Provide details regarding the technical feasibility of transplantation of directly affected blue felt lichen as a proposed mitigation.</p> <p>c. Confirm that a 100 m habitat buffer would be maintained for all individuals of blue felt lichens and frosted glass whiskers that would not be directly affected by the Project. For any individuals where a 100 m habitat buffer would not be implemented, identify measures to avoid/minimize the effects.</p> <p>d. Provide a lichen SAR monitoring program that would include all sites where lichen SAR have been detected in the Local Assessment Area. Explain how adaptive management measures would be proposed and implemented in a timely manner in the event that adverse effects to lichen SAR are detected.</p> <p>e. Provide details on the conservation allowance for the loss of wetland function (habitat for hibernating snapping turtles) that will be implemented.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p> <p>c. Conforms.</p> <p>d. Non-conforming. The information does not adequately address the IR. The response refers to Appendix P.6, where in Section 5.4 states that "mitigation commitments outlined in Section 6.13" will be applied to species at risk lichen. Section 6.13 (specifically table 6.13-15) states that "Preliminary Lichen Mitigation and Monitoring Plan (Appendix P.6)" will be implemented. These two sections reference themselves and neither provides the proposed mitigation, monitoring and adaptive management measures. Revise the response to clarify the mitigation measures proposed for species at risk lichen.</p> <p>e. Conforms.</p> <p>f. Non-conforming. The response does not adequately address Part F of the IR. Although the response refers to the updated EIS, it is unclear where the response can be found within the EIS. Revise the response to provide the information required in the original IR.</p>

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				<p>Frosted glass whiskers were detected at eight locations at the Beaver Dam Mine site, and micro-siting has resulted in avoidance of all eight locations. Three individuals were identified along the Preferred Alternative Haul Road, but do not fall directly within the road alignment. Frosted glass whiskers not directly affected by the project may be indirectly affected by changes in air quality, or changes in the hydrology of the site. The proponent proposes to reduce effects to frosted glass whiskers by maintaining a 100 m habitat buffer wherever practicable.</p> <p><i>Snapping Turtle</i> The Project will result in the loss of wetland habitat suitable for hibernating snapping turtle.</p>	<p>f. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	

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Air, Noise and Human Health						
CEAA 2-27	CEAA, KMKNO, ESFW, Save Caribou	Section 6.7.3 Cumulative Effects Assessment	Section 8.5 Cumulative Effects Assessment of the Valued Components	<p>Section 8 of the revised EIS does not contain a cumulative effects assessment for noise.</p> <p>The proponent states that residual adverse effects from noise will remain after the application of mitigations. Residual effects of other past, present and reasonably foreseeable projects noted in the revised EIS have the potential to interact with the residual effects of the Beaver Dam Mine Project, both spatially and temporally (Table 8.4-4). Specifically, the proposed Beaver Dam Mine, Fifteen Mile Stream Gold and Cochrane Hill Gold Projects will be operating concurrently and using the same Haul Roads to transport ore to the existing Touquoy Mine and Facility for final processing.</p> <p>The proponent's rationale for not carrying noise into the cumulative effects assessment is that the residual effects from noise are anticipated to revert back to baseline conditions upon completion of the Project.</p> <p>The Agency notes that noise levels were close to or exceeded thresholds during the assessment of direct Project effects. As such, the Agency requires that noise be carried forward into the cumulative effects assessment.</p> <p>In addition to Fifteen Mile Stream Gold and Cochrane Hill Gold Projects, the proponent has identified forestry operations as an ongoing project in the area. Although sporadic, the proponent indicated that there is a potential for cumulative effects between forestry and the other mining projects, and stated that an overlap of these projects will likely occur.</p>	<p>a. Provide a cumulative effects assessment for noise, including the reasonably foreseeable projects: Fifteen Mile Stream Gold and Cochrane Hill Gold Projects.</p> <p>b. Provide a worst-case scenario for noise along the Haul Road in consideration of Beaver Dam, Fifteen Mile Stream Gold, and Cochrane Hill Gold Projects and forestry operations.</p> <p>c. Update the direct and cumulative effects assessment of related valued components as appropriate and include additional mitigation to reflect this scenario.</p>	<p>a. Non-conforming. The response to Part A appears to contradict information in the EIS. Section 8.5.2.2.2 of the EIS predicts 190 daily round-trips between Beaver Dam Mine Site and Touquoy Mine Site; however, Table CEAA-2-27-1 in the IR response predicts that there will be 95 daily round-trips. Revise the response to clarify the predicted amount of daily round-trips and update the cumulative effects assessment to account for the number of round-trips, if required.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. It is unclear based on Appendix B.2 how many trucks are assumed in the worst-case noise analysis along the Haul Road. The response does not include the assumptions made to determine the predicted cumulative effects on the noise receptors presented in Table CEAA-2-27-2. Revise the response to include how many trucks are assumed in the worst-case scenario analysis, and what assumptions were made to determine the cumulative effects on noise receptors.</p> <p>c. Non-conforming. The response does not adequately address Part C of the IR. Update the direct and cumulative effects assessment of related valued components.</p>
CEAA 2-28	CEAA, KMKNO, ESFW, Save Caribou	Section 6.7.3 Cumulative Effects Assessment	Section 8.5 Cumulative Effects Assessment of the Valued Components	<p>A cumulative effects assessment for air is included in section 8.5 of the revised EIS. The proponent identified projects that are certain or reasonably foreseeable that would operate concurrently with the Beaver Dam Mine Project, and use the same Haul Roads.</p> <p>The Agency notes that the air dispersion model of the Haul Road (presented in C-1 and within the revised EIS) does not account for Fifteen Mile Stream and Cochrane Hill Gold Projects. Some air quality levels were close to or exceeded thresholds during the assessment of direct Project effects. As such, the Agency requires that air dispersion modelling be completed to characterize potential cumulative effects.</p> <p>In addition to Fifteen Mile Stream Gold and Cochrane Hill Gold Projects, the proponent has stated: "it is likely that forestry operations will occasionally</p>	<p>a. Provide modelling to support the cumulative effects assessment for air quality, including the reasonably foreseeable projects: Fifteen Mile Stream Gold and Cochrane Hill Gold Projects.</p> <p>b. Provide a worst-case scenario for air quality along the Haul Road in consideration of Beaver Dam, Fifteen Mile Stream Gold and Cochrane Hill Gold Projects and forestry operations. Update the cumulative effects assessment as required, including providing additional mitigation.</p>	<p>a. Non-conforming. The EIS section referred to in the IR response appears to contradict the information used in the model. Section 8.5.2.2.2 of the EIS states that there would be 190 round-trips per day between Beaver Dam Mine Site and Touquoy Mine Site; however, it appears that 95 round-trips per day was used in the model (Appendix C.1). In addition, the modelling does not appear to include dust from the haul road. Revise the response to clarify the predicted amount of daily road trips, to include dust from the haul road in modelling and to update the cumulative effects assessment to account for the number of round-trips, if required.</p>

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				<p>coincide with those of the Beaver Dam Mine and cause greater disturbance to air quality than these operations produce individually, especially along the Haul Road. However, such additive periods are likely to be limited in duration and frequency and are not expected to be significant." The proponent has stated that during active periods, forestry-related traffic results in approximately 100 trucks per day.</p> <p>The Agency requires that the proponent provide a worst-case scenario for air quality in consideration of forestry, Fifteen Mile Stream Gold and Cochrane Hill Gold Projects.</p>	<p>c. Update the direct and cumulative effects assessment of related valued components as appropriate.</p>	<p>b,c. Non-conforming. The response does not adequately address Part B and C of the IR. Although the responses refer to Appendix C.1 and Section 8.5.2 of the EIS, it is unclear where the responses can be found within the EIS. Revise the responses to provide the information required in the original IR, with consideration of any revisions made to address Part A.</p>
