

SNC-Lavalin Inc. 8648 Commerce Court Burnaby, British Columbia, Canada, V5A 4N6 & 604.515.5151 d 604.515.5150

November 15, 2016

Project: 631976

BC Ministry of Transportation and Infrastructure 300 – 940 Blanshard Street Victoria, BC V8W 3E6

ATTENTION: Paul Savinkoff, P.Geo.

REFERENCE: Performance Verification Plan, 8099 Nordel Way (Nordel 7), Delta, BC

SNC-Lavalin Inc. (SNC-Lavalin) has prepared this Performance Verification Plan (PVP) in support of an application for a Certificate of Compliance (CofC) for 8099 Nordel Way, located in Delta, BC (herein referred to as "the Site"). The PVP presents the principal risk controls that apply at the Site to ensure the CofC remains valid (i.e., the key risk controls of Schedule B). The PVP was prepared in accordance with Ministry of Environment (MoE) Procedure 12: Procedures for Preparing and Issuing Contaminated Sites Legal Instruments (MoE, 2015a) and Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans (MoE, 2015b).

### **Principal Risk Controls**

A Human Health Risk Assessment (HHERA) was conducted for the Site, with the results presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, 8099 Nordel Way (Nordel 7), Delta, BC* dated November 9, 2016 (SNC-Lavalin, 2016a). The HHERA was prepared based on the findings and conclusions presented in the SNC-Lavalin report, *Stage 1 Preliminary Site Investigation Update and Supplemental Detailed Site Investigation, 8099 Nordel Way (Nordel 7), Delta, BC* dated November 9, 2016 (SNC-Lavalin, 2016b).

The principal risk controls on which the risk assessment was based, as presented in Schedule B of the CofC, are as follows:

- > Groundwater from the Site must not be used as a drinking water source.
- Any future building at the on-Site management area (MA; as defined in SNC-Lavalin, 2016b) will include a perimeter drainage system to prevent groundwater contact with the slab of the building, and any sumps associated with the perimeter drainage system will be located or vented exterior to the building.





BC Ministry of Transportation and Infrastructure – Page 2 of 4 November 15, 2016 Project 631976

## **Determination of Procedure 12 Remediation Type**

Based on the principal risk controls for the Site (i.e., the use of institutional controls to mitigate/eliminate risks at the Site and lack of imminent risks in the event that the controls were either not implemented or were rendered ineffective), the Remediation Type applicable at the Site is considered to be Type 2.

Under a Remediation Type 2 scenario, MoE (2015a, 2015b) indicates that a PVP is required, while an operations and maintenance plan may be required.

# **Performance Verification Plan**

A PVP is required to ensure that the principal risk controls upon which the HHERA is based is being met at the Site.

This includes the maintenance of up-to-date records of performance verification actions and results for the Site being maintained by the responsible person (or their agents). If requested by the Director, the responsible person (or their agents) will provide these records to the MoE. As well, if requested by the Director, responsible person(s) will provide a signed statement on whether conditions set out in this Schedule B of the CofC are being met.

Performance verification actions for the Site include the following:

- > Communication with the owner/operator that groundwater at the Site must not be used for drinking water purposes. Drinking water for the Site and the Corporation of Delta is supplied by the municipality, through a piped distribution system. Groundwater at the Site is not being used for drinking water purposes (e.g., consumption, showering, washing, garden watering, etc.), and, given the presence of the alternate drinking water supply in the area, the future need for groundwater at the Site to be used for drinking water is considered unlikely.
  - Based on the above, an advisory for the Site that groundwater must not be used as a drinking water source is considered appropriate to meet this risk control. The listing of this risk control in Schedule B of the CofC meets this requirement.
- Communication with the owner/operator that any future building at the on-Site MA will include a perimeter drainage system to prevent groundwater contact with the slab of the building, and any sumps associated with the perimeter drainage system will be located or vented exterior to the building. Development plans are unknown for the Site, but currently, construction at the Site is limited to slab-on-grade construction. The installation of a perimeter drainage system is required as per the BC Building Code, and it is likely given the size of the Site that sumps would be located exterior to the building (i.e., venting the sumps to the exterior is only an issue if the sump(s) is located on the interior of the building).
  - Based on the above, an advisory that any future building constructed at the on-Site MA will include a perimeter drainage system to prevent groundwater contact with the slab of the building, and any sumps associated with the perimeter drainage system will be





BC Ministry of Transportation and Infrastructure – Page 3 of 4 November 15, 2016 Project 631976

located or vented exterior to the building is considered appropriate to meet this risk control. The listing of this risk control in Schedule B of the CofC meets this requirement.

In summary, it is our opinion that the advisory in Schedule B of the CofC is sufficient for addressing the principal risk controls at the Site.

#### References

- MoE. 2015a. Procedure 12. Procedures for preparing and issuing contaminated sites legal instruments. BC Ministry of Environment, Victoria, BC, December, 2015.
- MoE. 2015b. Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans. BC Ministry of Environment, Victoria, BC, December, 2015.
- SNC-Lavalin. 2016a. Human Health and Ecological Risk Assessment, 8099 Nordel Way (Nordel 7), Delta, BC, dated November 15, 2016.
- SNC-Lavalin. 2016b. Stage 1 Preliminary Site Investigation Update and Supplemental Detailed Site Investigation, 8099 Nordel Way (Nordel 7), Delta, BC dated November 15, 2016.

#### Notice to Reader

This report has been prepared and the work referred to in this report have been undertaken by SNC-Lavalin Inc. (SNC-Lavalin) for the exclusive use of the Ministry of Transportation and Infrastructure (MoTI) and the BC Transportation Finance Authority (BCTFA), each of which has been party to the development of the scope of work and understands its limitations. The methodology, findings, conclusions and recommendations in this report are based solely upon the scope of work and subject to the time and budgetary considerations described in the proposal and/or contract pursuant to which this report was issued. Any use, reliance on, or decision made by a third party based on this report is the sole responsibility of such third party. SNC-Lavalin accepts no liability or responsibility for any damages that may be suffered or incurred by any third party as a result of the BC Ministry of Environment (MoE) by MoTI or the BCTFA, the MoE is authorized to rely on the results in the report, subject to the limitations set out herein, for the sole purpose of determining whether MoTI or the BCTFA has fulfilled its obligations with respect to meeting the regulatory requirements of the MoE.

The findings, conclusions and recommendations in this report (i) have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and (ii) reflect SNC-Lavalin's best judgment based on information available at the time of preparation of this report. No other warranties, either expressed or implied, are made with respect to the professional services provided to MoTI and the BCTFA or the findings, conclusions and





BC Ministry of Transportation and Infrastructure – Page 4 of 4 November 15, 2016

Project 631976

recommendations contained in this report. The findings and conclusions contained in this report are valid only as of the date of this report and may be based, in part, upon information provided by others. If any of the information is inaccurate, new information is discovered or project parameters change, modifications to this report may be necessary.

This report must be read as a whole, as sections taken out of context may be misleading. If discrepancies occur between the preliminary (draft) and final version of this report, it is the final version that takes precedence. Nothing in this report is intended to constitute or provide a legal opinion.

Copying of this report is not permitted without the written permission of MoTI, the BCTFA or SNC-Lavalin.

Infrastructure

Lindsay Du Gas, MET, R.P.Bio. Risk Assessor/Toxicologist Environment & Geoscience

LDG/gc P\CP\MOT\511068\L013\5.0\5.5\L1115LDA\_PVP\_NORDEL 7.DOCX

Mandeep Purewal, MET, P.Ag., R.P.Bio. Project Specialist, Risk Assessment

Environment & Geoscience Infrastructure

