
HAMMOND REEF GOLD PROJECT RESPONSE TO COMMENTS ON FINAL EIS/EA

COMMENT – T-31

Source: Canadian Environmental Assessment Agency

Summary of Comment

It is understood that some overburden will be used at the project site for closure and reclamation purposes.

It is noted in the Geochemistry, Geology and Soils TSD that the Proponent's geochemical characterization of the overburden materials is not based on the testing of the overburden materials that occur directly over the pit, but rather based on the overburden that occurs in the nearby aggregate sources. The metal leaching potential for the overburden materials from potential aggregate sources further away from the open pit may be lower than that for the overburden occurring over the open pit area. On this basis, it appears that the characterization of metal leaching potential of the overburden materials may not be representative of the overburden directly over the open pit.

The short-term leach tests indicate that Ag, Al, B, Co, Cr, Cu, Fe, Pb, V and Zn concentrations exceeded the corresponding PWQOs for one or more overburden samples. Out of them Al and Fe concentrations in the leachate of some samples exceeded the corresponding PWQOs by more than 10 times. Overburden from the pit area may exhibit even higher values.

The Proponent's statement that the overburden is expected to be of low metal leaching potential is not well supported. There is concern that the water quality predictions for the overburden materials may have been underestimated.

This information is important for understanding the water quality predictions for the overburden material.

Proposed Action

Clarify whether the geochemical data for the overburden from potential aggregate sources were used as source term input in the water quality modeling.

Given the metal leaching potential for a fairly large number of parameters, undertake geochemical testing on overburden samples collected from the pit area. The data should be compared to the other overburden samples that were previously tested, and if warranted on the basis of significant differences, the water quality modeling should be revised.

Reference to EIS

Hammond Reef Gold Project Geochemistry, Geology and Soils TSD, version 2, page 8/8

Response to IR# EC-29

Response

Canadian Malartic Corporation understands that the Government Review Team is concerned about the robustness of the geochemistry data for the overburden at site. Geochemical evaluation of overburden is discussed in response to Information Request EC-29, as provided in Appendix 1.IV of the Final EIS/EA Report. Overburden units are described in Section 4.0 (Soils) of the Geochemistry Geology and Soils TSD. Water quality model inputs are based primarily on the geochemistry of potential disturbed rock from the pit rather than

HAMMOND REEF GOLD PROJECT RESPONSE TO COMMENTS ON FINAL EIS/EA

overburden. Natural runoff water quality is used to represent overburden runoff, as the overburden is expected to be similar to the upper layer of naturally occurring material in the LSA.

Given the glacial history of the region the discontinuous, overburden will be similar to surface soils, as such the chemistry result presented in Table 4-5 of the Geochemistry, Geology and Soils TSD are considered reasonable and valid for evaluation of overburden chemistry characteristics. Test results from these materials show consistent, low solid phase metal concentrations over the local study area.

Additional testing of overburden will be undertaken prior to construction or operations, as part of detailed design planning and/or regular operational monitoring. Sampling of overburden in the vicinity of the pit will be included in the Geochemical Characterization Plan for the site to be undertaken during operations. Geochemical confirmation assessment of overburden will be conducted prior to use for site construction. The conceptual current mine design is robust in that seepage from the overburden stockpile is currently captured and can be treated (as an additional mitigation strategy) if necessary prior to discharge from the site.