CEAA 2-29	HC	Section 6.1.1 Atmospheric Environment	Section 6.2.6, p238; Section 6.2.9, p242; Table 6.2-12, p238; Table 6.2-15, p242	<p>In Table 6.2-12, the maximum cumulative (i.e. baseline + project) concentrations of total suspended particulate (TSP), PM₁₀ and PM_{2.5} (annual average) are predicted to exceed the relevant air quality criteria in the Haul Road operations scenario. Consequently, at one of the sensitive receptor locations (i.e. Deepwood Estates), the maximum cumulative concentrations of TSP and PM₁₀ would exceed the criteria and PM_{2.5} would reach 95% of the criteria (Table 6.2-15).</p> <p>However, the proponent states that these elevated contaminant levels are "likely to be overestimated ... due to conservatism related to the lack of local background data (as well as conservatism inherent in the dispersion modelling)" (p238). The proponent also concludes that "[t]here is a great deal of uncertainty in the presented background concentrations for both TSP and PM₁₀, which reduces the proposed significance of these findings. The overall significance of these exceedances is therefore also assessed as 'not significant'" (EIS Section 6.2.9, p242).</p> <p>Although cumulative effects <i>may be</i> overestimated due to conservative approaches employed (e.g. use of the maximum measured 24-hour TSP background concentration instead of 90th percentile value) to compensate for insufficient background data, the conservative approaches are not sufficient to conclude that the adverse effect is not significant.</p> <p>As such, the assessment with respect to air quality is inconclusive given the lack of background data, and, as such, determination of significance cannot be conclusively defined for PM_{2.5}.</p>	<p>a. Provide additional justification to support the conclusion and related significance determination on the PM_{2.5} health effects. This could include measures to reduce uncertainty and increase confidence in the predictions and/or to further mitigate effects.</p>	<p>a. Non-conforming. The response to the IR appears to contradict the information that it references in the EIS. The 24-hour PM_{2.5} 90th percentile background ambient air concentration presented in the IR response (90 µg/m³) contradicts the value presented in Table 6.2-3 of the EIS (9.0 µg/m³). Revise the response to clarify which PM_{2.5} 90th percentile background ambient air concentration is correct.</p>
CEAA 2-30	HC	Section 4.1 Guidance; Section 3.2 Factors to be Considered	Section 6.1.9, p223 Appendix B.1 - Section 2.0 Methodology	<p>The EIS states that during construction "noise will be elevated above baseline for limited periods but for a short duration (12-24 months)". According to Section 6.3.1 of Health Canada (2016), construction noise lasting longer than one year should be assessed as operational noise. The methods to evaluate operational noise are also presented in Health Canada (2016). <i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: NOISE</i>. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</p>	<p>a. Provide a quantitative evaluation of construction noise as operational noise using the approach described in Health Canada (2016) given the expected duration of the construction phase (up to 2 years).</p>	<p>a. Conforms.</p>

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CEAA 2-31	HC	Section 3.2.2 Operation; 6.1.1 Atmospheric Environment; 6.2 Predicted Changes to the Physical Environment; 6.3.4 Aboriginal Peoples	Section 6.1.6, p214; 6.1.7.3, p218; Table 6.14-1, p808 Figure 2.1-2 Appendix B.1 Figures 3 and 4 Appendix B.1 Section 6.1 Section 6.1.3.2, p211 Appendix B.1 - Section 6.2 Section 6.2.6.4, p235	<p>The locations of the nearest human receptors that were evaluated in the air and noise assessments are not clear. Several seasonal and permanent dwelling locations appear on the maps provided; however, it is not clear if all relevant receptors were identified. For example, the locations of traditional land use were not identified. Where traditional land use is practiced closer to the project site than the permanent/seasonal dwellings, these areas should also be evaluated for potential health impacts.</p> <p><i>Noise</i> Given that the Nova Scotia Environment (NSE) Noise Guidelines are intended not only for dwellings but also for recreational areas, any area used for recreational or traditional purposes by Indigenous peoples located closer to the project site should be included in the noise assessment. This is particularly relevant because of the predicted exceedances of the provincial noise guidelines at the Beaver Dam Mine site property boundary.</p> <p>In terms of noise, section 6.1 of Appendix B.1 states that “the Nova Scotia Guidelines for Environmental Noise Measurement and Assessment state that their guideline limit values are intended to be applied where people normally live, work, or take part in recreation”. According to section 6.1.7.3 of the EIS, “activities in the project site area include recreational use (hunting, ATVs, etc)”. According to Table 6.14-1, “Mi’kmaq families also enjoy camps in the area for recreational purposes.”</p> <p>Additionally, the EIS states that “the highest predicted noise levels at the property boundaries of the Beaver Dam Mine Site exceed the criteria NSE Pit and Quarry Guidelines (1999) for all time periods ... While the limits stated in these guidelines are clear and specific, they are not considered practical to meet for open pit mines with operations located close to property lines.” However, according to section 6.2 of Appendix B, The NSEL document <i>Pit and Quarry Guidelines, May 1999</i> specifies the following sound level limits at the property boundaries of pits and quarries.</p> <p><i>Air Quality</i> In terms of air quality, it appears that the predicted air pollutant concentrations were screened against air quality criteria at the “sensitive receptor” locations throughout the EIS (e.g. Table 6.2-12). However, it is not clear what these sensitive receptors represent and how they are selected and located.</p> <p>In the vicinity of the Beaver Dam and Touquoy Mine sites and Haul Road operations area, Indigenous traditional land users may be exposed to higher concentrations of airborne contaminants than those at the identified ‘sensitive receptor’ locations. The proponent should screen and assess the exposure to air contaminants at the maximum point of impingement (MPOI) in addition to at the nearest permanent and seasonal dwellings.</p>	<p>a. Provide all human receptor locations, including locations of traditional land use and recreational use which may be closer to the project area than seasonal and/or permanent dwellings (for both air quality and noise VCs) on maps and in summary tables.</p> <p>b. Update the noise and air modelling and human health assessment as required.</p> <p>c. Provide further justification for the conclusion that the noise limits in the <i>NSE Pit and Quarry Guidelines (1999)</i> are not valid at the property boundary of the Beaver Dam Mine Site.</p> <p>d. Provide additional mitigation measures that reduce noise at the property boundary given the predicted exceedances.</p> <p>e. Update any monitoring or follow-up programs at the property boundary to verify predicted noise levels and evaluate the level of conservatism used in the modelling.</p> <p>f. Provide the predicted exposure levels to air pollutants at the MPOI.</p> <p>g. Assess the health risks from air pollutants using the revised exposure levels at the MPOI.</p> <p>h. Illustrate the predicted air and noise isopleths for the regional study area, in graphic/map format with all the human receptor locations identified above.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The response states that the revised EIS provides maps and summary tables for seasonal and permanent human receptor locations for both air quality and noise valued components. However, maps illustrating predicted NO2 and other contaminants of potential concern (COPC) in air overlaid with sensitive human receptor locations in the local study area and regional study area were not provided. The response also states that some figures in Appendices B.1, B.2, and C.1 of the revised EIS have also been produced with Millbrook First Nation traditional land use areas shown and only shared directly with Millbrook First Nation. It remains unclear if traditional land and resource use locations are closer to the project area than seasonal and/or permanent dwellings. Any area used for recreational or traditional purposes by the Mi’kmaq of Nova Scotia located closer to the project site than the nearest residences that were evaluated in the environmental effects assessments, should also be evaluated for potential health impacts and included in the updates to the noise and air quality assessments. The Proponent is also required to provide summary tables describing project-induced noise and air quality levels approaching or exceeding appropriate guidelines and/or standards where the Mi’kmaq of Nova Scotia practice traditional uses of the land. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. Although the response refers to Sections 6.1 and 6.2 and Appendices B.1, B.2, and C.1 of the updated EIS, it is unclear where the response can be found within the referenced EIS sections and appendices. Revise the response to provide the information required in the original IR.</p> <p>c. Non-conforming. The response does not adequately address Part C of the IR. Although the response refers to Section 6.1 and Appendix B.2 of the updated EIS, it is unclear where the response can be found within the referenced EIS sections and appendix. Revise the response to provide the information required in the original IR.</p>

