

March 18, 2014

12-1520-0049-5430

Imperial Oil
405 - 5945 Kathleen Avenue
Burnaby BC V5H 4J7

PERFORMANCE VERIFICATION PLAN FOR CERTIFICATE OF COMPLIANCE FOR SITE ID 9116

Site ID: 9116
Site Location: 1281 Marine Drive Gibsons, BC
Author: Christine Thomas, M.Sc., R.P.Bio, Senior Risk Assessor
Name of Firm Preparing the PVP: Golder Associates Ltd.
Risk Control Type: 1B

Golder Associates Ltd. (Golder) has prepared this Performance Verification Plan (PVP) on behalf of Imperial Oil (IOL) to support an application for Certificate of Compliance (CoC) for the former Hopkins Landing bulk plant, located at 1281 Marine Drive, Gibsons, BC (herein referred to as the Site).

The PVP presents the principal risk management measures that apply at the Site so that the Site CoC remains valid. The PVP was prepared in accordance with BC Ministry of Environment (BC MoE) Administrative Guidance 14: Performance Verification Plans, Contingency Plans, and Operation and Maintenance Plans (BC MoE 2014).

Required Risk Controls

Based on the results of the Detailed Site Investigation (DSI) and Confirmation of Remediation Report, Area of Environmental Concern 1 (AEC 1) was the only area where contamination remained at the Site. To address the remaining soil contamination, a risk assessment was conducted using both BC MoE screening level and detailed risk assessment tools. Based on the results of the risk assessment, the required risk controls are as follows:

- A cover remains in place in AEC 1, such that direct contact with hydrocarbon contaminated soil confined to depths greater than 3 metres below ground surface (mbgs) in an area less than 35 m², near the western property line within Lot 15 (as defined in the legal site description) is prevented.
- There should be no contact of the groundwater table with potential future building foundations.

The location of the area that is subject to this risk control is identified in Figure 1.



Required Actions to Implement Risk Controls

Based on the risk management measures for the Site (i.e., the use of an intrinsic or natural soil cover), the risk control type at the Site is considered to be Type 1B (BC MoE 2014). As such, the required recordkeeping for the risk control described above is for the responsible person or agent to notify the Director if, and when, the cover becomes compromised or no longer in effect.

Rationale for Risk Controls

The hydrocarbon contamination remaining in AEC 1 is confined to depths below 3.0 m in an area less than 35 m², near the western property line within Lot 15 (as defined in the legal site description). The risk assessment indicated that this impacted soil remaining at the Site poses no unacceptable risks to human or ecological receptors assuming that the current cover or barrier remains in place in AEC 1. Currently, this barrier consists of an uncontaminated layer of natural soil and imported clean gravel backfill. This intrinsic control is considered sufficient to mitigate the potential risks.

The requirement for a cover is based on the application of the BC MoE (2008) Protocol 13: Screening Level Risk Assessment, which is a pathway based evaluation and not a quantitative evaluation of risk. This PVP may be modified (e.g., the need for a cover could be revisited and addressed through additional quantitative evaluation of risks, or the contamination managed through a soil management plan) based on the recommendation of an Contaminated Sites Approved Professional to the Director.

Closure

I trust the information contained in this letter is sufficient for your present needs. Should you have any additional questions, please do not hesitate to contact the undersigned.

