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May 9, 2016

Project: 130904

Corporation of the City of New Westminster
511 Royal Avenue
New Westminster, BC
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ATTENTION: Roger Emanuels

REFERENCE: Performance Verification Plan,
Areas of Environmental Concern, Poplar Landing (Former Doman Industries
Ltd. Sawmill), 1400 Quayside Drive, New Westminster, BC
SITE ID: 8071, PID: 012-237-281

On behalf of the Corporation of the City of New Westminster (the City), SNC-Lavalin Inc. (SNC-Lavalin) has completed this Performance Verification Plan (PVP) in support of an application for a Certificate of Compliance (CofC) for the areas of environmental concern (AEC) associated with Poplar Landing (Former Doman Industries Ltd. Sawmill), 1400 Quayside Drive, New Westminster, BC, BC Ministry of Environment (MoE) site ID # 8071 (herein referred to as "Site"). The PVP presents the principal risk controls that apply at the AECs at the Site (specifically, at "AEC1" and "AEC2") to ensure the 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 (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 Site, including AEC1 and AEC2, and the results presented in the SNC-Lavalin report, *Human Health and Ecological Risk Assessment, Areas of Environmental Concern and Management Areas Associated with Poplar Landing (Former Doman Industries Ltd. Sawmill), 1400 Quayside Drive, New Westminster, 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 reports, *2007 to 2015 Post Remediation and Supplemental Site Assessments, Poplar Landing (Former Doman Industries Ltd. Sawmill), 1400 Quayside Drive, New Westminster, BC*, dated 2016 and *Updated Evaluation of Polychlorinated Dioxins and Furans Concentrations in Soil, 1400 Quayside Drive, New Westminster, BC (BC MoE Site No. 8071)*, dated 2016 (SNC-Lavalin, 2016b;c).





The principal risk controls for AEC1 and AEC2 on which the SNC-Lavalin (2016a) risk assessment was based, as presented in Schedule B of the CofC, are as follows:

- › Any vegetation introduced at AEC1 must be limited to that with root structures of < 1.5 meters below ground surface (m bgs) in areas where residual contamination is present. Alternatively measures must be taken to prevent root contact with soil contamination present at depths ≥ 1.5 m bgs.
- › Any vegetation introduced at AEC2 must be limited to that with root structures of < 2 m bgs in areas where residual contamination is present. Alternatively measures must be taken to prevent root contact with arsenic present in groundwater at depths ≥ 2 m bgs.

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 Site and lack of imminent risks in the event that controls were either not implanted or were rendered ineffective), the Remediation Type applicable at the Site, are considered to be Type 2.

Under a Remediation Type 2 scenario, MoE (2015a; 2015b) indicates that a Performance Verification Plan (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. The following performance verification actions are recommended.

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 AEC1 include the following:

- › Communication with the owner/operator that any vegetation introduced at AEC1 must be limited to that with root structures of < 1.5 m bgs in areas where residual contamination is present. Alternatively measures must be taken to prevent root contact with soil contamination present at depths ≥ 1.5 m bgs. AEC1 is currently zoned for industrial purposes with the potential to be used for either industrial (current) or urban park (future) land use. Surrounding land use consists of commercial, industrial and residential properties, with the Fraser River located to the south. Under current and future land use scenarios, AEC1 constitutes significant terrestrial habitat. Based on the depth of contamination in soil, operable exposure pathways to terrestrial ecological receptors are not present, with the exception of deep rooting vegetation.





Based on the above, an advisory for AEC1 that any vegetation introduced at AEC1 must be limited to that with root structures of < 1.5 m bgs in areas where residual contamination is present or alternatively, measures must be taken to prevent root contact with soil contamination present at depths ≥ 1.5 m bgs is considered appropriate to meet this risk control. The listing of this risk control in Schedule B of the CofC meets this requirement.

Performance verification actions for AEC2 include the following:

- › Communication with the owner/operator that any vegetation introduced at AEC2 must be limited to that with root structures of < 2 m bgs in areas where residual contamination is present. Alternatively measures must be taken to prevent root contact with arsenic present in groundwater at depths ≥ 2 m bgs. AEC2 is currently zoned for industrial purposes with the potential to be used for either industrial (current) or residential/parkland (future) land use. Surrounding land use consists of commercial, industrial and residential properties, with the Fraser River located to the south. Under current and future land use scenarios, AEC2 constitutes significant terrestrial habitat. Based on the depth of contamination in groundwater, operable exposure pathways to terrestrial ecological receptors are not present, with the exception of deep rooting vegetation.

Based on the above, an advisory for AEC2 that any vegetation introduced at AEC2 must be limited to that with root structures of < 2 m bgs in areas where residual contamination is present or alternatively, measures must be taken to prevent root contact with arsenic present in groundwater at depths ≥ 2 m bgs 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 AEC1 and AEC2.

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, Areas of Environmental Concern and Management Areas Associated with Poplar Landing (Former Doman Industries Ltd. Sawmill), 1400 Quayside Drive, New Westminster, BC, prepared by SNC-Lavalin Inc., dated 2016.
- SNC-Lavalin. 2016b. 2007 to 2015 Post Remediation and Supplemental Site Assessments, Poplar Landing (Former Doman Industries Ltd. Sawmill), 1400 Quayside Drive, New Westminster, BC, prepared by SNC-Lavalin Inc., dated 2016.





SNC-Lavalin. 2016c. Updated Evaluation of Polychlorinated Dioxins and Furans Concentrations in Soil, 1400 Quayside Drive, New Westminster, BC (BC MoE Site No. 8071), prepared by SNC-Lavalin Inc., dated 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 Corporation of the City of New Westminster (the City), who 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 use of, reliance on, or any decision made based on this report. Should this report be submitted to the BC Ministry of Environment (MoE) by the City, 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 the City 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 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.

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.

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.





SNC • LAVALIN

Corporation of the City of New Westminster – Page 5 of 5
May 9, 2016

Project 130904

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We trust this provides you with the information you currently require. If you have any questions, please contact this office at your earliest convenience.

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Environment & Geoscience
Infrastructure

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