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						<p>d. Non-conforming. The response does not adequately address Part D of the IR. Although the response refers to Section 6.1 and Appendix B.2 of the updated EIS, it is unclear where the response can be found within the referenced EIS sections and appendix. Revise the response to provide the information required in the original IR.</p> <p>e. Non-conforming. The response does not adequately address Part E of the IR. The response and the revised EIS did not provide any updated follow-up noise monitoring programs. Sound-level monitoring should be considered at the mine site property boundary to verify modeled project construction and operational noise levels and evaluate whether proposed mitigation measures will be effective. Revise the response to provide the information required in the original IR. If no noise monitoring is proposed, provide justification for why it is not considered necessary.</p> <p>f. Non-conforming. The response does not adequately address Part F of the IR. Table 7A (Particulate Modeling Results for Project Only and Cumulative Truck Traffic Scenarios – 80% Road Dust Mitigation) in Appendix C.1 of the revised EIS provides predicted exposure levels to TSP, PM10, and PM2.5 at the MPOI. However, predicted exposure levels to other COPCs in air (e.g., NOx) at the MPOI were not assessed. Furthermore, when evaluating potential health risks associated with project activities, it is important to assess risks both with and without proposed mitigation measures; this will allow for the development of a reasonable worst-case scenario in the event that mitigation will not be as effective as predicted. This can also be used to guide follow-up monitoring plans, remediation, and/or risk management approaches to reduce any unacceptable risks. Revise the response to provide the information required in the original IR.</p> <p>g. Conforms.</p> <p>h. Non-conforming. The response does not adequately address Part H of the IR Based on the revisions to Part A, revise the response to provide the information required in the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-32	HC	Section 6.1.1 Atmospheric Environment	Section 2.3.2.2, p127 Section 6.1.8, p219	<p>Section 6.1.8 states that “traffic on the Haul Road will generally be restricted to 16 hours per day during the operational phase. This will minimize noise along the Haul Road during evening hours.”</p> <p>Section 2.3.2.2 states that approximately 20 trucks will be operating between 0600-2300 hours (which is a time span of 17 hours) to transport ore from the Beaver Dam Mine site to the Touquoy Mine site.</p> <p>It is unclear whether an increased duration will have an impact on noise levels along the Haul Road during the evening hours (which according to the <i>Nova Scotia Guidelines for Environmental Noise Measurement and Assessment</i> is between 1900 and 2300 hours).</p> <p>In the event future noise levels are elevated, a formalized complaint-response plan should be implemented and additional mitigation may also be necessary.</p>	<p>a. Confirm that the truck traffic for the noise assessment has been adjusted to reflect 16 hours rather than 12 hours. If noise levels are likely to be elevated during the evening/overnight period, provide a discussion of any additional mitigation measures that may be employed to reduce noise levels at the nearest receptor locations.</p> <p>b. Develop a complaint-response plan which would be implemented in the event of public complaints associated with increased noise levels during project construction and/or operation.</p>	<p>a. Non-conforming. The submission does not provide a response for Part A. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. The response indicates that the Complaint Resolution Plan in place for the Touquoy Mine will be updated to include the Beaver Dam Mine Project. The Complaint Resolution Plan was not provided for review. Revise the response to provide the information required in the original IR.</p>
CEAA 2-33	HC	6.1.1 Atmospheric Environment	Section 6.2, p229 Section 6.2.4.4, pp238 and 239	<p>The proponent considered particle deposition as the sole operable pathway for air contaminants and assessed the health effects of only particulate matter (PM), such as total suspended particulate, PM_{2.5} and PM₁₀. The EIS states that “gaseous compounds were screened out during the preliminary air quality assessment (Appendix C.1), only particulate concentrations were carried forward for the air quality impact assessment”. However, it is unclear why other important criteria air contaminants, such as NO₂ and SO₂, were screened out and not carried forward to the impact assessment.</p> <p>Also, although the annual average PM_{2.5} concentration is predicted to exceed the <i>Canadian Ambient Air Quality Standards</i> (CAAQS) at the MPOI in the Haul Road operations scenario, the effect is considered <i>not-significant</i> as the exceedances are predicted to occur less than 2% of the time.</p> <p>The CAAQS for PM_{2.5} explicitly recognize the absence of health effects thresholds by having additional management levels at concentrations below the CAAQS, which reflect the health and environmental benefits that can be achieved by taking actions to reduce air pollution to background levels. The proponent mentions that health risks exist below the air quality criteria; however, the risk levels are stated to “be within acceptable ranges” without discussing the possible mitigation measures to prevent air quality deterioration compared to background levels.</p>	<p>a. Provide an additional explanation as to why the inhalation of gaseous compounds, such as NO₂ and SO₂, were screened out of further assessment in terms of human health.</p> <p>b. Provide a qualitative or quantitative Human Health Risk Assessment (HHRA) for PM_{2.5} in relation to exposure throughout the study area with particular attention to PM_{2.5} concentrations along the Haul Road in close proximity to seasonal/permanent residences and traditional land use areas.</p> <p>c. Provide a discussion of the implications of the CAAQS-associated management levels and the potential to reduce emissions.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The response indicates that gaseous compounds were screened out in Appendix C of the EIS due to the updated modelling results analysis. It is unclear where within the appendix this is explained. In addition, the response refers to Table 7 of the response to CEAA 2-25; however, this table could not be found. Revise the response to provide the information required in the original IR.</p> <p>b. Conforms.</p> <p>c. Conforms.</p>
CEAA 2-34	HC	Section 6.1.4 Groundwater and Surface Water	Section 6.6.3.1, p297	<p>The discussion of regional domestic well supplies is not sufficient to identify potential receptors of project-related contaminants. It is unclear whether the “nearest domestic well” referenced is at the intersection of Hwy 224 and the Haul Road or elsewhere.</p> <p>The results presented in Tables 6.6-1 and 6.6-2 are not discussed and it is not clear how the results represent regional baseline groundwater quality.</p>	<p>a. Provide a map showing the documented domestic drilled and dug wells within the project area/zone of influence. For example, clarify where the wells from Tables 6.6-1 and 6.6-2 are located.</p> <p>b. Indicate when the samples in Tables 6.6-1 and 6.6-2 were taken and discuss the results in terms of existing COPC levels.</p>	<p>a,b. Non-conforming. The response does not adequately address Parts A and B of the IR. The response states that in the revised EIS, Tables 6.6-1 and 6.6-2 have been replaced based on updated monitoring and modelling information. This updated baseline water quality data appears now to be summarized in Tables 6.6-2 and 6.6-3. However, the locations of where the dug well from Table 6.6-2 (Till Groundwater Analysis for Dug Well in area of Beaver Dam Mine Site) is located or</p>

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						where the drilled wells from Table 6.6-3 (Bedrock Groundwater Analysis for Drilled Wells in area of Beaver Dam Mine Site) are still unclear. Revise the response to provide the locations of the dug well from Table 6.6-2 and the drilled wells from Table 6.6-3.
