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November 4, 2019

James Millard Atlantic Mining NS Corp 409 Billybell Way, Mooseland Middle Musquodoboit, NS B0N 1X0

SUBJECT: Conformity review outcome for the Fifteen Mile Stream Gold **Project Environmental Impact Statement**

Dear James Millard:

The Impact Assessment Agency of Canada (the Agency) reviewed the Environmental Impact Statement (EIS) submitted by Atlantic Mining NS Corp on October 4, 2019 for the Fifteen Mile Stream Gold Project (the Project).

The Agency determined that the EIS does not conform to the requirements of the August, 2018 Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environmental Assessment Act, 2012 for the Fifteen Mile Stream Gold Project (the EIS Guidelines). The Agency received advice on the conformity of the EIS from federal authorities.

Annex 1 (attached) identifies the areas where information and/or clarity are required for the EIS to meet the requirements of the EIS Guidelines. The outcome of this conformity review, including this letter and annexes, as well as submissions from federal authorities that informed this review, will be posted on the Canadian Impact Assessment Registry Internet Site, found at: https://iaac-aeic.gc.ca/050/evaluations/proj/80152.

Atlantic Mining NS Corp is required to provide a revised EIS that meets the requirements of the EIS Guidelines, as detailed in Annex 1. The timeline for the federal environmental assessment process will be paused while you complete this work.

Upon receipt of a revised EIS, the Agency will conduct a conformity review in accordance with its Operational Policy Statement: Information Requests and Timelines, February 2016 (https://www.canada.ca/en/impact-assessmentagency/news/media-room/media-room-2016/information-requests-timelines.html.

Once the Agency determines that the EIS conforms with the EIS Guidelines, the environmental assessment can proceed to the technical review and public comment period.





Annex 2 (attached), while not conformity requirements, is advice to Atlantic Mining NS Corp from federal authorities based on their reviews of the ElSand should be considered throughout the preparation of the revised ElS, the remainder of the environmental assessment process, and the regulatory processes that follow, as applicable.

The Agency welcomes the opportunity to discuss the outcome of this review with you and to provide further advice on how to best address the outstanding information required to move forward with the assessment process. If you have any questions about the content of this letter or conformity review table, please contact the undersigned at 902-426-4716 or via email at CEAA.FifteenMile.ACEE@ceaa-acee.gc.ca.

Sincerely,

<Original signed by>

Nicole Scotney Project Manager

Annex 1 – Detailed Conformity Gaps

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
### ### ### ### ### #### #### ########	Throughout	Clarify whether the Mi'kmaq of Nova Scotia (Kwilmu'kw Maw-klusuaqn Negotiation Office, Millbrook First Nation and Sipekne'katik First Nation) were provided with the opportunity to review and provide comments on the information used for describing and assessing effects on the Mi'kmaq of Nova Scotia. Document efforts that were undertaken by the proponent to provide Indigenous groups with the opportunity to review and provide comments on the information used for describing and assessing effects on Indigenous peoples, including impacts on Aboriginal or Treaty rights. Demonstrate that the proponent responded to the comments provided by the Mi'kmaq of Nova Scotia to ensure that the comments are adequately addressed.
4. Preparation and Presentation of the Environmental impact statement	EIS Summary	In the EIS summary, include an overview of how the factors under paragraph 19(1) of CEAA 2012 were considered, specifically the environmental effects of malfunctions or accidents, cumulative effects and changes to the project caused by the environment. Improve the clarity of Figures throughout the EIS Summary, in particular: • Figure 1.1- label all roads as they appear in the text (e.g. Beaver Dam Haul Road) • Figure 1.2- include all relevant project components, including site access, proposed and existing bypass roads/routes.

