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June 10, 2016

Project: 510279

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REFERENCE: Performance Verification Plan, Portion of City of Nanaimo Lands Near 3180 and 3190 N. Island Highway and 2700 Norwell Drive, Nanaimo, 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 a portion of City of Nanaimo Lands (herein referred to as the "City MA") near the Former Suncor and Historic Shell Service Station at 3180 N. Island Highway and the Former Imperial Service Station at 2700 Norwell Drive, Nanaimo, BC. The PVP presents the principal risk controls that apply 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 Ministry of Environment (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 City MA, and the results presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, 3180 and 3190 North Island Highway, 2700 Norwell Drive and Associated Management Areas, Nanaimo, BC* prepared by SNC-Lavalin, dated 2016, (SNC-Lavalin, 2016a). The HHERA was prepared based on the findings and conclusions presented in the SNC-Lavalin report, *Stage 2 Preliminary Site and Detailed Site Investigation, 3180 and 3190 North Island Highway, 2700 Norwell Drive and Associated Management Areas, Nanaimo, BC* dated 2016 (SNC-Lavalin, 2016b).

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

- › Groundwater at the MA must not be used as a drinking water source.

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; 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 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 at the City MA must not be used for drinking water purposes. The City MA is currently used as a roadway and is located in a developed commercial area and drinking water to the surrounding area is currently supplied by a municipal water distribution system. Consequently, groundwater is not being used for drinking water purposes (e.g., consumption, showering, washing, garden watering). 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 is 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, 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, 3180 and 3190 North Island Highway, 2700 Norwell Drive and Associated Management Areas, Nanaimo, BC*, prepared by SNC-Lavalin Inc., Environment & Water, dated 2016.

SNC-Lavalin. 2016b. *Stage 2 Preliminary Site Investigation and Detailed Site Investigation 3180 and 3190 North Island Highway, 2700 Norwell Drive and Associated Management Areas, Nanaimo, BC*, prepared by SNC-Lavalin Inc., Environment & Water, dated 2016.

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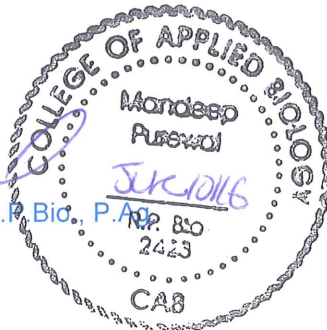
The findings, conclusions and recommendations in this report (i) have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and (ii) reflect SNC-Lavalin's best judgment based on information available at the time of preparation of this report. No other warranties, either expressed or implied, are made as to the professional services provided under the terms of our original contract and included 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, site conditions change or applicable standards are amended, modifications to this report may be necessary. The results of this assessment should in no way be construed as a warranty that the subject site is free from any and all contamination.

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