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

COMMENT – T-27

Source: Canadian Environmental Assessment Agency

Summary of Comment

Results of the short term (shake flask) leaching tests of the waste rock samples indicate that there is selenium metal leaching potential for the waste rocks. The upper ranges of selenium leachate concentrations are 6-16 times higher than the CCME guideline (1 ug/L).

Given the sensitivities concerning the impacts of selenium on confined water bodies (e.g., lakes and ponds), it is necessary that the Proponent take appropriate steps to manage the effluent from waste rock stockpiles to prevent any potential impacts to the adjacent waterbodies (e.g., Sawbill Bay, Lynxhead Bay and Trap Bay).

In the Aging Test results-Tailings Process Water (Table 3-12 of the TSD Hammond Reef Gold Project Geochemistry, Geology and Soils), the Proponent has not presented the data for selenium.

Proposed Action

Explain how the proponent plans to address/ mitigate the potential impacts of selenium metal leaching from waste rock to the adjacent water bodies by means of surface and subsurface effluent discharge (particularly seepage).

Provide the aging test results for selenium.

Reference to EIS

Hammond Reef Gold Project Geochemistry, Geology and Soils TSD Section 3.5.1.4 (Short-Term Leach Testing and Net Acid Generation Leach Test)

Hammond Reef Gold Project Geochemistry, Geology and Soils TSD Section 3.5.1.4 (Short-Term Leach Testing and Net Acid Generation Leach Test)

Response

Age test results for selenium are provided in Appendix 2.III B-6 and indicate that all concentrations are at or below detection limits. Short term leach tests results are provided in Appendix 2.III B-4. Of the 41 samples analyzed only 3 samples contained concentrations above the detection limit of 1 ug/L, two samples contained values near the quantitation limit of the analyses 3 ug/L and only one sample, from a minor unit (Quartz Vein) had a concentration of 16 ug/L. When evaluating overall leachate potential of the mine rock each of these samples was considered and used to develop an overall leachate concentration for the pile based on consideration of all of the results and the proportion of the rock that the single elevated sample represents (see Site Water Quality TSD).

Although CCME or receiving water guidelines are not directly applicable to short term leach test results, comparisons are provided for reference to identify parameters that need to be carried forward and evaluated with respect to overall site water quality (see Site Water Quality TSD and Lake Water Quality TSD), such as was conducted for this Project. Since these few samples represent only a small fraction of the rock, when results are considered and carried forward into the overall site water quality model there are no predicted adverse impacts to aquatic life.