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
PART 2		
3.1 Project Components	Map Book	 Improve the clarity of Figures throughout the EIS, in particular: Figure 1.1-1- label all roads as they appear in the text (e.g. Beaver Dam Haul Road) Figure 1.1-2- include all relevant project components, including site access, proposed and existing bypass roads/routes Figure 2.1-4- include haul roads.
3.2. Project activities	Section 2.4.6 Section 4.5 Section 2.2.19	Describe how the changes made to the project since originally proposed considered feedback from the Mi'kmaq of Nova Scotia during engagement sessions and how the changes benefit the Mi'kmaq of Nova Scotia. Demonstrate that the planned Seloam Brook Diversion is technically feasible and that the diversion channel (as well as upstream and downstream watercourses) will remain stable over the long term since the diversion is permanent.
		Provide detailed information about the proposed Seloam Brook Diversion such as: • the preliminary design of the diversion channel o the gradient, width and depth of the proposed diversion channel o whether alterations to watercourses at the downstream end of the diversion channel need to be made to accommodate anticipated flows and remain stable over the long term o the fish habitat functions and features the diversion channel will provide • the construction methods and materials o the planned sequencing and timing of the construction and operation of the Seloam Brook Diversion in relation to other relevant project components such as construction of the diversion berm

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement	
	Section 2.6.12.1	 the studies and modelling that have been done to demonstrate that the diversion channel will be appropriately designed and sized to accommodate the anticipated flows and remain stable over the long term whether Nova Scotia Power's most recent operational requirements and procedures for upstream and downstream reservoirs and dams have been factored into the design of the diversion channel. Provide an assessment of whether the Seloam Brook Diversion and diversion berms around the open pit will be able to accept and function in the event of elevated flows under various dam operational scenarios, and under what circumstances this may 	
E INDICENCIA ENCACEMENT AND CONCE		occur.	
5. Indigenous Engagement and Concerns 5. Indigenous Engagement and Concerns	Section 4 Section 4.5 Appendix K.1	Describe how engagement activities by the proponent allowed Indigenous groups to understand the project and evaluate its impacts on their communities, activities, potential or established Aboriginal or Treaty rights. Where impacts are identified, provide a discussion of how those would be managed or mitigated (and provide this information for each Mi'kmaq of Nova Scotia group separately, including those communities represented by KMKNO, Millbrook First Nation and Sipekne'katik First Nation). Describe the impacts identified by the Mi'kmaq of Nova Scotia during engagement activities and the approaches the proponent discussed to manage or mitigate those impacts. Describe the efforts made to discuss the degree of those impacts after mitigation (residual effects) with the Mi'kmaq of Nova Scotia before submitting the EIS to the Agency. Describe how the following requirement in section 5 of the EIS Guidelines was fulfilled: "The proponent will facilitate these meetings by making key EA summary documents	

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement	
6. IMPACTS TO POTENTIAL OR ESTABLISHED	ARORIGINAL OR TREA	(baseline studies, EIS, key findings, plain language summaries) accessible in advance. The proponent will ensure there are sufficient opportunities for individuals and groups to provide oral input in the language of their choice. If possible, the proponent should consider translating information for these groups into the appropriate Mi'kmaq of Nova Scotia languages(s) in order to facilitate engagement activities during the EA."	
6. Impacts to Potential or Established Aboriginal or Treaty Rights	Section 4.4 Section 6.13, Section 6.14 Appendix H.1	 Based on additional information collected in fulfillment of conformity gaps noted throughout Annex 1, update the EIS as applicable. For example: location(s) in which rights are being practiced or exercised context in which the right is practiced or exercised (including information about which groups of an Indigenous group practice the right (women, elders, youth etc.), how the right was practiced historically) how the Indigenous group's cultural traditions, laws and governance systems inform the manner in which they exercise their rights (the who, what, when, how, where, and why) the Indigenous group's perspectives on the importance of the land on which the Project is located and how it intersects with any land management uses and/or plans they may have how often the right is practiced or exercised and timing or seasonality of the practice or exercise of the right maps and data sets (e.g. fish catch numbers). If information is not provided or available, include a rationale. 	
		Include the perspectives of the Mi'kmaq of Nova Scotia concerning the proposed mitigations and adverse direct and cumulative effects, including but not limited to their views of the proposed bypass roads, ability to pursue traditional activities on nearby crown land, potential effects of the proposed Seloam Brook diversion, etc.	