CEAA 2-35	HC	Section 4.1 Guidance	<p>Section 1.3 Federal, p83</p> <p>6.6.5.4, p316</p> <p>6.7.5.1, p378</p> <p>6.7.5.5, p385</p> <p>6.14.6 Surface Water and Groundwater, p837</p> <p>6.14.6 Surface Water and Groundwater, pp836 and 837</p> <p>Table ES-1, Reference IR Number NSE-1-2, p13</p> <p>Table ES-1, Reference IR Number NSE-1-54, p22</p> <p>6.16.3.2, p874</p> <p>6.3.4 Aboriginal Peoples</p> <p>6.5 Mitigation</p>	<p>The conclusions on the significance of adverse effects on groundwater and surface water quality are subsequently used to determine the significance of indirect effects on human health. However, there is no comparison of predicted results to the <i>Guidelines for Canadian Drinking Water Quality</i> (GCDWQ).</p> <p>According to Nova Scotia Environment (NSE, 2014), “in situations where surface water is used as a drinking water source or where there is believed to be a high potential for incidental ingestion of surface water, the [GCDWQ] are recommended for use.”</p> <p>There are several statements of impacts to surface water being “limited”; however there is no discussion of whether any parameters were predicted to be above GCDWQ. Also, surface water is omitted as a direct exposure pathway (i.e., contact and ingestion/drinking during traditional land use activities) with no justification.</p> <p>The proponent states that “there is the possibility for seasonal dwellings to be drawing water from the lakes; however, there is no record of this”.</p> <p>The GCDWQ have more stringent antimony and uranium limits than the NSE Tier 1 and/or Canadian Council of Ministers of the Environment (CCME) guidelines. The GCDWQ also provide limits for nitrate and nitrite which are absent from the NSE guidelines. The site specific water quality objective derived for arsenic did not consider effects to human health and is higher than the GCDWQ limit which is “based on treatment achievability; elevated levels associated with certain groundwater issues; levels should be kept as low as reasonably achievable”.</p> <p>The groundwater assessment appears to have used “average” predicted concentrations for groundwater discharges to surface water. Using maximum predicted concentrations is a more conservative assessment of potential health risks from consumption of surface water under the influence of groundwater in the event that either is a potable drinking water supply.</p> <p><i>References:</i> <i>Guidelines for Canadian Drinking Water Quality - Summary Table. 2017. Prepared by the Federal-Provincial-Territorial Committee on Drinking Water of the Federal-Provincial-Territorial Committee on Health and the Environment. February. https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html</i> <i>NSE Environmental Quality Standards EQS for Contaminated Sites Rationale and Guidance document. April 2014.</i></p>	<p>a. Compare predicted surface and/or groundwater concentrations to the GCDWQ if there are drinking water supplies (surface or groundwater) affected by project activities.</p> <p>b. Include nitrate in Table 6.7-15 or further justify its exclusion.</p> <p>c. Provide a justification as to why average contaminant concentrations in groundwater discharges to surface water were used to evaluate potential health risks from the consumption of surface and/or groundwater that may be impacted by mining activities.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. Figures presenting simulated COPCs which exceed provincial standards or the GCDWQ were provided in the response; however, a comparison of all individual surface and/or groundwater quality parameters to appropriate guidelines, for both baseline case and predicted future concentrations during project activities, must be provided regardless of whether these data exceed the applicable guidelines. Additionally, Appendix F.5 (including Figures 7.9, 7.20, and 7.21) references the incorrect manganese value (120 ug/L) for the Nova Scotia Environmental Quality Standards for potable groundwater. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of this IR. Although the response indicates that Figures 7.10 and 7.11 have been updated to include nitrate, Table 6.7-18 in the updated EIS (which appears to have replaced Table 6.7-15 from the 2019 EIS) was not updated to include nitrate. Revise the response to provide the information required in the original IR.</p> <p>c. Conforms.</p>

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CEAA 2-36	HC	Section 6.2 Predicted Changes to the Physical Environment	Section 6.6.6.2, p321 2.3.1.2, p113 6.6.8, p330	Potential effects to groundwater quality as a result of the application of magnesium chloride during operations are characterized simply as “highly localized” and “limited in extent”. Given that aggregate materials for construction of the Haul Road may be “sourced from either the Touquoy or Beaver Dam Mine Sites”, a discussion is warranted on the use of tested, “clean” material. This is particularly important given the presence of potentially elevated levels of specific metals in the aggregate materials that may be used to construct the Haul Road.	a. Specify whether the application of magnesium chloride or other dust suppressants on the Haul Road (or elsewhere depending on usage) or use of aggregate materials for road construction may impact domestic drinking water supplies such that the GCDWQ may be exceeded in nearby wells (including frequency and magnitude of any effects). b. If impacts are predicted, provide a follow up plan that includes baseline sampling of nearby drinking water wells.	a. Conforms. b. Conforms.
CEAA 2-37	HC	Section 3.3.1 Changes to the Environment	Section 6.7.3.1.2, p351 Figures 6.7-3I, 6.7-12 Section 6.7.6.2, p396	The water flow and fish passage discussion in the revised EIS is limited to the effects of Haul Road activities. However, receptors downstream of water crossings have the potential to be exposed to project related contaminants, including in the event of a spill, through recreational use or drinking water. It is also unclear whether residents along Ferry Lake are located upstream or downstream of the Haul Road.	a. Assess the potential effects of Haul Road activities on water quality downstream of the watercourse crossings. b. Clarify whether human receptors who may live or use Ferry Lake (or any other locations downstream of any water crossings) may be affected due to project-related contaminants, including accidental chemical spills and the possible contamination of downstream drinking water supplies. If there is the potential for this to occur, update the assessment of related valued component as appropriate.	a. Conforms. b. Conforms.
CEAA 2-38	HC	Section 6.3.4 Aboriginal Peoples	Section 6.14.5, p828 Section 6.14.6 Surface Water and Groundwater, p836 Example from 6.14.6 Geology, Soil and Sediment, p835	The EIS dismisses indirect effects on human health from each exposure pathway independently from all other pathways. For example: “No residual effects for geology, soils and sediment are anticipated Therefore, no indirect significant effects are expected as a result of the link between biophysical effects and effects to Indigenous peoples.” An HHRA is required when elevated COPC concentrations are predicted in one or more environmental media for a proposed project. The following elevated COPC concentrations are noted: Several contaminants are above criteria in air at receptors located further from the project than Indigenous traditional land users. <ul style="list-style-type: none"> Aluminum and boron concentrations in soil along the Haul Road are predicted above criteria. Concentrations of several parameters were predicted to be above criteria in the Beaver Dam and Touquoy pit lakes, and to a lesser extent the receiving watercourses. Note comment HC-10 regarding the use of site-specific water quality objectives for arsenic focused on effects to aquatic ecology and not on human health. Concentrations of several parameters were predicted above criteria in berries along the Haul Road. Note comment HC-01 regarding the limited scope of the country foods assessment. 	a. Provide justification as to why an HHRA is not required to determine significance on Indigenous people. OR. Conduct an HHRA to provide an estimate of potential human health risks associated with chemicals released at various stages of the proposed project. This should include but is not limited to Indigenous and recreational land users, seasonal residents and/or permanent residents.	a. Non-conforming. The response does not adequately address the IR. Although the response refers to Appendix C.2 of the updated EIS, it is unclear where the response can be found within this appendix. Revise the response to provide the information required in the original IR.

