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January 23, 2015

Project 134085

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**ATTENTION:** John Driedger, P.Eng.  
Senior Program Manager – Soil and Groundwater FDG

**REFERENCE:** **Performance Verification Plan, Management Area Adjacent Former Payless Service Station, 4450 Trans Canada Highway, Cobble Hill, BC, Location Code: 47049, Site ID: 1938**

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The Environment & Water business unit of SNC-Lavalin Inc. (SNC-Lavalin) has prepared this Performance Verification Plan (PVP) in support of an application for a Certificate of Compliance (CofC) for the Management Area located adjacent the Former Payless Service Station located at 4450 Trans Canada Highway, Cobble Hill, BC, BC Ministry of Environment (MoE) Site ID: 1938 (herein referred to as the "MA"). The PVP presents the principal risk controls that apply at the MA to ensure the Site CofC remains valid (i.e., the key risk controls of Schedule B). The PVP was prepared in accordance with MoE Procedure 12: Procedures for preparing and issuing contaminated sites legal instruments (2013) and Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans (2014).

**PRINCIPAL RISK CONTROLS**

A Human Health and Ecological Risk Assessment (HHERA) was conducted for the MA, and the results presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, Former Payless Service Station and Management Area Adjacent 4450 Trans Canada Highway, Cobble Hill BC, Location Code: 47049*, prepared by SNC-Lavalin, (SNC-Lavalin, 2015a). The HHERA was prepared based on the findings and conclusions presented in the SNC-Lavalin report, *Stage 1 & 2 Preliminary Site Investigation, Detailed Site Investigation and Decommissioning, Former Payless Station and Management Area Located Adjacent 4450 Trans Canada Highway, Cobble Hill, BC* (SNC-Lavalin, 2015b).



The principal risk controls on which the SNC-Lavalin (2015a) risk assessment was based, as presented in Schedule B of the CofC, are as follows:

- (a) *Contaminated groundwater must not be used as a drinking water source; and*
- (b) *A worker health and safety plan with provisions to prevent vapour inhalation exposures must be developed in the event that trenches (excavations that are deeper than they are wide, > 1.5 m below grade and suitable for human entry) are advanced at the Site; and*

#### **DETERMINATION OF PROCEDURE 12 REMEDIATION TYPE**

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

Under a Remediation Type 2 scenario, MoE (2013; 2014) 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 are being met at the MA.

This includes the maintenance of up-to-date records of performance verification actions and results for the MA 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 are being met.

Performance verification actions for the MA include the following:

- a) Communication with the owner/operator that Contaminated groundwater at the MA must not be used for drinking water purposes. The MA is currently being used as a roadway and is assumed to continue to be used as a roadway (industrial land use with no buildings present). Given the land use and the assumption of future use as a roadway (see advisory above), it is considered unlikely that groundwater at the MA will be used for drinking water purposes. It is noted that groundwater conditions at the MA are at minimum stable and Contamination is present at < 7 m bgs and is delineated to within the shallow aquifer (SNC-Lavalin, 2015b). Groundwater is not currently used as a drinking water source at the MA. Drinking water wells are present in the general area, however, wells are installed at depths of approximately 27 m bgs to 41 m bgs, much deeper than the depth of Contaminated groundwater. Given the depth of Contaminated groundwater being relatively shallow with Contamination being delineated and stable, and the presence of a deeper aquifer more suitable for drinking water present at the MA, it is considered unlikely that Contaminated groundwater will be used as a potential drinking water source.



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Based on the above, an advisory for the MA that Contaminated groundwater must not be used for drinking water purposes is considered appropriate to meet this risk control. The listing of this risk control in Schedule B of the CofC meets this requirement.

- b) Communication with the MA owner/operator that a worker health and safety plan must be developed in the event that trenches (defined as excavations that are deeper than they are wide, > 1.5 m bgs and suitable for human entry) are advanced at the MA. The worker health and safety plan will include measures to mitigate trench vapour inhalation exposures. It is unknown if trench work is required at the MA, and if any such work will be undertaken in the future.

Based on the above, an advisory for the MA that a worker health and safety plan must be developed and implemented in the event that trenches (as per the above definition) are advanced at the MA 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 advisories in Schedule B of the CofC are sufficient for addressing the principal risk controls at the MA.

## REFERENCES

- MoE. 2013. Procedure 12. Procedures for preparing and issuing contaminated sites legal instruments. BC Ministry of Environment, Victoria, BC, February, 2013.
- MoE. 2014. Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans. BC Ministry of Environment, Victoria, BC, February, 2014.
- SNC-Lavalin. 2015a. *Human Health and Ecological Risk Assessment, Former Payless Service Station and Management Area Adjacent 4450 Trans Canada Highway, Cobble Hill, BC, Location Code: C47049*, prepared by SNC-Lavalin Inc., Environment & Water, dated January 23, 2015.
- SNC-Lavalin. 2015b. *Stage 1 & 2 Preliminary Site Investigation, Detailed Site Investigation and Decommissioning, Former Payless Service Station and Management Area Adjacent 4450 Trans Canada Highway, Cobble Hill, BC, Location Code: C47049*, prepared by SNC-Lavalin Inc., Environment & Water, dated January 22, 2015.

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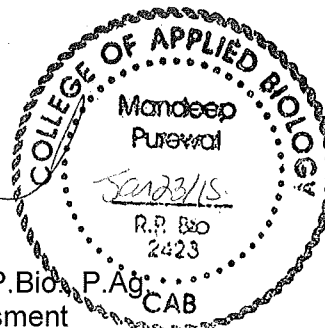
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