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Kugaaruk

Phyllis Beaulieu
Manager of Licencing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B1J0

June 3rd, 2015

Re: TMAC's Request to Modify Waste Rock and Ore Management Plan to incorporate Pad T.

Dear Phyllis Beaulieu, KIA has completed its review of the TMAC request to modify the waste rock and ore management plan to incorporate Pad T. The KIA's geotechnical consultant's review and comments are provided as follows:

SRK Report Content

SRK (2015) provided the following select updates regarding the waste rock and ore storage plan:

- The new pad is located within the original development area and is located within an existing Pollution Containment System.
- Low salt drilling procedures have been included in an effort to reduce soluble salt in the waste rock pile.
- The majority of waste rock will be produced in the first two years of mining.
- The pad has been designed to hold 556,000 tonnes of waste rock and quarry rock with some material being backfilled underground.
- After backfill, 188,000 t of waste rock will remain on surface after mining is completed.
- Previous gabbro samples are now classified as "low NP basalt". Based on lower total inorganic carbon (TIC) and neutralizing potential (NP) in that unit compared to other basalt, this unit is classified as moderate risk for metals leaching (ML) and acid rock drainage (ARD) and will be managed as "mineralized waste".
- Mineralized waste will be placed on the eastern end of Pad T with non-mineralized rock on the western end. The boundary of these two material types is to be surveyed after each lift.
- Testing procedures are provided in Section 3.4 for confirmation of the use of non-mineralized waste rock as construction rock.
- By their estimation, they propose to increase their security deposit by an additional $6000 for the revised pad configuration.

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These comments are not meant to be comprehensive but instead highlight some select revisions from the previous plan as context for the comments in the next section.

Comments

Table 2-1 provides a summary of specific comments / recommendations regarding the inspection conditions and related commentary provided by SRK in their report:

Yours truly

John Roesch

John Roesch, P.Eng.

Senior Hope Bay Project Officer
Kitikmeot Inuit Association
Department of Lands and Environment

Cc Geoff Clark,
Director of Kitikmeot Inuit Association Department of Lands and Environment

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Table 2-1. Geotechnical Engineering Consultant Comments on SRK Report.

SRK Report Section Number	SRK Comment	Geotechnical Engineering Consultant Comment
3.2 Stockpile Configuration	Slopes of 2H:1V. Figure 3 shows 2.5H:1V on waste rock slope. Drawing DN-DMC-T3 shows 2.5H:1V on waste rock slope and 2H:1V on diversion berm slopes.	TMAC to confirm design slope for the waste rock pile. If 2.5H:1V is long term slope, why not construct waste dump at such slope rather than leaving possible re-sloping liability costs until later?
3.5 Water Management	All seepage and runoff from waste rock pads are directed to Pollution Control Pond and sumps (shown on Figure 6). No sumps are shown on associated plans or sections in Drawings DN-DMC-T0 to –T3.	If all seepage and runoff reports to Pollution Control Pond, why is there a need for sumps on the downstream side? How does water from Pad T reach these sumps? Are the sumps lined to contain all contact water? Are there specific design criteria for the sumps to prevent overflow or seepage? Why are the sumps not shown on the engineering drawings?
3.7 Low Salt Underground Brine Water Use	A procedure is outlined for low salt use. Section 3.4 refers to salt testing for acceptable levels.	No comment or commitment provided therein to monitor salt content in the actual waste rock. In addition, no target salt level forecast when using the low salt procedure. Could TMAC confirm acceptable salt levels (possibly defined in water licence for Station ST-2)? If salt levels not acceptable, what happens to impacted water?
5.1 Waste Rock Pile	Outlines parameters to be checked at Station ST-2 from Pollution Control Pond) off waste rock).	Listed parameters do not include salinity. Does salinity need to be checked based on comment above?
Drawing DN-DMC-T3 Pad T – Sections and Details	Detail 1 shows GCL liner installed at 1H:1V slope.	If GCL liner installed at 1H:1V slope, it will be very difficult to place bedding layer and properly compact over top, leading to potential stability issues on the upstream side. No information noted regarding bedding or cover layer to protect GCL. Liner would possibly be punctured without these layers leading to leakage through Diversion Berm. Could there be any chance of salty water from the waste dump impacting the GCL as performance of these liners may be impacted by salt.
SRK Memo Dated March 27, 2015 (attachment 6)	Any exposed areas of Pad T, not covered by non-mineralized waste rock, will remain in place at closure and only minimal grading will be required.	The text notes that only non-mineralized waste rock is to be left on surface. The SRK sentence on page 2 of the memo implies that mineralize waste rock can be left uncovered at closure. At first review, this statement would be contrary to leaving only non-mineralized waste rock on surface. Leaving mineralized waste rock on surface without a cover would seem to represent a bigger liability for the KIA. Could TMAC clarify their closure intentions for waste rock and confirm if any uncovered mineralized waste rock will be left on surface at closure?

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SRK Report Section Number	SRK Comment	Geotechnical Engineering Consultant Comment
SRK Memo Dated March 27, 2015 (attachment 6)	$6000 extra security estimated based on regrading costs only.	This assumes that only non-mineralized waste rock remain on surface at closure. If mineralized waste rock placed on surface (previous question), then liability to manage waste and contact water would be much higher. So the estimate security value is related to previous question.