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				<p>Given the documented traditional land use of the area, the predicted COPC concentrations above criteria in several media, and the Millbrook First Nation request for an independent study regarding impacts to human health, a quantitative HHRA should be undertaken. Where there are pathways that may not result in increased exposure to the human receptors identified, a qualitative (screening) approach may be sufficient.</p> <p>Further information on evaluating human health risks can be found in Health Canada's 2012 <i>Guidance on Preliminary Quantitative Risk Assessment (PQRA)</i>.</p> <p><i>Reference:</i> Health Canada. 2012. <i>Guidance on Human Health Preliminary Quantitative Risk Assessment (PQRA)</i>, Version 2.0.</p>		
CEAA 2-39	HC	Section 6.6 Significance of Residual Effects	Section 6.14.5.2, p830	<p>Health Canada assesses biophysical changes in air quality, noise levels, drinking water effects, and contamination of country foods (and those impacts on human health).</p> <p>Thresholds for the determination of significance on human health are defined as "effects on health ... of affected Indigenous communities to the extent that there are <i>associated detectable and sustained decreases in the quality of life of a community.</i>"</p> <p>The proposed significance definition does not provide a quantitative measure to evaluate potential human health effects from the project. Furthermore, there is no evaluation of quality of life in the EIS and as such, it is not possible to evaluate significance in relation to human health. For example, 'detectable' and 'sustained decreases' in the 'quality of life' of 'a community' cannot be determined during the environmental assessment process.</p> <p>Section 6.14.5.2 further states that <i>non-permanent and/or geographically limited (i.e., small-scale) changes in harvest areas caused by displacement due to Project activities are not considered to be significant</i>. The Agency requires that terms such as "geographically limited (i.e. small scale)" or "changes in harvest areas" must be clearly defined.</p>	<p>a. Provide a quantitative definition of significance for human health that can be measured during the environmental assessment. If this is not feasible, provide a reasoned rationale for the proposed definition of significance for human health.</p> <p>b. Define the "geographically limited (i.e. small scale) changes in harvest areas" relative to the assessment study areas and confirm that the movement of species of interest for harvest through the study areas has been considered.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p>
Hydrogeochemistry						
CEAA 2-40	NRCan	Part 2, Section 6 Effects Assessment; 6.1.3 Topography and Soil	Page 203-204, Section 6.5.3.2 Soils and Sediments Appendix C.2, Evaluation of Exposure Potential Related to Dust Deposition from Haul Road	<p>Section 6.5.3.2 provides a brief description of the surficial geology and geochemistry of soils and tills in the project area based on two reports from the Nova Scotia Department of Natural Resources summarizing exploration geochemistry data collected by Nova Scotia Department of Natural Resources (NSDNR) from 1977-1982 (3 samples; NSDNR 2006a) and by Seabright Resources from 1986-1989 (98 samples; NSDNR 2006). Additional soil sampling was completed along the proposed Haul Road in 2018 as discussed in Appendix C.2. Six overburden samples were also collected at the Beaver Dam Project Site for metal leaching/acid rock drainage (ML/ARD) testing, but are not discussed in section 6.5.3.2.</p>	<p>a. Conduct a survey of soil geochemistry at the Beaver Dam Mine site to delineate soils contaminated by former mining activity, including historical tailing.</p>	<p>a. Non-conforming. The response does not adequately address the IR. Although the response refers to Appendix E.6, E.7 and E.8 of the updated EIS, it is unclear where the response can be found within these appendices. Revise the response to provide the information required in the original IR.</p>

Annex 1 - Summary Table for Non-conforming Round 2 Information Requirement Responses

			<p>Traffic onto Soils, Berries, and Vegetation, Table 2-1</p> <p>Appendix E.2, Beaver Dam Project – ML/ARD Assessment Report, Table 4-9</p>	<p>It is NRCan’s view that a systematic survey of surface soils at the Beaver Dam site would help to establish more reliable site-specific baseline concentrations for a broader range of metal(loid)s within the project area, and may also help to identify areas containing historical mine tailings. The spatial distribution of some elements of concern, especially arsenic, will most likely vary significantly across the site and be influenced by various factors such as proximity to the ore zone, glacial transport, and soil depth (see Parsons and Little (2015) for examples from other gold mines in Nova Scotia). A better understanding of soil geochemistry could help the proponent manage areas contaminated by historical mining activity, and select the most appropriate materials for future reclamation efforts.</p> <p>From 2007 to 2010, the NSDNR and Geological Survey of Canada (GSC) collected samples of soil and till throughout Nova Scotia that could provide additional insight into the geochemistry of soils and dust along the proposed haul route (Rencz et al. 2011; Friske et al. 2014a, 2014b). These surveys sampled individual soil horizons, including the “Public Health” layer (0-5 cm) and would augment data for the 11 soil samples collected along the haul road in 2018 (Appendix C.2). Geochemical data from these surveys would also be useful for establishing background concentrations for a wide range of elements from other parts of the Meguma Supergroup with similar bedrock and surficial geology to the Beaver Dam site. Based on the results of these surveys, include discussion on the main processes that might control the spatial distribution of elements such as arsenic, which exceeds CCME soil quality guidelines in 29 of 98 till samples near the project site (page 203, section 6.5.3.2) and in all of the overburden samples collected for ML/ARD testing (Appendix E.2, Table 4-9). These data would serve as a baseline for future environmental monitoring activities and help guide reclamation efforts.</p> <p>Soil geochemistry data are available from regional surveys carried out by the GSC and NSDNR from 2007-2010, and by the GSC around NS gold mine districts. These datasets could help the proponent to evaluate the ranges of arsenic (As) and Mercury (Hg) typically encountered around historical gold mine districts, and how their own soil geochemistry data compare to other parts of Nova Scotia. Incorporating these data into future environmental monitoring programs should help to distinguish mining impacts from natural variations in element concentrations within soils of the Meguma Terrane.</p> <p>Friske, P.W.B., Ford, K.L., McNeil, R.J., Pronk, A.G., Parkhill, M.A., and Goodwin, T.A. (2014a) <i>Soil Geochemical, Mineralogical, Radon and Gamma Ray Spectrometric Data from the 2007 North American Soil Geochemical Landscapes Project in New Brunswick, Nova Scotia and Prince Edward Island</i>; Geological Survey of Canada, Open File 6433 (revised). doi:10.4095/293020</p> <p>Friske, P.W.B., Ford, K.L., McNeil, R.J., Amor, S.D., Goodwin, T.A., Groom, H.D., Matile, G.L.D., Campbell, J.E., and Weiss, J.A. (2014b) <i>Soil Geochemical, Radon and Gamma Ray Spectrometric Data from the 2008 and 2009 North American Soil Geochemical Landscapes Project Field Surveys</i>; Geological Survey of Canada, Open File 7334 (revised). doi:10.4095/293019</p>		
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IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
