



March 16, 2022

Minister Timothy Halman
Department of Environment and Climate Change
Barrington Tower
1894 Barrington Street, Suite 1800
P.O. Box 442
Halifax, NS
B3J 2P8

Dear Minister Halman,

Atlantic Mining NS Inc. (AMNS) is pleased to submit the attached Addendum to the Touquoy Gold Project Site Modifications Environmental Assessment Report (EARD), which is submitted in accordance with Part IV of the Environment Act, and in response to a request for additional information from the Minister, dated September 8, 2021.

Since 2017, we have been proud to operate the Touquoy Gold Mine in a safe, responsible, and sustainable way. The Touquoy Operation is seen as an example of a successful mineral development in Nova Scotia by the global resource development community. As such, our 350 employees are part of the community, and an integral part of the Nova Scotia economy. We look forward to building on this success, and growing additional opportunities for Nova Scotians.

This submission provides responses to the additional information request, notably:

- The Main Addendum Report directly addresses the additional information requests, including the third party review of groundwater and surface water modelling
- Appendix A provides clarifications, as requested on the analyses of water quality and water quantity
- Appendix B details the results of the hydrogeological site investigation including an update to the Groundwater Flow and Solute Transport Model
- Responses provided to questions asked during the registration process are included in the memo attached to this covering letter, "Responses to Questions Related to Safety and Construction – Touquoy Mine Site Addendum to the Environmental Assessment Registration Document"

Our team, including third-party technical specialists, have completed thorough investigations, analysis, and design to provide fulsome responses to the information requests, and confidence in the conclusions presented. The work carried out and presented in this submission confirms the conclusions presented in the EARD: in consideration of the assessment, mitigation, and planned follow up and monitoring, the planned modifications to the Touquoy site are not likely to result in significant environmental effects.

AMNS believes we have satisfied all the requirements to progress this Environmental Assessment to an approval decision.

I thank you for your time to review this package and I also look forward to meeting with you in the future.

Sincerely,

Andrew Taylor
General Manager, Atlantic Operations

Atlantic Operations



att: Memo - Responses to Questions Related to Safety and Construction – Touquoy Mine Site Addendum to the Environmental Assessment Registration Document

To:	Bridget Tutty, EA Officer	From:	Craig Hudson, Head of Permitting and Projects
	Nova Scotia Environment and Climate Change		Atlantic Mining NS Inc. 409 Billybell Way, Mooseland Middle Musquodoboit, NC B0N 1X0
File:	Touquoy Mine	Date:	March 16, 2022

Reference: Responses to Questions Related to Safety and Construction – Touquoy Mine Site Addendum to the Environmental Assessment Registration Document

The following questions were submitted ahead of registration of the Addendum to the Touquoy Gold Project Modifications – Environmental Assessment Registration (the Addendum). These questions relate to the proposed seepage mitigation for the Open Pit, which is described in Section 2.1 and Appendix B.2 of the Addendum. As noted in the covering email to these questions – they pertain to the construction and safety of the proposed mitigation. This information does not affect the assessment of potential environmental effects, and is more representative of the level of detail that would be included in a future Industrial Approval Amendment. The following responses are provided, given the direction from the EA Branch that once the project has registered for EA there are no opportunities for AMNS to provide additional information.

The information provided in Appendix B.2 is intended to provide an engineering concept of the mitigation – as noted throughout the document. Additional details and related “issued for construction drawings and specifications” will be developed through detailed design, which will form part of a future application to amend the Industrial Approval.

1. How can AMNS safely scale the wall/working face?

These are common engineering and construction practices. The extent of scaling and suitable approaches will be finalized at the detailed design stage. Typically slope scaling operations are completed from the top down, using equipment designed for this work such as a telescopic man lifts (zoom boom). In areas where this or similar equipment cannot be used, individuals with specific training in remote access scaling would be employed. The safe work plan will be developed with the Job Hazard Analysis tools and will meet or exceed the Occupational Health and Safety standards.

2. How will the geotextile be placed and joined along the wall/working face? (i.e. fused? Or otherwise).

As shown on the Drawing No. 4 of Appendix B.2, there are no plans to place geotextile against the pit wall (rock face). As shown in these drawings and described in Appendix B.2, if required, an upstream filter may be applied interior to the clay fill and exterior to the drainage layer: this could be a granular filter as used on the exists Tailing Storage Dam or a geotextile. For the purposes of this submission a geotextile layer was noted on the drawing to illustrate there will be material filter compatibility between dissimilar materials. The final filter requirements will be determined through detailed design.

3. What other mines have used this methodology?

This mitigation and the engineering and construction methods proposed have been used by Stantec’s direct experience at the Cerro Corona Mine in Peru. In addition, Stantec is currently completing similar a design for a confidential major mining client of an operating facility in Atlantic Canada. In addition we would note that

March 16, 2022

Bridget Tutty, EA Officer

Page 2 of 2

Reference: Responses to Questions Related to Safety and Construction – Touquoy Mine Site Addendum to the Environmental Assessment Registration Document

the basic engineering design concept of using an upstream clay liner to mitigate seepage, is the same as used for the Touquoy Tailings Management Facility (TMF) dykes.

4. How will the geotextile and clay liner be placed over current areas of the West Wall where water is seeping through?

As explained in Question 2, there are no plans to place geotextile to the pit wall. The water seepage is not significant and is not expected to impact placement of the drainage layer or clay liner. It should be noted that from a constructability perspective, all materials including clay layer, filters, and rockfills will be done in 1 m lifts from the bottom up allowing quality control of material placement and related design grades.

5. The proposed low permeability layer (clay liner) is reported to have (Section 2.1.5) a total normal thickness between 3 to 5 m wide, but Appendix B.2 states a total normal thickness of 3.5m. What is the thickness?

The nominal thickness of the clay layer is 3.5 m as shown on the Drawing provided in Appendix B2. However, due to the irregular surface profile of the pit slopes, the final as-built and design thickness of the layer is anticipated to vary and therefore a range of 3.0 to 5.0 was noted in the text. As noted above, the final details will be determined at the detailed design stage and will be provided in the engineered issued for construction drawings and specifications.