Yours truly,

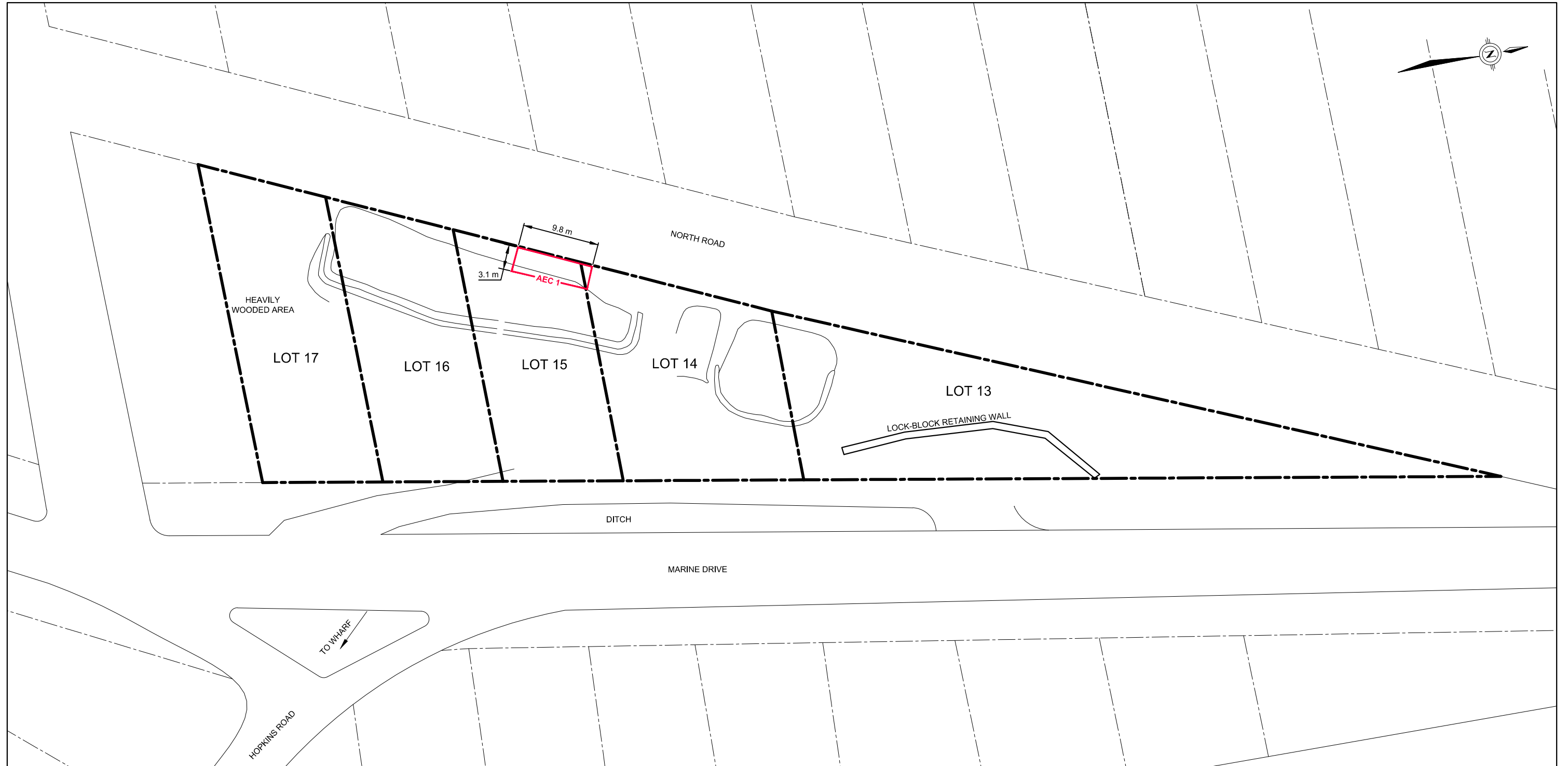
GOLDER ASSOCIATES LTD.



Christine Thomas, M.Sc., R.P.Bio.
Associate/Senior Environmental Scientist

Attachment: Figure 1 – Site Plan with Remaining AEC 1

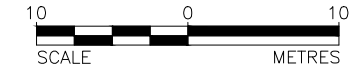
\\golder.gds\CALIM\CAD\2014\1520\14-1520-0027\7210\2016\PVP Letter Report\Fig 01 IOL38002772102016001 Site Plan with Remaining AEC1.dwg Apr 01, 2014 - 4:14pm



LEGEND
 - - - - - PROPERTY BOUNDARY (SURVEYED BY MCELHANNEY, 2011)
 [Red outline] AREA OF ENVIRONMENTAL CONCERN

LIST OF APPLICABLE ABBREVIATIONS
 AEC AREA OF ENVIRONMENTAL CONCERN

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM SNC LAVALIN MORROW ENVIRONMENTAL;
 DRAWING No.: V041033-008; SCALE: 1:300; DATE: 2004-11-01.
 ORIGINAL DRAWING OBTAINED FROM MCELHANNEY ASSOCIATES LAND
 SURVEYING LTD.; FILE No.: 02249-0-1; JOB No. 22113-02249-0; SCALE: 1:500; DATE:
 JULY 27, 2011.
 THE APEC'S WERE TAKEN FROM THE FOLLOWING HISTORICAL REPORT: SNC
 LAVALIN ENVIRONMENT INC. (FORMERLY MORROW ENVIRONMENTAL
 CONSULTANTS INC.) (2005). SITE INVESTIGATIONS, FORMER IMPERIAL OIL BULK
 PLANT, 1281 PORT MELLON HIGHWAY, HOPKINS LANDING, GIBSONS, BC,
 LOCATION NO. R02663/88000859



CLIENT		IMPERIAL OIL FORMER HOPKINS LANDING BULK PLANT 1281 MARINE DRIVE, GIBSONS, B.C.	
TITLE		SITE PLAN WITH REMAINING AEC1	
	PROJECT	14.1520.0027.7210	FILE No. IOL38002772102016001
	DESIGN	WB	25/03/14
	CADD	YAW	25/03/14
	CHECK	BM	01/04/14
REVIEW	WB	01/04/14	SCALE AS SHOWN REV. 0
			FIGURE: 1