				<p>Parsons, M.B. and Little, M.E. (2015) <i>Establishing geochemical baselines in forest soils for environmental risk assessment at the Montague and Goldenville gold districts</i>, Nova Scotia, Canada; <i>Atlantic Geology</i>, v. 51, pp364–386.</p> <p>Rencz, A.N., Garrett, R.G., Kettles, I.M., Grunsky, E.C., and McNeil, R.J. (2011) <i>Using soil geochemical data to estimate the range of range of background element concentrations for ecological and human-health risk assessments</i>; Geological Survey of Canada, Current Research 2011-9, 22 p. doi:10.4095/288746</p>		
CEAA 2-41	NRCan	Section 6.1.4; 6.2.2	Appendix F.5 Parts I-II (Hydrogeologic Model Development and Application)	<p>Dewatering scenario at Beaver Dam:</p> <p>The simulation of the drawdowns caused by the dewatering activities was done using drains along the wall and at the bottom of the open pit. Figures 7.1a-b, 7.2a-b and 7.3a-b in Appendix F.5 show that resulting drawdowns close to the open pit will be in the order of 4 m. Given that the depth of the open pit will be up to 200 m, those drawdowns appear to be very low in comparison.</p> <p>The proponent should indicate whether a seepage face will be present along the pit walls. If a seepage face is present, as stated in the Appendix F.1 (Assessment of Potential Open Pit Groundwater Inflows – Beaver Dam Gold Project), seepage along the pit walls may induce instability of the walls and complete dewatering of the walls would be safer. In this scenario, adding pumping wells or horizontal drains along the perimeter of the pit may be necessary. As a consequence, more groundwater would be pumped out of the aquifer, which may result in more water to dispose of, more drawdowns, more impact on the baseflow, as well as a different solute transport time.</p>	<p>a. Provide a cross-section through the Beaver Dam open pit with drawdowns and hydraulic heads depicted as a figure to give a better perspective of the induced drawdowns.</p> <p>b. Indicate whether a seepage face will be present along the pit walls. If so, simulate seepage along the pit walls and reassess impacts accordingly, particularly for the Cameron Flowage.</p>	<p>a. Conforms.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. Although the response indicates that a seepage face is present and that impacts were assessed, no further information was provided. Revise the response to provide the information required in the original IR.</p>
CEAA 2-42	NRCan	Section 6.1.4; 6.2.2	Appendix F.5 Parts I-II (Hydrogeologic Model Development and Application) and Appendix F.6 (Groundwater Flow and Solute Transport Modelling to Evaluate Disposal of Beaver Dam Tailings in Touquoy Open Pit)	<p>Bedrock porosity at Beaver Dam and Touquoy:</p> <p>Transport simulations were conducted to assess the potential of contamination of the mining activities on the quality of the surface water. In these simulations, the porosity values used for the bedrock (shallow and deep) appear to be in the higher range of possible values for the formations present. For instance, values of 10% and 5% for shallow and deep bedrock were used, respectively (the same values were used for the Beaver Dam and Touquoy sites). Given the very low hydraulic conductivity of the bedrock, in the range of 10^{-7} and 10^{-9} m/s, much lower values of porosity are expected. Using much lower porosity values will increase groundwater velocity, which in turn may have a larger impact on water quality.</p>	<p>a. Provide porosity measurements on cores to reduce the uncertainty on porosity values.</p> <p>b. Reassess transport simulations particularly for the Cameron Flowage and the Moose River.</p>	<p>a. Conforms.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. Although the response refers to Appendix F.6 it is unclear where the response can be found within this appendix. Revise the response to provide the information required in the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-43	NRCan	Section 6.1.4; 6.2.2	Appendix F.6 (Groundwater Flow and Solute Transport Modelling to Evaluate Disposal of Beaver Dam Tailings in Touquoy Open Pit)	<p><i>Hydraulic conductivity of the mapped faults at Touquoy:</i></p> <p>As indicated by the sensitivity analysis provided, the presence of mapped faults not characterized during hydrogeological field testing may have important negative impacts on the water quality of the Moose River and Watercourse-4.</p>	<ul style="list-style-type: none"> a. Assess the potential for high hydraulic conductivity faults at Touquoy in the field. b. Based on the results, update the modeling, including calibrating the model with the faults, and the effects assessment, as required. 	<ul style="list-style-type: none"> a. Non-conforming. The response to Part A provides information that contradicts the information provided in Appendix F.6. The response states that “<i>water bearing faults were identified on the pit wall in the vicinity of monitoring well OPM-2A/B</i>”, which is located between the pit and Moose River. However in Section 3.3.2 of Appendix F.6 it states “<i>The faults with seepage were located on pit walls that were generally located away from Moose River</i>”. The response also states that groundwater seepage is largely through the glacial till and through fractures in the shallow bedrock; however, Table 4.6 in Appendix F.6 states that the modelled weather bedrock had hydraulic conductivities assigned that were three to four orders of magnitude (10^{-7} or 10^{-8} m/s) below the till (10^{-4} m/s). The calibrated model has very little difference between the hydraulic conductivities assigned to weathered bedrock and to competent bedrock. It also appears that no new data or information was collected to respond to this IR; however, interpretations changed from the 2019 EIS. Revise the response to remove contradictions and to clarify why interpretations changed from the 2019 EIS and to provide the information required in the original IR. b. Non-conforming. The response does not adequately address Part B of the IR. Although the response refers to Appendix F.6, it is unclear where the response can be found within this appendix. Revise the response to provide the information required in the original IR.
CEAA 2-44	NRCan	Section 6.1.4; 6.2.2	Appendix F.6 (Groundwater Flow and Solute Transport Modelling to Evaluate Disposal of Beaver Dam Tailings in Touquoy Open Pit)	<p><i>Baseflow calibration for Touquoy:</i></p> <p>A baseflow value for the Moose River is estimated using the calibrated numerical model for the baseline conditions. However, there is no baseflow calibration to ensure that the estimated value with the model is correct. While the calibration with the hydraulic heads is satisfactory, this does not guarantee that the mass balance of the model is realistic. Without baseflow calibration, several combinations of hydraulic conductivity and groundwater recharge can match observed heads, but with each combination having a different impact on the baseflow estimates.</p> <p>Baseflow calibration should be done at least for the Moose River which is expected to be the most impacted by the Project.</p>	<ul style="list-style-type: none"> a. Using a similar approach to Touquoy, estimate baseflow for the Moose River using recursive filter on streamflow records. b. Based on the results, update the modeling, including calibrating the model to Moose River baseflow, and the assessment of related valued component as appropriate. 	<ul style="list-style-type: none"> a. Non-conforming. The response states that baseflow for Moose River was estimated using a recursive filter; however, the response does not contain sufficient information for technical review as the data and methodology used to obtain this calculation was not provided. Revise the response to explain the data and methodology used to make these calculations. b. Non-conforming. The response does not adequately address Part B of the IR. Although the response refers to Appendix F.6 it is unclear where the response can be found within this appendix. Revise the response to provide the information required in the original IR.