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.) 7. EFFECTS ASSESSMENT	Section of the EIS	Information Requirement
7.1.4 Riparian, wetland and terrestrial environments	Section 6.7	Wetland species composition for the wetlands identified within the Fifteen Mile Stream Gold study area. This must include, as a minimum, representative vegetation composition for each wetland type.
7.1.5 Groundwater and surface water	Section 6.5 Section 6.6 Appendix B.2 Appendices F.1 and F.2	The EIS requires an appropriate hydrogeologic model for the project area, which discusses the hydrostratigraphy and groundwater flow systems; a sensitivity analysis will be performed to test model sensitivity to climatic variations (e.g. recharge) and hydrogeologic parameters (e.g. hydraulic conductivity). Provide information or a sufficient rationale for the omission of the following from the hydrogeological model: • addressing the zones of "enhanced hydraulic conductivity" • regional (deep) groundwater flow regime • the use of large uniform beds to represent fractured rock • calibration of the model using baseflow (and not just heads) from streams • the irregular model extent shape • representative ranges of input parameters that represent the hydrogeological conditions that are then assessed in the sensitivity analysis. Provide a sensitivity analysis to assess the effects in the event that some potentially acid generating waste rock is classified, incorrectly, as non-acid generating wasterock and be then either used for construction purposes or stored in the incorrect waste rock
	Section 6.6.2	stockpile. Describe the monitoring protocol for the collection of surface water data.
	Section 6.6.3	Provide baseline information pertaining to the bathymetry, maximum and mean depths, and water level fluctuations for all watercourses described in the EIS. As the reference document "McCallum (2019") is not publically available, a description of the baseline data collection methodology is not available. Provide a characterization of groundwater – surface water interactions.

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		Describe the temperature changes in surface water as a result of groundwater-surface water interactions.
7.1.6 Fish and fish habitat	Section 6.8.3.1	Describe the seasonal variation of primary and secondary productivity in the affected water bodies.
		Describe the habitat by homogenous section for potentially affected surface waters. Specifically, provide further detail of the watercourses in Table 6.6-6 including: a description of the riparian vegetation water depths representative photos for each homogenous section of watercourse.
7.1.10 Indigenous Peoples	Section 6.13 Appendix K.1 Appendix H.1	Describe the Mi'kmaq of NS populations and subpopulations. Demonstrate how the differences of experiences by sub-populations within an Indigenous group (e.g. women, youth, elders, families) were considered in the description of baseline information for Indigenous peoples and cumulative effects.
		Describe the overall quality of the experience of the practice (e.g. noise, air quality, visual landscape, presence of others).
		Provide a model or virtual representation of the Project area (before construction, during operation, decommissioning and post reclamation) to illustrate how the visual landscape from nearby areas; including areas used by Indigenous groups such as Seloam Lake and Highway 374 will be affected.
7.2.2 Changes to Groundwater and Surface Water	Section 6.6.6 Section 6.6.8	Describe how project activities may impact pH, turbidity, or temperature in the surrounding waterbodies. If no changes to pH, turbidity, dissolved oxygen, or temperature are anticipated, substantiate conclusions with scientific knowledge. Clearly state assumptions and describe how each assumption was tested.

