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October 31, 2017
File: 663-067.04

Mr. Satnam Sing Sidhu
Sunshine West Real Estate Limited (Inc No. C1004027)
8670 River Road
Delta, BC. V4G 1B5

Attn: Mr. Sidhu

Re: Performance Verification Plan for Sunshine West Property (Lot 4), 8662 River Road, Delta, BC

1.0 INTRODUCTION

Hemmera Envirochem Inc. (Hemmera) was retained by Sunbury River Road Developments LP to prepare this Performance Verification Plan (PVP) in support of an application for a “risk-based” Certificate of Compliance (CoC) for the property located at 8662 River Rd, Delta, BC (Lot 4 District Lot 131 Group 2 New Westminster District Plan 6284 [002-097-231]) (the “Site”), part of MOTI Site ID #2452.

This PVP identifies: (a) risk controls recommended in the *Human Health and Ecological Risk Assessment North Alpha Landfill, Delta, BC* (Hemmera, 2017); and (b) recommended actions to ensure that these risk controls are implemented and maintained, in order that the Site continues to meet Contaminated Sites Regulation (CSR) risk-based standards for remediation in the future.

This PVP was prepared in accordance with BC Ministry of Environment (BCMOE) *Administrative Guidance 14: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans, Version 1.0* (BCMOE, 2015) and *Procedure 12: Procedures for Preparing and Issuing Contaminated Site Legal Instruments* (BCMOE, 2016).

2.0 SITE TYPE

Type 2, based on the institutional and engineering risk controls recommended in the human health and ecological risk assessment (HHERA), presented and discussed below.

3.0 RISK CONTROLS

The following risk controls were recommended in the HHERA (Hemmera, 2017a):

- a) The landfill cap, as it currently is must remain intact.
- b) Site groundwater must not be used as drinking water.
- c) The leachate collection system must remain in place and functioning, until such time that BC Ministry of Environment approves that leachate collection is no longer required.

BOUNDARY FOR THE ON-SITE RISK CONTROL AREA

The landfill cap must remain in place for the extents of the boundaries of the property (Lot 4, District Lot 131, Group 2, New Westminster District Plan 6284) with the exclusion of the following set-backs:

- 32.5 m from the south-most property boundary
- 75 m from the north-most property boundary

These boundaries solely refer to risk control (a) the landfill cap.

4.0 RATIONALE FOR RISK CONTROLS

The Site is part of a former landfill and is currently used for truck storage. The Site is subject to landfill closure procedures, as documented in *North Alpha Landfill Closure Plan* (Sperling Hansen, 2013), as well as risk controls as detailed in **Section 3**.

The risk control requiring that the landfill cap, as it currently is, be maintained, is believed to be necessary, as this is both required as part of the Landfill Closure Plan, and it is necessary to prevent human and ecological receptors from interacting with sub-surface soil contamination. Specifics on the schematics of the landfill cap are presented in Sperling Hansen (2013) Figure 6-3 to 6-7 and in Sperling Hansen (2016), Figure 1,2,4 and 7.

Site groundwater contains sulphide, barium, boron, nickel, zinc, acridine, anthracene, benz(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene and pyrene at concentrations exceeding drinking water standards. Hence, groundwater should not be used as potable water. While the use of Site groundwater as drinking water is extremely unlikely given an available municipal water supply, this risk control was recommended both as a precautionary measure, and in accordance with BCMOE policy and procedure regarding DW use and risk based closure. This risk control has been extended to the Site as a whole both for simplicity, and in the event groundwater extraction from outside of areas of contamination could draw contaminated groundwater to extraction locations.

Inclusion of the leachate collection system as a risk control is required, as groundwater migration is expected to be curtailed by the leachate collection system (Hemmera, 2017b). As well, this system is a requirement of the Landfill Closure Plan, and samples are collected on a monthly basis. Specifics on the schematics of the leachate collection system are presented in Sperling Hansen (2013) Figure 4-2 and 4-3 and in Sperling Hansen (2016), Figure 5.

5.0 RECOMMENDED ACTIONS

The above risk controls pertain to current and future Site development and use.

No formal verification or records keeping of such communication or adherence to the no potable water use is needed.

However, verification of the intact landfill cap maintenance is required by the Site owner. This includes ensuring that thickness of the cap is maintained, including during earth moving activities associated with the future development and evaluating loss due to erosion. This verification is conducted bi-annually, during the landfill monitoring geotechnical assessment and slope stability monitoring. It is understood that there is an agreement between Sunbury River Road Investments Ltd. Inc. and D A Trucking in place to provide expert consultant support in evaluating the landfill cap (which occurs during monitoring events). D A Trucking should obtain copies of these monitoring records, and hold them in order to produce if requested by the Director.

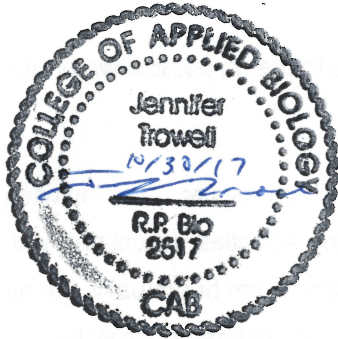
As well, verification of the leachate collection system's continued functioning should also be conducted by the Site owner. As noted before, this system is monitored monthly, and samples are collected for reporting to Metro Vancouver as part of the conditions for discharge into the sanitary sewer. This monthly monitoring is also facilitated as part of the agreement between Sunbury River Road and D A Trucking. D A Trucking should obtain copies of these reports as well, to hold and produce if requested by the Director.

6.0 CLOSURE

This Work was performed in accordance with the professional services agreement between Hemmera Envirochem Inc. ("Hemmera") and Sunbury River Road Developments LP ("Client"), dated November 16, 2016 ("Contract"). This Report has been prepared by Hemmera, based on fieldwork conducted by Hemmera, for sole benefit and use by the Client, BC MOE, and the Contaminated Sites Approved Professional (CSAP). In performing this Work, Hemmera has relied in good faith on information provided by others, and has assumed that the information provided by those individuals is both complete and accurate. This Work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and project terms of reference; further, the findings are time sensitive and

are considered valid only at the time the Report was produced. The conclusions and recommendations contained in this Report are based upon the applicable guidelines, regulations, and legislation existing at the time the Report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

Prepared by:
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7.0 REFERENCES

BCMOE (2015). Administrative Guidance 14 on Contaminated Sites: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans, Version 3.0, December, 2015.

BCMOE (2016). BC Ministry of Environment Procedure 12: Procedures for Preparing and Issuing Contaminated Site Legal Instruments, Version 3.0 Draft 7, February, 2016.

Hemmera (2017). Human Health and Ecological Risk Assessment – North Alpha Landfill, Delta, BC, September, 2017.

Sperling Hansen (2013) North Alpha Landfill Closure Plan Update Final v2 Report, prepared for Utzig Holdings BC Ltd., Sunshine West and DA Trucking July 2013