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CEAA 2-45	NRCan	Section 6.1.4; 6.2.2	Appendix F.6 (Groundwater Flow and Solute Transport Modelling to Evaluate Disposal of Beaver Dam Tailings in Touquoy Open Pit)	<p><i>Calibrated hydraulic conductivity values for streambed at Touquoy:</i></p> <p>It is indicated that the hydraulic conductivity values for river streambeds (e.g., Moose River) were adjusted during the calibration. However, the calibrated values are not provided.</p> <p>For conservative simulations, NRCan recommends also using streambed hydraulic conductivity values higher or equal than the hosting material. Indeed, using lower K values will disconnect the rivers from the aquifer and thus diminishing the impact of dewatering activities.</p>	<p>a. Provide adjusted calibrated hydraulic conductivity streambed values for river streambeds at the Touquoy project site.</p> <p>b. Indicate how values compare with the hosting material.</p>	<p>a,b. Non-conforming. The response does not adequately address Parts A and B of the IR. Although the response refers to Appendix F.6 of the updated EIS, it is unclear where the response can be found within this appendix. Revise the response to provide the information required in the original IR.</p>
CEAA 2-46	Agency, KMKNO	Section 6.1.4; 6.2.2	Section 6.6.6.3 Appendix F.6	<p>The proponent's solute transport model presented in Appendix F.6 indicates that contaminant concentrations would decrease by a factor of 1,000 over the 100 m distance between the tailings pit and the Moose River. However, even when the low permeability of the rock is considered, this rate of transport is unusually low.</p> <p>Kwilmu'kw Maw-klusuaqn Negotiation Office's consultant (CBCL Limited) completed scoping calculations using data from the report, and the results are not consistent with the presented model results.</p>	<p>a. Discuss the low rate of transport presented in Appendix F.6 and justify the results presented in the model.</p>	<p>a. Non-conforming. The response does not adequately address the IR. Although the response refers to Appendix F.6 of the updated EIS, it is unclear where the response can be found within the referenced EIS sections and appendices. Revise the response to provide the information required in the original IR.</p>
Accidents and Malfunctions						
CEAA 2-47	Agency, ECC, KMKNO, ESW	Section 6.7.1	Section 6.18	<p>In accordance with the Operation Policy Statement: <i>Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under the Canadian Environmental Assessment Act, 2012</i> and Technical Guidance: <i>Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under the Canadian Environmental Assessment Act, 2012</i>, the Agency requires that mitigation and contingency planning are clearly outlined in the event of accidents and malfunctions.</p> <p>Comments received from Indigenous people expressed concern regarding the potential for fuel and other spills (e.g. cyanide) to affect land and resources in the project area, and to detract from Indigenous use of the area or lead to avoidance.</p> <p>In the revised EIS, Table 6.18-6 Fuel and/or Other Spills Interactions with VCs states that "fuel and/or spills could potentially adversely affect Indigenous peoples", either directly in relation to ground and surface water quality and/or indirectly due to potential adverse effects to fish, fish habitat, wetlands and terrestrial habitats and species, and that this potential for adverse effects is high. No analysis of potential fuel/spills on current use is provided in the revised EIS.</p> <p>Furthermore, the Risk Rating Matrix (i.e. Figure 6.18-1), utilized on page 861 of the revised EIS, is not a commonly used ranking system. The selected values for likelihood of occurrence and level of magnitude are unsupported. The resulting risk ratings appear to be unrealistic for the selected scenarios.</p>	<p>a. Provide an analysis of the effects of potential fuel or other spill events on current use of land and resources by Indigenous people, including the potential for a worst-case scenario event.</p> <p>b. Provide mitigation and contingency planning, with priority given to areas of high importance by Indigenous people and how these would be protected in the event of a spill.</p> <p>c. Justify or revise the Risk Rating Matrix to provide a more comprehensive assessment that utilizes a more up-to-date ranking method of the likelihood and magnitude of all plausible accidents and malfunctions.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. The analysis of the effects of potential fuel or other spill events on current use of land and resources by the Mi'kmaq of Nova Scotia does not include the potential for a worst-case scenario event. Revise the response to provide the information required in the original IR.</p> <p>b. Non-conforming. The response does not adequately address Part B of the IR. The response indicates that mitigation and emergency response for potential fuel and other spills are discussed in Section 6.18.5.2; however this section cannot be found in the EIS. Section 6.18.7.1.4 of the EIS states that "<i>contingency measures developed as part of the spill response plan will be focused on areas of high ecological importance and areas used by Indigenous Peoples and will provide a plan on how such areas could/would be protected in the event of a spill</i>"; however, the spill response plan was not provided. Revise the response to provide the information required in the original IR.</p> <p>c. Conforms.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
Current Use						
CEAA-2-48	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Sections 4.3.2, 5.0, 6.3.4	<p>The EIS Guidelines (Sections 4.3.2, 5.0, 6.3.4) require the proponent to include measures to mitigate the effects of changes to the environment caused by the Project on current use of lands for traditional purposes and Aboriginal potential or established rights. The EIS must clearly describe how the proponent intends to implement those mitigation measures.</p> <p>In the revised EIS, Figure 6.14-1 shows that current Mi'kmaq land and resource uses overlap with the Project LAA, including in the vicinity of the mine site. The EIS does not describe how the proponent intends to implement measures to mitigate potential impacts to the Mi'kmaq's ability to continue to access preferred current land and use sites (such as preferred harvest areas) and to exercise their harvesting right. Rather, the proponent states it will "Engage in in-depth access management planning ... with Millbrook to ensure continued access to preferred harvest and occupancy areas, <i>where possible</i>."</p>	<p>a. Provide specific mitigation measures and describe how the proponent intends to implement those measures to mitigate potential effects on the experience and the current use of land and resources for traditional purposes and on the ability of the Mi'kmaq to continue to exercise their harvesting rights.</p> <p>b. Where access to preferred areas by the Mi'kmaq cannot be maintained, provide information on specific mitigation, including measures to minimize disruption within the project area and to ensure that traditional practices can continue in other areas of similar value during Project operations.</p>	<p>a. Non-conforming. The response does not adequately address Part A of the IR. While Table CEAA 2-48-1 summarizes the potential project interactions with the Mi'kmaq of Nova Scotia, specific mitigation measures are not described for project interactions. Revise the response to provide the information requested in the original IR.</p> <p>b. Conforms.</p>
CEAA 2-49	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Section 6.1.4	<p>Section 6.1.4 of the revised EIS indicates that Millbrook First Nation <i>significantly</i> uses the Beaver Dam Mine site and its vicinity, and that there will be a loss of access to current-use lands for up to eight years. The revised EIS states that "local residents of the Beaver Dam, Sheet Harbour and Millbrook IRs frequently use the area (range of use from weekly to yearly, depending on availability of species) for hunting and rely on the wild harvest as an important food and dietary source. Equally, community members harvest berries when in season, and a number of plants that are also used for sustenance, as well as traditional medicines."</p> <p>The proponent acknowledges that this loss of land includes impeded access to flora and fauna, and that an exclusion zone for the use of firearms is in place that may affect hunting. However, no estimates have been provided for the amount of land lost for current-use purposes for the duration of the Project.</p> <p>Furthermore, the proponent states that there is sufficient and unrestricted adjacent access to similar lands to limit any impact on Indigenous peoples as a result of Project activities. However, a better understanding of whether nearby lands are suitable and immediately available (i.e. not private land) for Indigenous peoples to use and/or harvest is required.</p>	<p>a. Based on the information available, calculate and provide a figure depicting the total area lost for all VCs that may affect the current use of land by Indigenous peoples. The calculation is required to include the direct loss of land (i.e. the Project footprint), as well as indirect loss of land (e.g. visual or noise disturbances, and exclusion zones for the use of firearms, etc.). The direct and indirect loss of land is to be quantified as a surface area measure, and represented in plan view on the figure.</p> <p>b. Explain how nearby lands would be a suitable alternative for Indigenous groups to practice current use, and how they are sufficient to limit potential impacts on Indigenous peoples. Include a description of the suitable alternative areas that may be used by Indigenous peoples for current-use practices (in consideration of other land uses, zoning and ownership) in the local and regional assessment area, and indicate the degree of access to these areas in realistic and quantifiable terms.</p> <p>c. Provide a definition of the term "suitable alternative", incorporating a consideration of Indigenous groups' potential adaptability to transfer existing cultural, experiential and biophysical reliance on lands and resources to available alternate nearby areas. Include a discussion on whether and how these conclusions were informed by engagement with the affected Indigenous groups.