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

COMMENT – T-43

Source: Canadian Environmental Assessment Agency

Summary of Comment

The EIS states that the dam foundation for the TMF will be stripped of organic soils, with perimeter dykes constructed of compacted waste rock. Without stripping of all permeable material at the foundation, seepage from the TMF may be difficult to manage. This is of special concern with the Reclaim pond, where contact water will migrate to groundwater reporting to surface waters. With the uncertainties in the Proponent's metal leaching predictions, there are concerns that this effluent seepage will not meet water quality criteria and have direct impacts to water quality in Lizard Lake.

Proposed Action

Provide additional mitigation measures and consider adaptive management plans to manage effluent from the Reclaim pond and TMF in the event that effluent and receiving water quality criteria cannot be met.

Revise the effluent and receiving water quality predictions for the TMF based on revised geochemical analysis of tailings materials.

Reference to EIS

EIS Chapter 5 Project Description Version 2 Page 5-34.

Response

On April 28, 2014 Canadian Malartic Corporation hosted a water quality workshop with the Government Review Team. We also initiated communications with the Regional Groundwater Group Leader for MOE's Northern Region who stated on May 15, 2014 that upon further clarification he is satisfied at this time with the estimates of seepage to Lizard Lake."

Measures to limit, prevent and collect seepage from the TMF, WRMA, ore, low-grade ore, and overburden stockpiles have been developed at the conceptual level only at this time and consist of a series of collection ditches, and pumping stations. There are many proven ways to intercept seepage from a given site. During the detailed design stage for the project additional drilling will be undertaken along the dam alignments, ditch alignments and near the edges of proposed stockpiles, and at that time it will be appropriate to further specify the details of the seepage collection system design. Considerations during detailed design will include bedrock and depth of overburden conditions, and use of pumping; however it is not possible for Canadian Malartic Corporation to fully define these measures at a detailed design level without appropriate funding and Project EIS/EA approval.

The water quality of seepage has been predicted and assessed in the Final EIS/EA Report. All infiltration from Project facilities was assigned a water quality (as identified and discussed in the responses to information requests from the Draft EIS/EA Report) and direct discharge of this water from the facilities was evaluated. Infiltration water is expected to be compliant with applicable MMER and O. Reg 560/94 criteria. In addition, concentrations for each potential point source were considered (as part of IR-MOE-NR-GW-16 in Appendix 1.IV of the Final EIS/EA Report) and it was found that direct discharge of these concentrations into a water body would not result in adverse aquatic impacts.

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At the request of the Government Review Team, additional 3D groundwater modelling efforts were undertaken for the eastern portion of the TMF. The preliminary 3D groundwater model was constructed using available information and, through this evaluation, it was shown that capture of greater than 90% of seepage could be achieved by the proposed control system given the current TMF design configuration and the current understanding of the tailing properties and geologic conditions of the site. Further details of this modelling evaluation are provided in the *attached* memorandum entitled 'Tailings Management Facility, 3D Groundwater Modelling' provided in *Part D of the Addendum to the Version 3 EIS/EA*. ~~as Attachment 3 of the Final EIS/EA Addendum.~~

In light of the results of the newly undertaken groundwater modelling, it is considered that the assumed seepage capture efficiency is realistically achievable based on the conceptual design. During the detailed design stage additional information collected will be used to develop a more robust modelling evaluation to refine and optimize the design of the seepage collection system.

It is the intent of Canadian Malartic Corporation to work with the design engineers and the applicable regulatory agencies to ensure that future data collection and the development of predictive models will meet both the requirements of engineering design and needs of the agencies with respect to permitting requirements.