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
7.3.1 Fish and fish habitat	Section 6.8.6	Provide an assessment of potential impacts to fish habitat in watercourses immediately upstream and downstream of the Seloam Brook Diversion.
		Indicate how the channel morphology and other relevant fish habitat features and functions change within watercourses immediately upstream and downstream of the Seloam Brook Diversion change.
		Provide the current seasonal water levels and flows in these watercourses and indicate how will the diversion channel affect them.
	Section 6.8.6 Section 6.8.8	Provide an assessment of the potential effects to the food web or the potential effects on primary and secondary productivity.
	Section 2.2.1.9	Provide additional information and detail regarding the purpose and construction of the Seloam Brook Diversion. Specifically, describe how the Seloam Brook Diversion channel and associated berms will provide fish habitat components and features.
	Table 6.8-20	Describe the effects on ongoing water withdrawal requirements from Seloam Lake on fish and fish habitat. Include a rationale and relevant information to support any determinations of whether or not fish habitat in Seloam Lake will be potentially impacted by water withdrawals.

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
7.3.5 Indigenous Peoples	Section 6.13 Section 6.14 Appendix K.1 Appendix H.1	Demonstrate how potential effects to mental and social well-being on the Mi'kmaq of NS were considered in the assessment of potential project effects to Indigenous health and socioeconomic conditions, and any incidental effects on the current use of lands and resources for traditional purposes Describe how the effects of changes to the environment on Indigenous peoples could be different for particular sub-populations within an Indigenous group (e.g., women, youth, elders, specific families). Provide an assessment of impacts to human health assessing effects of changes to the environment on the Mi'kmaq of Nova Scotia's socio-economic conditions, including, but not limited to: • the use of navigable waters (including any water used for Mi'kmaq of Nova Scotia transport) • forestry and logging operations • commercial fishing, hunting, trapping, and gathering activities (e.g., Food, Social, Ceremonial and Communal Commercial fishing licenses and the right to fish for a moderate livelihood) • commercial outfitters • recreational use • food security • income inequity • changes at the community level that affect socio-economic conditions for the Mi'kmaq of Nova Scotia as a result of increased population, economic activity, cost of living, among other factors • non-commercial / trade economy.

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement	
		 Describe how the proponent considered in its assessment: the regional context for traditional use, and the value of the project area in that regional context, including alienation of lands from traditional use potential to return affected areas to pre-project conditions to support traditional practices (including the identification of end land use goals). Describe potential effects to the practice of current use or activities, including: accessing areas and resources without difficulty or additional cost used to conduct an activity or practice, as well as the opening up of areas to non-Indigenous populations for access and use, and consideration of preferred areas, timing of harvest, and options of traveling there in preferred manner changes that affect the spiritual and cultural experiences of the activity or practice, as well as sense of place and wellbeing, and the applicability and transmission of Mi'kmaq of Nova Scotia knowledge, laws, customs and traditions. 	
7.5 Significance of Residual Effects	Section 6.6.5.6	Provide a definition for Significant Adverse Effects for both surface water quality and quantity.	
9. FOLLOW-UP AND MONITORING			
9.1 Follow-up Program	Throughout	Describe how Indigenous groups were engaged regarding the design or proposed implementation of the follow-up and monitoring program(s).	
General			
Missing information	Appendix K.1	Update the Summary of Engagement Activities with Mi'kmaq of Nova Scotia (Appendix K.1) beyond April 21, 2019.	
Correct table number	Summary document, Section 6.10.2, page 113	There is reference to Table 6.10-5, but it should read Table 6.10-3.	
Correct table number	Summary document, Section 6.11.2, page 118	There is reference to Table 6.11-2, but it should read Table 6.11-1.	

