



3rd Floor Gallery Building
4923-52nd Street, P.O. Box 1500
Yellowknife, NT X1A 2R3

January 16, 2023

Attention: Andrea Cleland
Regulatory Officer
Mackenzie Valley Land and Water Board
P. O. Box 2130, YELLOWKNIFE NT X1A 2P6

**Re: Gordon Lake Group Remediation Project - MV2016L8-0006
Response – Geotechnical Implementation Plan**

Dear Ms. Cleland,

As per the MVLWB letter dated November 28, 2022 and Part F, Condition 10)b of the Gordon Lake Group Water Licence, the following table outlines CARD’s responses to the Professional Engineer made in the 2021 Geotechnical Report, submitted as part of the 2021 Annual Report.

2021 Geotechnical Report Recommendation	CARD Implementation Plan
Englobe recommends addressing the chronic erosion rilling of the embankments with a more permanent engineered solution for this Site beyond providing annual inspections and minor regrading work. Such solutions may involve installing multi-flow under drainage pipes, providing riprap, and/or flattening the embankment at locations where the erosion rilling is occurring. The coco-mats should also be inspected for degradation and chronic dislodgement on an annual basis or until it has been established through mitigation or otherwise, that any minor embankment surface erosion has ceased.	CARD will continue to perform regular inspections at Camlaren including visual inspections of the TSCA, water quality sampling at the proximal SNP stations in Gordon Lake and perform minor regrading work where necessary (as was done in 2021). A Performance Assessment Review will be conducted after Year 5 of LTM which will evaluate the stability of the embankments and cocomattng. If erosion issues are determined to be significant and on-going, a more permanent engineered solution will be considered.
At the toe of the south embankment, and from about Station 0+320 to 0+335 (e.g. about 15 m in length), the toe of the slope intersects slightly within the south perimeter ditch resulting in some minor undercutting of the embankment toe there. This deficiency was previously noted in prior post-inspection reviews completed by Stantec following the 2018 rehabilitation and soil liner system	Should there be an opportunity to bring the necessary equipment to site to perform the construction necessary to correct this slight deficiency, CARD will do so. This would likely occur in conjunction with a larger-scale remote construction need should it arise. Otherwise, CARD will continue to conduct geotechnical inspections of the area as dictated by the Long Term Monitoring Plan (LTMP).

construction period. Englobe recommends removal of the over-steepened portion of the existing soil liner material at the location and replace it with a similar rip-rap material currently used to line the existing south ditch	
The observed ice blockage in monitoring well MW1 should be removed to permit for future water level measurements.	This will be included in the Y5 LTM (2023) scope.
Continue annual inspection and/or surveillance of the dam to monitor for any changes in erosion effects is recommended until it is established that erosion is no longer occurring or otherwise further mitigated. The Site surveillance, inspection and maintenance work should be completed according to the existing Operations, Maintenance and Surveillance (OMS) plan for the Camlaren Site as outlined in the Final Report: Operations, Maintenance and Surveillance Plan–Gordon Lake Group of Sites [Camlaren site], Stantec Consulting Ltd., Dartmouth, NS (March 2020) report.	Annual inspections will continue as dictated by the Gordon LTMP.
A review of the as-built drawings completed following the 2018 site mitigation construction work is recommended to address minor inconsistencies of what was observed on-Site. This could be addressed via a deficiency report product	This item was included as part of the scope of the TSCA Dam Classification Investigation program (2022 – see below).
Consideration to a re-classification of the current structure from a dam structure to a mine waste structure is recommended. Any re-classification should be completed with further appropriate review and determination using site-acquired water level monitoring data and additional geotechnical boreholes to determine the strength of the contained tailings.	Reclassification of the TSCA structure was the main objective of the TSCA Dam Classification Investigation program. The field component was completed July 29-August 1 2022. The report is currently under review with CIRNAC-CARD's Project Technical Office and is expected to be finalized by March 31 2023.

If there are any further questions or concerns, please feel free to contact me (jessica.wilson@RCAANC-CIRNAC.gc.ca; 867-446-3494)

Sincerely,



Jessica Wilson
Project Officer, Contaminants and Remediation Division
Crown Indigenous Relations and Northern Affairs Canada (CIRNAC)