Atlantic Operations
Atlantic Mining N.S. Inc
409 Billybell Way, Mooseland
Middle Musquodoboit,
Nova Scotia, Canada B0N 1X0
T +902 384 2772
F +902 384 2259
stbarbara.com.au

Kathryn McCarthy
Impact Assessment Agency of Canada
200-1801 Hollis Street
Halifax, NS B3J 3N4

February 10, 2023

Dear Ms. McCarthy,

On behalf of Atlantic Mining Nova Scotia Inc. (AMNS), I would like to thank you for the discussions held in the fall around the Beaver Dam Mine Project (the Project) regarding the technical review comments from the Department of Fisheries and Oceans (DFO) on potential effects to fish and fish habitat. We have received the most recent letter, dated November 17, 2022, with comments from DFO, Environment and Climate Change Canada (ECCC), and Natural Resources Canada (NRCan). Based on the technical feedback received, we do not believe the information provided related to flow modelling, water treatment, and the aquatic effects monitoring plan has been accurately represented. This letter is not intended to address each item of the November 17 DFO letter individually, however there are statements made in that letter than we feel should be addressed for the record.

From the outset of the Project, we have engaged industry experts to assist in the assessment of potential environmental effects. Throughout the environmental assessment process, there has been active engagement with DFO and AMNS has taken the time and assigned the resources to address DFO's comments and requests. We are now at the point where the industry professionals we have contracted to assist us in both the planning and environmental assessment of the Project have come to a different conclusion than DFO on the potential environmental effects to fish and fish habitat. We feel we have provided sufficient information as to why there would not be significant environmental effects to fish and fish habitat during the life of the project.

The environmental assessment process is itself an engagement and planning tool, and as such we had hoped that over the past year, since we received the "Technical Review Comments on the 2021 Environmental Impact Statement and Round 2 Information Request Responses", we would have had the opportunity to meet with DFO to engage in dialogue to resolve the issues identified. Without the opportunity for a fulsome exchange, we have resorted to exchanging highly technical written communications, which has been burdensome on schedule, and resources. We have not received in detail the science that DFO is basing its assertions on, and continue to object to many of the assertions made. It is greatly disappointing that the environmental assessment process has not been used effectively in this case to advance sustainable development and the identification of appropriate avoidance, mitigation, and compensation.

We would welcome any correspondence on the above, directed to the undersigned.

Kind regards,

<Original signed by>

Sara Wallace
Head of Permitting

Email: Sara.Wallace@stbarbara.ca

cc: Mike Atkinson, Impact Assessment Agency of Canada

	DFO Comment	AMNS Response
1.	Based on DFO's experience with the proponent's flow monitoring program in Moose River at the Touquoy mine, the proposed flow monitoring has a low likelihood of being effective. The proponent did not collect baseline flow data before mine development, and the control station upstream of the mine intended to measure the natural, unaffected flow in Moose River was installed in an area of dense in-stream aquatic vegetation which affects the data reliability. Attempts have the proponent address data quality issues at this station have been unsuccessful. There are also issues and inconsistencies with the root cause analysis and interpretation of results. For example, the proponent has asserted that 20-50% of the instantaneous flow in Moose River between locations and upstream and downstream of the mine could be lost to evapotranspiration during summer. This is an unexpected statement based on the flow and evapotranspiration monitoring data available for Nova Scotia. See Section 3.3 and Appendix F here: https://novascotia.ca/nse/ea/Touquoy-Gold- Project-Site-Modifications/	This comment is not relevant to the Beaver Dam Mine Project description and assessment and is focused on the Touquoy Mine, which is not currently under environmental assessment. Nevertheless, we provide the following commentary: Baseline flow data was not a requirement at the time of the Touquoy EA and therefore was not completed. Subsequent flow monitoring was hampered by field conditions; these logistical barriers were identified in annual reporting to NSECC and has been addressed by adding in an additional upstream station in 2021 (SW11-B) to assess accuracy of the original station (SW11). Both stations were monitored in 2021 and 2022. The baseline data set for the Touquoy Mine has no relationship to the data that has been collected in support of the Beaver Dam Mine Project to date as part of the environmental assessment and that would be collected in the future. Observations on the Touquoy operation are clearly prejudicial and insufficient grounds to comment on the potential future effectiveness of a monitoring plan for the Beaver Dam Mine Project. The example provided relating to 20-50% evapotranspiration is misleading and again provides commentary about what should be considered an operational/monitoring inquiry related to the Touquoy Mine and has no bearing on the Beaver Dam environmental assessment. The information quoted by DFO is from Natural Resources Canada (NRCan) and was included in Stantec's "Detailed Report on 2021 Moose River Hydrometric Data", provided to DFO on November 1, 2021. The report also stated that flow loss is likely a combination of factors - evapotranspiration was only one assertion/suggestion. Other contributing factors were listed and included loss through the adjacent wetland and a wooden structure located in the river. AMNS has not received any direct feedback from DFO on this report and while we would be happy to engage further on that particular issue, the review process for the Beaver Dam Mine Project is not an appropriate place to provide such commentary.
2.	The proponent's Touquoy mine is a relevant example of the uncertainty associated with model predictions. The proponent predicted that there was no risk of dewatering Moose River from the open pit because the river was well protected by the geology. A third-party review of the groundwater model identified a number of issues with the model, and the model's predicted flow changes to Moose River are significantly less than indicated by the flow monitoring data.	This statement is misleading and untrue. Modelling is a prediction of future conditions and is therefore inherently uncertain, as any professional technical modeller will state. However, the uncertainty can be characterized by using existing information; performing sensitivity analysis; and calibrating to observed conditions. Furthermore, modelling assumptions are made to build in a level of conservatism. Modelling is widely and commonly used in all environmental assessment and prediction work across disciplines and if it is discounted wholescale, environmental assessments would be comprised of best guesses and subjective professional opinions. The recommendations made through the third-party review of the groundwater model presented for the Touquoy Modifications EARD have been incorporated to updated modelling as of March 2022. The flow monitoring in the river is showing losses that are not attributed to the pit based on pit dewatering data and the model. These flow changes in Moose River are not indicating that there is an issue with the model.
3.	Page 888 includes this disclaimer: "This technical memorandum has been prepared by GHD for Atlantic Mining NS Inc. It is not prepared as, and is not represented to be, a deliverable suitable for reliance by any person for any purpose." The disclaimer implies a high degree of uncertainty in the predicted effects to water temperature in Killag River and therefore this document does not change DFO's conclusions regarding the project effects to fish and fish habitat.	There are two references to standard industry disclaimers used by third party consulting firms as part of their regular templates in technical reports. DFO's comments on these disclaimers suggest that they introduce uncertainty in the findings of the report and that, '…therefore this document does not change DFO's conclusions." This is an unusual and misleading interpretation of what is a common legal disclaimer used in technical writing and is in no way sufficient rationale for disregarding the technical information provided therein. Furthermore, in making these comments, the full text of the quote from the technical document was not reproduced which was deliberately misleading.