Requirement of the EIS Guideline (Please refer to the August 31, 2018 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
Include tables	Summary document, Section 6.12.4, page 129	There is reference to tables that are not in the report. " are not carried forward in the tables below." Ensure tables referenced in the report are included in the EIS.
Edit spelling	Section 4.4.3, page 120	"Support to the Mawita'jik "Let Use Gather", should read "Let Us Gather".
Insert correct Figure number	Section 6.17.7, page 767	Reference to a figure appears as "provided on Error! Reference source not found" confirm this should be "provided on Figure 6.17-1".
Be consistent with terms	Section 6.17.7, page 767	Figure 6.17-1 Risk Ranking Matrix is referred to in the text as a Risk Rating Matrix.
Correct units	Section 8.5.2.1, page 820	The text for µg is illegible.
Inaccurate information	Table 9.1-3: Summary of Mitigation Measures page 893	The following statement is inaccurate and needs to be revised: The Proponent to support joint funding initiatives with CEAA for Mi'kmaq third party review of the Proponent's proposed mitigation and monitoring programs during EIS review. Scope and scale of this commitment to be determined.
	Table 6.13-7: Mitigation and Monitoring Programs for Potential Effects on the Mi'kmaq of Nova Scotia page 686	The Agency does not provide specific funding initiatives for Mi'kmaq third party review.

ANNEX 2: Advice to the proponent

Department	Reference to EIS	Context and Rationale	Advice to the Proponent
DFO-1	Appendix D.3 – Conceptual Fish Habitat Offsetting Plan	This is standard advice to proponents regarding habitat offsetting measures required for <i>Fisheries Act</i> authorizations.	To offset harmful alteration, disruption, and destruction (HADD) of fish habitat from the Project, the Conceptual Fish Habitat Offsetting Plan will need to be revised and take into consideration habitat quality, uncertainty, and time-lag.
			Project components, such as the Seloam Brook Diversion Channel, cannot be used as offsetting measures; however, any fish habitat features included in project components may mitigate the area of residual HADD that must be offset.
			It is recommended that the proponent seek further advice from DFO regarding offsetting the HADD of fish habitat.
DFO-2	Section 6.83 Baseline Conditions - Fish and Fish Habitat	This is standard advice to proponents regarding the information required to demonstrate fish absence from a waterbody.	DFO assumes that waterbodies with hydrological connectivity to fish-bearing waterbodies are frequented by fish unless the proponent is able to demonstrate otherwise. Determination of the absence of fish from a waterbody is difficult and the ultimate "proof" of absence must be associated with the most intensive and efficient sampling procedures appropriate for the habitat, species, life stage, and time of year. Fish sampling procedures should include multi-season sampling events, and utilize multiple gear-types with appropriate methods wherever possible. Fish

			sampling efforts should be well documented: date/time, GPS locations, datasheets, photos, effort, catch, etc. Within the Project area the annual maximum flows and water levels typically occur in April followed by November and December whereas annual minimum flows and water levels typically occur July through September. To demonstrate fish absence from a waterbody, fish sampling and hydraulic connectivity assessments should be timed to coincide with annual maximum flows and water levels.
DFO-3	Section 6.8.2.1.1.5 Fish Habitat Assessment	This is standard advice to proponents regarding the information required to describe fish habitat in FMS Study Area and the significance of effects to fish habitat from the Project.	The appropriateness of the use of the Standard Methods Guide for Freshwater Fish and Fish Habitat Surveys in Newfoundland and Labrador: Rivers and Streams and Beak (1980) to describe the quality of fish habitat for the FMS Study Area and the significance of effects of the Project on fish habitat is questionable. It is our understanding that the FMS Study Area is effectively inaccessible to Atlantic Salmon. Therefore, using Atlantic Salmon as an index for the relative quality and productivity of the streams, waterbodies, and wetlands for fish populations may not be the most
			appropriate or practical approach. It may be more relevant and better suited to describe the habitat quality in terms of the fish species that are known to be present in the

