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**PERFORMANCE VERIFICATION PLAN  
6055 MONTEREY ROAD, PRINCE GEORGE, BC**

**SITE ID No.: 3218**

**Performance Verification Plan**

**April 2016  
SLR Project No.: 201.03502.00016**



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**6055 MONTEREY ROAD, PRINCE GEORGE, BC**  
**Site ID.: 3218**  
**SLR Project No.: 201.03502.00016**

Prepared by  
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for

Suncor Energy Products Partnership  
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April 2016

Prepared by:

A handwritten signature in black ink, appearing to read "Barbara Glijer". The signature is written in a cursive, flowing style.

**Barbara Glijer, B.Sc, G.D. Ecotoxicology, PChem**  
Senior Risk Assessor

**CONFIDENTIAL**

Distribution: 1 copy – Suncor Energy Products Partnership  
1 copy – BC Ministry of Environment  
1 copy – SLR Consulting (Canada) Ltd.  
1 copy – CSAP Approved Professional

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## DRAWING

Drawing 1: Property Plan

## 1.0 INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR), on behalf of Suncor Energy Products Partnership (Suncor), prepared this Performance Verification Plan (PVP) for the former service station/current automotive repair facility at 6055 Monterey Road, Prince George, BC (the "Property").

The PVP presents risk management controls to be implemented at the Property to ensure that risk-based Certificate of Compliance (CoC) will remain valid. This report was prepared in accordance with BC Ministry of Environment (MOE) