



To: Myles Hargrove
Ashleigh Fraser

Date: August 22, 2018

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From: Conrad Tench, P.Eng.
Kim Johnston, P.Eng.

File: VGEO03082-01

Subject: Derwent Way Transfer Station – Response to Geotechnical Comments

Tetra Tech Canada Inc. (Tetra Tech) has prepared this memo to address the comments regarding the geotechnical report made by the Port of Vancouver (PMV). The comments were provided via email and are itemized in a spreadsheet log. The comments that are addressed in this memo are Items 4 and 5 on the spreadsheet. This document has been revised from our original memo dated September 29, 2017. The reason for the revision is to update this document to reflect a design change to a conveyor system to load the barge.

The comments, along with our responses to the comments, are as follows:

- *PMV Item 4 – additional geotechnical recommendations in the geotechnical report regarding the foundation design of the proposed roof structure that will cover the proposed storage site.*

Tetra Tech response – The proposed roof structure has not yet been chosen, however, it is expected to be a pre-fabricated dome-like structure that is expected to have relatively light loads. The roof will be supported on several closely spaced supports that are founded on either the Lock Block walls or shallow foundations, which will be supported on the underlying sand fill. The sand fill will be compacted to provide a suitable bearing support for the Lock Block walls and shallow foundations. With proper site preparation, the Serviceability Limit State bearing resistance will be 100 kPa and the Ultimate Limit State bearing pressure will be 150 kPa, which will be suitable to support the roof. The foundations will also be designed to be heavy enough, or deep enough, to support any uplift loads from wind loading.

- *PMV Item 5 – additional geotechnical discussion regarding the depth of the densification at the ramp abutment.*

Tetra Tech response – The densification has been deleted from the design due to a design change to a conveyor system to load the barge. This system will not require densification to meet the intent of the applicable Code.

We note that the design is currently in progress and may be modified as the design progress. We propose to revise the geotechnical report to include the responses to the items above, as well as any other design changes, after the design has been finalized. In the meantime, we will provide additional Technical Memos on an as-needed basis.

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We trust this technical memo meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Canada Inc.



Prepared by:
Conrad Tench, P.Eng.
Senior Geotechnical Engineer
Direct Line: 778.945.5787
Conrad.Tench@tetrattech.com

CT/KJ

A handwritten signature in blue ink, appearing to read "Kim Johnston".

Reviewed by:
Kim Johnston, P.Eng.
Principal Specialist, Geotechnical Engineering
Direct Line: 778.945.5885
Kim.Johnston@tetrattech.com