



Supporting document for Grounds for Appeal (submission by The Ecology Action Centre)

September 8, 2022

The Ecology Action Centre (EAC) is an environmental charity based in Mi'kma'ki/Nova Scotia. Our 4,000 members count on EAC's 40+ employees and 300 volunteers to take leadership roles in working on critical environmental issues. As an organization, our current priorities are to take action on climate change, biodiversity loss and environmental justice. From this calling flows our leadership and work on resisting the advancement of open pit gold mining in Nova Scotia. This form of mining contributes to climate change, reduces biodiversity, and leads to environmental injustice. The advancement of open pit gold mining in Nova Scotia is predicted to increase carbon emissions in order to mine a mineral that is not currently needed in Nova Scotia. One way in which open pit gold mining decreases biodiversity is by directly killing or removing habitat for species at risk. People are calling for gold mining companies to stop perpetuating environmental racism and start respecting the position of First Nations when they clearly state that are against a proposed mine in their territory. The advancement of open pit gold mining thwarts the attempts of EAC to move us towards a more sustainable and just world.

The work of EAC staff and volunteers on gold mining resistance has included research, publication of reports, public education, media interviews, and advocacy, all surrounding the actual and potential negative impacts of open pit gold mining. In particular, EAC is very active in responding to both provincial and federal Environmental Assessments of gold mine projects during public comment periods. Throughout this work, EAC members, other groups it is affiliated with, and the public have consistently and increasingly raised concerns about the dangerous environmental, social and economic threats of these the gold mining projects. Our members and the public express gratitude that EAC is working to stop open pit gold mining in Nova Scotia. Because of our calls to actions as an organization, and our extensive work on understanding and communicating the dangers of this industry, we have a high level of interest in appealing the decision to approve the increase to the tailings dam wall at the Touquoy mine.

The decision by NSECC staff to modify the Industrial Approval to raise the tailings dam advances open pit gold mining in Nova Scotia. The project proponent stated they would have to cease mining operations if the dam wall increase was not granted, bringing their mining to a temporary halt. We all also know that the company operating the Touquoy mine (Atlantic Mining/ St. Barbara) wants

to maintain “continuity” - keep the mine open and operating – into order to smoothly transition into using the Touquoy pit as a deposition area for tailings from their 3 other proposed mines. By granting the increase, NSECC’s decision has aggrieved EAC by allowing the further advancement of open pit gold mining at Touquoy, and more broadly in Nova Scotia.

Below are EAC’s Grounds for Appeal.

### **Grounds for Appeal 1:**

The Administrator failed to meet the obligation imposed by subsection 9(1) of the Approval and Notification Procedures Regulations, which required him to determine whether the environmental impact of the proposed modification/extension conforms with the Environment Act and applicable regulations and standards. Specifically, the Administrator approved the application without having the information he needed to make the determination required by subsection 9(1). Serious gaps in the information provided by the proponent and reviewed by the Administrator can be inferred from the following portions of the amended Industrial Approval:

- Page 23: “The Approval Holder shall investigate the source of water quality exceedances at SW-15, including the increase in arsenic levels, to identify other project related sources not identified in Memo titled “Review and Follow Up Actions for noted GW/SW Monitoring Exceedances at SW-15, Touquoy Mine, NS.” dated June 13, 2022. A summary of the results of the investigation shall be submitted to the Department by November 30, 2022.”

- Page 23: “The Approval Holder shall complete an assessment of potential acute and chronic toxicity to aquatic life at monitoring station SW-15 for all water quality parameters from the 2021 water quality monitoring dataset that may exceed or are exceeding the Approval compliance criteria (Appendix K).” This assessment should have been completed before the decision to approve request was made.

- Page 23: “By September 30, 2022, the Approval shall retain the services of a qualified environmental toxicologist to review the geochemist’s report on arsenic leachate from mine waste rock used in construction (NPAG) and provide a report to the Department discussing the short and long term environmental impacts and suitability of continued use of mine waste rock for construction of mine infrastructure in any location where surface water runoff will not be captured and sent to the TMF for treatment.” This review and discussion of the short and long term environmental impacts and suitability of continued use of mine waste rock for construction of mine infrastructure should have been complete before

the decision to approve the request was made.

