

July 21, 2017

Project: 130307

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**ATTENTION:** John Driedger, P.Eng.  
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**REFERENCE:** **Performance Verification Plan, Management Area (City MA) Associated with a Shell Service Station at 2103 West Broadway, Vancouver, BC**  
**Location Code: C01303**

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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 City Management Area adjacent to the Shell service station at 2103 West Broadway, Vancouver, BC, Location Code: C01303 (herein referred to as the “City MA”). The PVP presents the principal risk control that applies at the City MA to ensure the City MA 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 (MoE, 2015a) and Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans (MoE, 2015b).

## Principal Risk Controls

A Human Health and Ecological Risk Assessment (HHERA) was conducted for the City MA, and the results are presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, Management Area (City MA) Associated with Shell Service Station at 2103 West Broadway, Vancouver, BC, Location Code:C01303*, prepared by SNC-Lavalin, dated July 21, 2017 (SNC-Lavalin, 2017a). The HHERA was prepared based on the findings and conclusions presented in the SNC-Lavalin report, *Stage 2 Preliminary Site Investigations and Detailed Site Investigation, Shell Service Station at 2103 West Broadway and 2106 West 8<sup>th</sup> Avenue, Vancouver, BC (Location Code: C01303) and Associated Management Area*, dated July 11, 2017 (SNC-Lavalin, 2017b).

The principal risk control upon which the SNC-Lavalin (2017a) risk assessment was based, as presented in Schedule B of the CofC, is as follows:

- › Groundwater from surface to 7 meters below ground surface (m bgs) at the City MA must not be used as a source of drinking water.





## Determination of Procedure 12 Remediation Type

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

Under a Remediation Type 2 scenario, MoE (2015a, b) 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 control upon which the HHERA is based is being met at the City MA.

This includes the maintenance of up-to-date records of performance verification actions and results for the City 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 City MA include the following:

- › Communication with the owner/operator that groundwater from surface to 7 m depth at the City MA must not be used for drinking water purposes. The City MA is located in a commercial/residential developed area and drinking water to the surrounding area is currently supplied by a municipal water distribution system. Consequently, groundwater is not being used as a drinking water source. Given the developed nature of the surrounding area and the presence of an alternate drinking water supply, future use of groundwater at the City MA as a drinking water supply is considered unlikely.

Based on the above, an advisory for the City MA that 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.

In summary, it is our opinion that the advisory in Schedule B of the CofC are sufficient for addressing the principal risk control at the City MA.





## References

- MoE. 2015a. Procedure 12. Procedures for Preparing and Issuing Contaminated Sites Legal Instruments. BC Ministry of Environment, Victoria, BC, December 15, 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. 2017a. *Human Health and Ecological Risk Assessment, Management Area (City MA) Associated with a Shell Service Station at 2103 West Broadway, Vancouver, BC, Location Code:C01303*, prepared by SNC-Lavalin Inc., dated July 21, 2017.
- SNC-Lavalin. 2017b. *Stage 2 Preliminary Site Investigations and Detailed Site Investigation, Shell Service Station at 2103 West Broadway and 2106 West 8<sup>th</sup> Avenue, Vancouver, BC (Location Code: C01303) and Associated Management Area*, prepared by SNC-Lavalin Inc., dated July 11, 2017.

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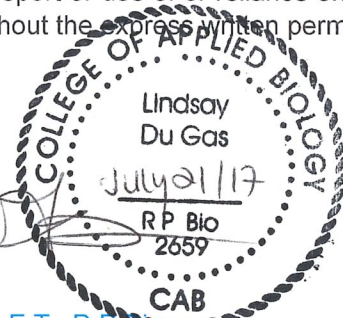




Any soil and rock descriptions in this report and associated logs have been made with the intent of providing general information on the subsurface conditions of the site. This information should not be used as geotechnical data for any purpose unless specifically addressed in the text of this report. Groundwater conditions described in this report refer only to those observed at the location and time of observation noted in the report.


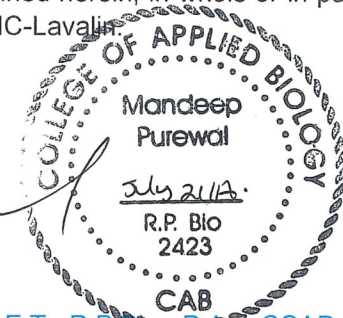
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