November 3, 2014 Project No. 1408454

Mr. Bruce Donald
Teck Resources Ltd.
601 Knighton Road
P.O. Box 2000
Kimberley BC V1A 3E1

**CLARIFICATION ON POLARIS MINE POST-RECLAMATION GEOTECHNICAL INSPECTION SCHEDULE**

Dear Mr. Donald,

The intention of this letter is to provide clarification on the recommended post-reclamation geotechnical inspection schedule for the former Polaris Mine site on Little Cornwallis Island, Nunavut.

Darrin Johnson, P.Eng., carried out an inspection of the former Polaris mine site on September 2, 2014 and observed the reclaimed site to be in a stable condition. In the subsidence area there are many raise bores (approximately 1.5 m in diameter that were used to either provide ventilation to the underground mine or deliver rock backfill to mine stopes) with corrugated steel pipe (CSP) extending slightly above ground surface. This is considered to be the result of near surface thaw settlement of backfill around and inside the CSP. At most of the vent/backfill raise locations the amount of settlement is less than 0.3 m deep which is not considered a safety risk to humans or wildlife. Three raise locations have internal settlement (i.e., inside the CSP) more than 0.3 m deep that could potentially pose a minor risk to either humans or wildlife. Four raise locations have thaw settlement adjacent to the raise resulting in exposed CSP up to 1 m above the surrounding ground surface that could potentially pose a minor risk to either humans or wildlife. Observed post-reclamation settlement in the subsidence area is considered to be a result of seasonal thaw and consolidation of backfill and not related to underground mine subsidence. No potential safety risks to either humans or wildlife were identified for the other areas inspected in September 2014.

A qualitative risk assessment was carried out for the safety hazards identified in the subsidence area which determined that the minor risks could be managed with monitoring. A superseded version of our 2014 inspection report suggested conducting visual inspections every 2 years to determine if there is additional settlement inside and around vent/backfill raises in the subsidence area. However, because the site has not changed substantially during the post-reclamation monitoring period and any potential future thaw settlement would occur slowly with minimal increased risk, we gave the frequency of ongoing inspections further consideration. The final version of our inspection report recommends conducting the next geotechnical inspection in 2019 (i.e., 5 years from now) which should provide sufficient opportunity to identify if any additional thaw settlement has occurred.

In fact, more frequent inspections may not observe any changes or additional thaw settlement. If no further thaw settlement or increased safety risks are observed in 2019 then the next inspection would be conducted in 2029 (i.e., 10 years later) as scheduled. The inspection schedule will be reassessed following each inspection based on observed conditions. The observations and conclusions of the 2014 geotechnical inspection did not change between the superseded and final revisions of the report.

We trust this letter provides sufficient clarification of the recommended post-reclamation inspection schedule. Please feel free to contact the undersigned should you have any questions.

**GOLDER ASSOCIATES LTD.**

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Associate, Geotechnical Engineer

Peter Merry, P.Eng.
Associate, Geotechnical Engineer

DCJ/PM

CC: Stephen Lines, Tunaley, Lines & Associates

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