- Page 24: “The Approval Holder shall implement mitigation measures to address exceedances for SW-15 to the satisfaction of the Department and in the timeline that may be established by the Department.” This information should have been known before the request was approved.

- Page 27: “By no later than December 30, 2022, the Approval Holder shall provide a report prepared by a qualified professional licensed to practice in Nova Scotia by Engineers Nova Scotia (ENS) or Geoscientists Nova Scotia (GNS) which meets the following requirements: i. Evaluate the reasons for increasing concentrations of parameters (such as arsenic) in excess of Approval compliance limits, as well as other associated increasing parameters, at SW-20, with the objective of identifying a source. ii. Identify any additional investigation required and timelines to complete investigation and determine mitigative measures which are required to prevent further increases in concentrations of parameters to concentrations above Approval compliance limits at SW-20.” This report should have been complete before the decision to approve the request was made.

- Page 34: “By no later than November 30, 2022, the Approval Holder shall have a qualified and experienced hydrogeologist licensed to practice in Nova Scotia by Engineers Nova Scotia (ENS) or Geoscientists Nova Scotia (GNS) review and submit a re-evaluation to the Department of groundwater equipotential mapping from the 2021 Annual Report, Figures 3.15 to 3.18.” This evaluation should have been completed before the decision to approve request was made.

- Page 36: “By no later than December 30, 2022, the Approval Holder shall provide a report prepared by a qualified professional licensed to practice in Nova Scotia by Engineers Nova Scotia (ENS) or Geoscientists Nova Scotia (GNS) that includes the following: i. A detailed description of available site-specific mitigative measures to protect groundwater (and surface water) quality outside the TMF, which are feasible given the site geology and hydrogeology, and which can be put in place prior to seepage impacts in excess of groundwater compliance criteria arriving outside the footprint of the TMF dam. ii. Information on any additional data collection which will be required to design and implement these measures. iii. A timeline for when mitigative measures are expected to be implemented (based on groundwater model predictions) and how long it will take to do so. iv. A timeline for further monitoring which will be required to evaluate the effectiveness of implemented mitigation measures. v. Estimated costing for design, implementation, and monitoring elements of this mitigation plan. vi. Indication of how costing



for potential future water quality mitigation measures can be included in reclamation bonding estimates going forward." This information should have been known before the request was approved.

This information should have been provided to NSECC before the IA modification was considered for approval. Without this information, the Administrator was incapable of determining whether the environmental impact of the proposed modification/extension conforms with the Environment Act and applicable regulations and standards. We therefore ask the Minister to cancel the approved amendments and require that the information described above be provided so that the determination required by subsection 9(1) can be made.

## **Grounds for Appeal 2:**

Given the significant gaps in information provided, it is unclear how the approval for Atlantic Gold's request to heighten the tailings dam wall at the Touquoy mine was decided upon by the district manager of NSECC.

In the 2007 Touquoy Project EARD it is stated that "The tailings dam will be 3,000 metres in length. The dam body will be composed of waste rock generated by mining, and enclosing a low-permeability clay core. The dam body will have a maximum height of 20 metres, a base width of 65 metres and a final crest width of eight metres. Slopes will be angle of repose, 37°, during operation and will be flattened at closure to facilitate reclamation. The clay core will be six metres wide and keyed into bedrock or low permeability soil at its base to minimize seepage." It is unclear, and unknown, by how much the tailings dam wall will be raised beyond the maximum height of 20m and filled beyond the maximum volume. While it can be confirmed that this information is not known to the public, it is uncertain whether the NSECC is aware of the extent of the increase. We want to be confident that all relevant information has been brought to and evaluated by the government.

