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March 31, 2017

Project: 132814

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ATTENTION: John Driedger, P.Eng.
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REFERENCE: **Performance Verification Plan for 465 Highway 97S**
100 Mile House, BC, Location Code: C44020

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 Former Shell Service Station located at 465 South Highway 97, 100 Mile House, BC, Ministry of Environment (MoE) Site ID: 11307 (herein referred to as the “Site”). The PVP presents the principal risk controls that apply at the Site to ensure the CofC for the Site remains valid (i.e., the key risk controls of Schedule B of the CofC). The PVP was prepared in accordance with MoE Procedure 12: Procedures for preparing and issuing contaminated sites legal instruments (2015a) and Administrative Guidance 14: Performance Verification Plans, Contingency Plans and Operations and Maintenance Plans (2015b).

Principal Risk Controls

A Human Health and Ecological Risk Assessment (HHERA) was conducted for the Site, and the results are presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, Former Shell Service Station and Management Area, 465 South Highway 97, 100 Mile House, BC, Location Code: C44020*, prepared by SNC-Lavalin, (SNC-Lavalin, 2016a). 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, Decommissioning, and Confirmation of Remediation, Former Shell Service Station and Management Area, 465 South Highway 97, 100 Mile House, BC* (SNC-Lavalin, 2016b).

Additional site investigation work was conducted in 2017 and reported in the SNC-Lavalin report, *Stage 1 PSI Update and Supplemental Investigation, Former Shell Service Station, 465 South Highway 97, 100 Mile House, BC*, dated March 13, 2017 (SNC-Lavalin, 2017a). To account for this additional data, and the time passed since the completion of the original HHERA, SNC-Lavalin produced a letter updating the risk assessment, titled *Risk Assessment Update, Former Shell Service*





Station, 465 South Highway 97, 100 Mile House, BC, Location Code: C44020, dated March 31, 2017 (SNC-Lavalin, 2017b). The risk assessment update confirmed that the results and conclusions for the Site described in the 2016 HHERA (SNC-Lavalin 2016b) remain valid.

The principal risk controls for the Site on which the SNC-Lavalin (2016a) risk assessment was based, as presented in Schedule B of the CofC, are as follows:

- (a) *Groundwater from the Site must not be used as a drinking water source.*
- (b) *The future grade at the Site will not be lower than the current grade.*

Other assumptions have been made throughout the HHERA (SNC-Lavalin, 2016a), but are not considered risk controls. Given that these assumptions were used to determine the presence of Contamination at the Site (i.e., they are assumptions used in the Site investigation), they are not considered to be risk controls and are not included in the PVP.

Determination of Procedure 12 Remediation Type

Based on the principal risk controls for the Site (i.e., the use of an institutional control to mitigate/eliminate risks at the Site and lack of imminent risks in the event that the control was either not implemented or was 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 are 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 are being met.

Performance verification actions for the Site include the following:

- (a) Communication with the owner/operator that Contaminated groundwater from the Site must not be used for drinking water purposes. The Site is currently unpaved and undeveloped, with the potential for a future slab-on-grade commercial building, with the exception of over the Spectra Right-of-Way. Groundwater at the Site is not currently used for drinking water purposes (including bathing/showering, cooking, gardening, drinking, etc.) and is not anticipated to be used for these purposes in the future, with drinking water supplied to the area by a municipal water distribution system. It is considered unlikely that groundwater will be used for drinking water purposes in the future.





Based on the above, an advisory that groundwater at the Site 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 owner/operator that future grade at the Site must not be lower than the current grade. The Site is currently unpaved and undeveloped, with the potential for a future slab-on-grade commercial building. Based on the Site location and land use type, overall grade at the Site is likely to remain consistent with the surrounding lands (which includes a road and a laneway along the western and eastern boundaries of the Site, respectively), as it is currently. It is considered unlikely that significant decreases in grade would occur at the Site.

Based on the above, an advisory that the future grade at the Site will not be lower than the current grade 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 an 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, Former Shell Service Station and Management Area, 465 South Highway 97, 100 Mile House, BC, Location Code: C44020*, prepared by SNC-Lavalin Inc., Environment & Water, dated January 7, 2016.
- SNC-Lavalin. 2016b. *Stage 1 PSI Update, Stage 2 Preliminary Site Investigation, Detailed Site Investigation, and Remedial Excavation, Former Shell Service Station and Management Area, 465 South Highway 97, 100 Mile House, BC. Location Code #C44020*, prepared by SNC-Lavalin Inc., Environment & Water, dated January 4, 2016.
- SNC-Lavalin. 2017a. *Stage 1 PSI Update and Supplemental Investigation, Former Shell Service Station, 465 South Highway 97, 100 Mile House, BC*, dated March 13, 2017.
- SNC-Lavalin. 2017b. *Risk Assessment Update, Former Shell Service Station, 465 South Highway 97, 100 Mile House, BC, Location Code: C44020*, dated March 31, 2017.





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