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March 29, 2018

Derek Donald Nunavut Water Board P.O. Box 119 Gjoa Haven, NU, X0B 1J0

Re: TMAC Response to Doris Project 2017 Annual Geotechnical Inspection Letter Recommendations

Dear Derek,

TMAC Resources Inc.'s (TMAC) is pleased to present the Doris Project 2017 Annual Geotechnical Inspection Letter. This report is required in fulfillment of Part J Item 16 of the Type A Water Licence 2AM-DOH1323. TMAC is providing responses to recommendations made in the report found in Table 1 below.

The Doris Project 2017 Annual Geotechnical Inspection report has been submitted to the NWB via email on March 28, 2018 and a hardcopy has been sent to you separately.

Should you have any questions or concerns regarding this submission, please contact me at Oliver.Curran@tmacresources.com.

Sincerely,

Oliver Curran

Vice President, Environmental Affairs TMAC Resources Inc.

Table 1 TMAC responses to Doris Project 2017 Annual Geotechnical Inspection Recommendations

Doris Project 2017 Annual Geotechnical Inspection			
Observation	Recommendation	TMAC Response	
TMAC did not conduct surveys of survey monuments on Pad B. See 2015 inspection report.	As stipulated in the 2015 inspection report, TMAC should complete at least four surveys annually of the two survey monuments on Pad B. These are to be done in May, June, August and September, which corresponds to the periods when thaw starts, and up to the time when the active layer thickness is at its greatest. This matter requires immediate attention.	TMAC will conduct the four surveys as per the recommendation.	
Sinkhole that developed at Pad G in 2014.	As stated in the 2016 inspection report, as a precautionary measure TMAC should continue to carefully monitor Pad G near the sinkhole that developed and was backfilled in October 2014 for any additional sign of deformation, at least until the fall of 2018.	TMAC will continue to monitor Pad G as per the recommendation.	
During the 2016 inspection a small depression was observed along the south-east abutment of the Doris bridge	TMAC should continue to monitor if there is any indication of the depression increasing in size.  Should any change be noted a geotechnical engineer should be consulted to further investigate the cause, and appropriate remedial measures need to be implemented.	TMAC will continue to monitor the depression as per the recommendation.	
SRK noted during the 2017 inspection the repairs and upgrades detailed for Sump #1 and Sump #2 in the 2016 inspection report have not been completed.	This work needs to be addressed as a matter of priority as the extent of permafrost degradation is increasing rapidly.	TMAC will repair and upgrade each sump as per the recommendations in 2016 inspection report.	
SRK noted during the 2017 inspection that a portion of the safety berm at the toe of the original waste rock pile (Pad I) and the ore stockpile constructed on top of it in 2017, where it borders the mill building, still needs to be completed.	Completion of the safety berm should be done as a matter of priority for the reasons stated in SRK's stability analysis.	TMAC will complete the safety berm in 2018.	

Doris Project 2017 Annual Geotechnical Inspection			
Observation	Recommendation	TMAC Response	
SRK observed that along the North end of the waste rock pile constructed on Pad T, there is a slight overbuild of the waste rock pile resulting in some waste rock spilling over onto the upstream diversion structure.	TMAC needs to implement improved dumping practices to avoid such overbuilding, and any waste rock upstream of the diversion berm needs to be relocated to the waste rock pile.	This recommendation was actioned by TMAC in late 2017. Materials that had encroached upon the diversion berm were relocated to the waste rock pile. A delineation berm was installed along with signage indicating the waste rock piles operating extent.	
Construction of the clean quarry rock base for Pad T was not completed prior to starting stockpiling of ore. The ore stockpile has reached the extent of the pad at the western end.	TMAC is reminded to complete Pad T pad construction prior to advancing the ore stockpile further west.	TMAC will complete Pad T prior to advancing the ore stock pile further west. This work has been scheduled for Q2 of 2018.	
None - reminder	TMAC should ensure that they consult the provided detailed thermal analysis and design guidance when designing and erecting new buildings on the project site.	TMAC will consult the thermal analysis and design guidance during the planning phases of any new building erection on the project site.	
The Pollution Control Pond (PCP) base is very undulated because of surficial permafrost melt, and as a result there are multiple small ponded areas that prevents complete drainage of the pond.	These depressions should be carefully filled in using unfrozen overburden salvaged from the overburden pile. In doing so, ongoing permafrost degradation will be minimized prolonging the life of the PCP	TMAC has scheduled this work to be completed in Q2 of 2018.	
TMAC has not implemented precautionary remedial measures in the form of sumps installed through the Roberts Bay 20 ML tank farm liner to allow monitoring for water accumulation underneath the liner.	TMAC should implement the precautionary remedial measures in the form of sumps installed through the Roberts Bay 20 ML tank farm liner to allow monitoring for water accumulation underneath the liner.	TMAC will work with SRK on a design to adequately address this issue.	
Rock spalling on the vent raise and 7.5 ML tank farm high walls has previously been raised as a concern for personnel safety. SRK noted during the 2017 inspection that over the last year a substantial number of rocks have fallen from these walls. This poses a safety hazard to personnel working in these areas.	Since limited access prohibits construction of a simple catchberm to retain falling rocks, TMAC should consider a permanent solution such as covering these high walls with mesh, or impose an annual preventative scaling campaign. However, until such time, TMAC should post signage waring people to avoid these areas, or if they must enter the danger zone, they should be made aware of the nature of the hazard.	TMAC will conduct an annual preventative scaling campaign of the high walls in these areas. Signage will also be posted in the areas warning of the hazard and that access is restricted to authorized personnel only.	