In particular, the increase in both the height and volume are key pieces of information. A recent study from BC titled *The Risk of Tailings Dam Failure in British Columbia: An Analysis of the British Columbia Existing and Future Tailings Storage Database*, highlights that two factors that increase the threat of a tailings dam breach are heightening the wall, and increasing the volume of tailings. Both of these will occur at the Touquoy mine, which in turns means an increase threat of a tailings dam breach. Importantly, the precautionary principle in part 2 (b)(iii) of the Environment Act was not applied in this decision; this section of the Environment Act states that:

"(ii) the precautionary principle will be used in decision making so that where there are threats of serious or irreversible damage, the lack of full

scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation”

The administrator needed to have information about the increase in dam height and volume before making a determination about the modification request. In addition to any study supplied by the proponent, the government should have commissioned its own study to fully understand the risks involved in heightening the wall, including a worse case senecio plan should the wall breach. This should have included an updated version of Golder's 2007 Dam Break Flooding Study (found on page 61 of APPENDIX S ACID ROCK DRAINAGE POTENTIAL MEMO) to account for the greater height and volume of the tailings dam at Touquoy. Because the full information was not available, the administrator should have applied the precautionary principle and not approved the request.

### **Grounds for Appeal 3:**

It is also uncertain how these changes will be able to withstand extreme weather events, especially as climate change intensifies. In the 2007 EARD it is stated “The dam is designed to manage inflows from the projected 1/100 year storm event in a wet year over a 24 hour period. The likelihood of the facility being exposed to such an event is minimized by the relatively short mine life.” This estimation was made in 2007. Since then, climate change has intensified more than models predicted, and updated models can better predict extreme weather events and their impact on dams. The administrator should not have approved this request without considering the resiliency, structure and integrity of the new dam height and volume of the tailings dam during an extreme weather event based on current modeling.

### **Grounds for Appeal 4:**

There was a failure by the Minister to consider past performance of the Terms and Conditions for operation of the Touquoy mine, and previous behavior of the proponent with regards to following environmental laws and regulations. The administrator should not have approved this request until Atlantic Gold has met all Terms and Conditions set out in the initial 2008 Environmental Assessment Approval for the Touquoy Project. For example, the following from the 2008 Terms and Conditions have not yet been fulfilled:

"2.0 Protection of Lands 2.1 Within four years of the date of this Approval, the Proponent shall develop and implement a plan for procuring conservation land with valued protected areas attributes in the vicinity of the Undertaking for statutory protection by the province. The plan shall be developed in consultation with NSEL, NSDNR, the Community Liaison Committee, and any other parties identified by NSEL. The plan must be approved by the Minister prior to implementation."



In addition to the unfilled requirements from the 2008 Terms and Conditions, the Minister should take into consideration the behaviors and previous neglect towards the environment. In fact, in a decision to approve or deny a request, the Approval and Notification Procedures Regulations empowers the Administrator to take past performance into account [clause 9(3)(h)]: “9(3) A review may include, but is not limited to, the following matters: [...] (h) the past performance of the applicant in providing for environmental protection with respect to the activity.”

In February 2022, a provincial judge sentenced Atlantic Gold to pay a total of \$250,000 in fines and contributions for failing to comply with federal and provincial environmental regulations at and around its Touquoy open pit gold mine. In her sentencing decision, Judge Murphy said that in terms of culpability for the actions, particularly for the provincial offences, “it can be presented in the court in its totality as something not close to being a due diligence near miss, but something further up the scale, and certainly something midway, perhaps more towards recklessness or intentional.” She also noted that “These types of operations, as has been set out to the court, are self-regulated in many regards. The citizens of the province, [and] the country for that matter, are entitled to rely on good corporate practise to balance the pursuit of profit with the protection of the environment. As a self-regulating industry there is considerable obligation in these circumstances ... the company had to be aware of the potential danger, but took a risk, not to test.” Given these past behaviors, it should not be assumed that the proponent has a consistent intention, or ability, to follow all regulations and requirements put in place by NSECC.