ECCC-1	Section 2.2.1.11, Page 34	It is stated "The TMF is located to the east and up gradient of the open pit and is situated in a position that limits	FMS Study Area and how those species utilize the area. Obviously, brook trout are salmonids. However, their tolerances and preferences and life history differ from Atlantic Salmon. Furthermore, the other fish species known to be present in the FMS Study Area differ greatly from Atlantic Salmon. Basing habitat types and describing the habitat quality in reference to Atlantic Salmon spawning and rearing habitat may not be relevant given the type of habitat present at the FMS Study Area. For example, poor quality juvenile salmonid rearing habitat with no spawning capability may be moderate to good quality habitat for other fish species. If the TMF footprint is located on waters frequent by fish, the proponent will have to go through the Schedule 2 amendment process
		interactions with wetlands and streams frequented by fish to the maximum practical extent."	under Metal and Diamond Mining Effluent Regulations (MDMER). "Maximum practical extent" is not an option.
ECCC-2	Section 2.2.1.5 – Overburden Till Stockpile	The volume of overburden was not provided.	Please provide the volume of overburden.
ECCC-3	Section 2.2.1.6 – Topsoil and Organic Material Stockpiles	The volume of topsoil was not provided.	Please provide the volume of topsoil.
ECCC-4	Section 2.4.2.1.2 – Waste Rock Management	The potential for metal leaching was not discussed in this section.	Provide a discussion on the potential for metal leaching.

TC-01	Sub-paragraph, 1.3.1.5	Refers to Transport Canada (TC)'s Navigation	The Canadian Navigable Waters Act (CNWA)
	Navigation Protection Act,	Protection Act and communication with TC	came into force on August 28, 2019.
	1985 (Page 13)	regarding any requirements as part of the	The CNWA still possesses a Schedule of
	, ,	project.	waterways to which the Act applies, however, as
			previously indicated, the proposed project does
			not appear to implicate any Scheduled
			waterways pursuant to the CNWA. HOWEVER,
			the EIS mentions the use of a Tailing
			Management Facility and other water control
			structures involving tailings disposal/storage.
			Infilling or dewatering of any navigable
			waterway remains prohibited under the CNWA
			and requires an Exemption by Order of the
			Governor in Council pursuant to Section 24 of
			the CNWA. This requirement can only be
			ascertained once the proponent submits a
			Notice of Work detailing the work, its effects,
			and the nature of the water bodies that may be
			involved/ affected.
			It is also understood that elements of the project
			may involve the diversion of
			watercourses. Under the Major Works Order
			made pursuant to the CNWA, proposed water
			control structures located on ANY navigable
			waterway that divert water, or change the water
			levels of watercourses require a CNWA approval
			(on scheduled <u>OR</u> non-scheduled waterways)
			Finally, with respect to any new or existing works
			located on non-scheduled waterways (culverts/
			• •
			bridges etc.) that may require construction,
			placement, alteration, repair or replacement as part of the overall project – under the
			, ,
			CNWA, owners of works – (other than a minor
			work or a major work) - that are <u>located on</u>
			navigable waterways not listed in the schedule,

	which may interfere with navigation, have the
	option to:
	1. either apply to the Minister of Transport
	for approval (approval review process
	and advertising and 30 day registry
	public review);
	or
	seek authorization through the public
	resolution process, and deposit specific
	information regarding their work on the
	new Common Project Search (online
	registry) inviting any interested party to
	comment.
	comment.
	(advertising and 30 day registry public
	review)
	With the coming into force of the CNWA, the
	Navigation Protection Program has transitioned
	to the use of the external submission site (ESS)
	linked below. This is the central point to submit
	an application for an approval or to publish a
	notification for a work:
	https://wwwapps.tc.gc.ca/Prog/3/NWAR-RLEN-
	E/en/Account/Login
	The proponent will need to create an account
	first.
	Once an application Is submitted on the ESS, it
	will be pushed to the Common Project Search
	Registry: https://common-project-
	search.canada.ca/ for public review.
	Additional guidance information and links for the
	NPP regulatory process can be found here:
	Canadian Navigable Waters Act
	https://www.tc.gc.ca/eng/programs-632.html
	https://www.tc.gc.ca/eng/canadian-navigable-
	waters-act.html

	Navigation Protection Program, Transport
	Canada
	http://www.tc.gc.ca/eng/programs-621.html

Conformity review of the Fifteen Mile Stream Gold Project Environmental Impact Statement