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p> <p>c. Non-conforming. The response does not adequately address Part C of the IR. While the response provides a definition for suitable alternative and states that the potential areas were discussed and shared with Millbrook First Nation, the response does not indicate whether Millbrook First Nation was supportive of all of the proposed locations. Revise the response to include feedback from Millbrook First Nation.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-50	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Section 6.14.5.2	<p>In response to CEAA 1-48, the revised EIS (section 6.14.5.2) states that “a significant adverse residual effect on Indigenous peoples as a Project-related environmental effect [is one] that results in one or more of the following outcomes:</p> <ul style="list-style-type: none"> • Long-term loss of the availability of, or access to, land and resources currently relied on for traditional use practices or the permanent loss of traditional use areas within a large portion of the project area. • Effects on health and/or socio-economic conditions of affected Indigenous communities to the extent that there are associated detectable and sustained decreases in the quality of life of a community.” <p>Table 5.10-1 of the revised EIS defines the definition of “long term” as an effect that extends beyond three years. The proposed life of the Beaver Dam Mine Project extends beyond three years. As such, in consideration of the threshold highlighted above, the effects predicted by the proponent to the Mi’kmaq of Nova Scotia would be significant.</p>	<p>a. Provide additional rationale for the conclusion that potential effects to Indigenous peoples are not significant based on the threshold identified in section 6.11.5.2 of the revised EIS.</p>	<p>a. Conforms.</p>
CEAA 2-51	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Section 8.5.7	<p>During consultation, Indigenous groups expressed concern regarding the potential for the Beaver Dam Mine Project and other regional projects to affect access to and current use of lands and resources. While the Agency is of the view that identifying projects within a 35 km radius may be appropriate for the cumulative effects assessment of some VCs (e.g. fish and fish habitat, air quality, habitat and fauna, etc.), it considers the buffer to be limiting for the Indigenous peoples’ VC. As suggested during consultation with Indigenous groups, the Agency requires the proponent to broaden the spatial boundaries of the current use of lands to the Eskikewa’kik for their consideration of cumulative environmental effects of existing and future physical activities that are certain or foreseeable (Figure 6.14-4 in the revised EIS).</p> <p>Additionally, the proponent is required to provide a complete analysis of the cumulative effects assessment in relation to Indigenous peoples. For example, although Table 8.4-2 in the revised EIS identifies that the residual effects of many certain or foreseeable projects may interact with the residual effects of the Project (section 8.5.7), the proponent’s discussion is limited to forestry, Touquoy Mine and the Beaver Dam to Touquoy Haul Road. Other projects within the 35 km buffer, and noted in Table 8.4-2, are not part of the proponent’s analysis. For example, despite only being 20 km away, Fifteen Mile Stream Gold Project is only considered in the context of Haul Road traffic and does not address the decrease of available land within the region that may affect the ability of Indigenous peoples to practice traditional and current-use activities.</p> <p>In the context of this IR, note that specific concerns of Indigenous peoples expressed throughout consultation include, but are not limited to: direct loss of land; contamination of water and soil; decreased quality of harvested wildlife, fish, berries and medicinal plants; increased noise; decreased air quality; removal of access to areas for traditional practices; and introduction</p>	<p>a. Revise the spatial scope for the cumulative effects analysis of VCs related to Indigenous peoples.</p> <p>b. Provide an updated cumulative effects analysis and significance determination for VCs related to Indigenous peoples (e.g. current use of lands, health and socio-economics) within the Eskikewa’kik territory.</p>	<p>a. Conforms.</p> <p>b. Conforms.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
				of new access to areas (which may open access to hunting by non-Indigenous peoples), etc.		
CEAA 2-52	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Appendix C.2	<p>With respect to the report <i>Evaluation of Exposure Potential Related to Dust Deposition from Haul Road Traffic onto Soils, Berries, and Vegetation</i> (Intrinsik, 2019) provided in Appendix C.2 of the revised EIS, KMKNO requested that a rationale for the berry and leaf samples used in Intrinsik's analysis be provided.</p> <p>In particular, KMKNO noted that Labrador tea is omitted from the berry and leaf samples used in the evaluation, despite Labrador tea being commonly consumed. KMKNO also notes that velvet-leafed blueberry (<i>Vaccinium myrtilloides</i>) was selected, while the more common late low blueberry (<i>Vaccinium angustifolium</i>), which is the usual wild species harvested for human consumption within the province, was not.</p> <p>Further, KMKNO requests a discussion of laboratory methods and results to gain a better understanding of Intrinsik's evaluation. For example, it is unclear whether the berries and leaves were analyzed separately by species or by composite.</p>	<p>a. Provide a rationale for the sample set of berries and leaves used in <i>Evaluation of Exposure Potential Related to Dust Deposition from Haul Road Traffic onto Soils, Berries, and Vegetation</i> (Intrinsik, 2019).</p> <p>b. Provide laboratory methods and results used to support the report <i>Evaluation of Exposure Potential Related to Dust Deposition from Haul Road Traffic onto Soils, Berries, and Vegetation</i> (Intrinsik, 2019).</p>	<p>a. Conforms.</p> <p>b. Conforms.</p>
CEAA 2-53	Agency, Indigenous groups	6.1.4 Indigenous Peoples	Section 6.14	<p>Section 6.14 of the revised EIS includes an assessment of how the health of Indigenous peoples may be affected by the Project. Health Canada indicated that there is insufficient justification in the revised EIS (based on the consideration of air quality, noise, drinking water and country foods assessment) to conclude that effects on human health are not significant. Round 2, Part 1 IRs CEAA 2-29 to CEAA 2-39 require the proponent to update their assessment of air quality and noise, and to further consider drinking water, while CEAA 2-38 requires that the proponent conduct an HHRA (or sufficient justification if one is not required). Based on the outcomes of the aforementioned IRs, the proponent's environmental effects and cumulative effects assessments (i.e. analysis and significance determination) of the health of Indigenous peoples requires an update.</p> <p>Guidance on the assessment of effects on human health is provided in the following Health Canada publications:</p> <ul style="list-style-type: none"> • Health Canada. 2016. <i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: NOISE</i>; • Health Canada. 2016. <i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: AIR QUALITY</i>; • Health Canada. 2018. <i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: COUNTRY FOODS</i>; • Health Canada. 2012. <i>Federal Contaminated Site Risk Assessment in Canada: Supplemental Guidance on Human Health Risk Assessment for Country Foods (HHRA Foods)</i>. 	<p>a. Update environmental effects and cumulative effects analysis and significance determination on the health of Indigenous peoples, including the consideration of air, noise, drinking water and country foods.</p>	<p>a. Non-conforming. The response does not adequately address the IR. Revise the response in consideration of any changes made to the responses to CEAA 2-48, CEAA 2-38 and CEAA 2-29 and address the original IR.</p>

IR Number	Expert Dept.	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to ...	Conformity Review
CEAA 2-54	Agency, Indigenous groups	Part 1, 1.1.1. Aboriginal Peoples; Part 2, 6.3.1 Fish and Fish Habitat	Section 6.9; 6.9.6	<p>Section 1.1.1 of the EIS Guidelines requires a description and analysis of how changes to the environment caused by the Project will affect Aboriginal groups' current use of land and resources for traditional purposes. This assessment characterizes any changes to resources (fish, wildlife, birds, plants or other natural resources) used for traditional purposes (e.g. hunting, fishing, trapping, collection of medicinal plants, use of sacred sites).</p> <p>In KMKNO's comments on the revised EIS, gaps were identified regarding the characterization of fish and fish habitat in relation to the Aboriginal fishery. The revised EIS does not clearly confirm the quality of Aboriginal fishery species habitat within the proposed mine footprint and does not identify Atlantic salmon as a fish species that supports Aboriginal fisheries.</p> <p>The proponent's responses to CEAA 2-06 through 2-23 will address many of KMKNO's questions regarding the characterization of fish habitat in the project area, as well as quantify potential losses/modifications. In addition, CEAA 2-33 requests an HHRA that will help to determine potential risks to humans in consuming fish that may be affected by metals. However, a discussion regarding how potential impacts to fish and fish habitat from the Project may affect the Aboriginal fishery is required. The discussion should include, but not be limited to, an overview of how the Aboriginal fishery may be affected during the Project's lifespan, particularly for species in the Killag River (a known salmon-bearing watercourse).</p>	<ul style="list-style-type: none"> a. Provide an overview of Aboriginal fisheries activity in the local and regional assessment areas, including, but not limited to, species harvested and known harvesting locations. b. Discuss how the proposed Project may affect the Aboriginal fishery of the Mi'kmaq of Nova Scotia, particularly for species in the Killag River. 	<ul style="list-style-type: none"> a. Conforms. b. Non-conforming. The response does not adequately address Part B of the IR. Revise the response to discuss how the Project may affect the Mi'kmaq fishery, particularly for species in the Killag River.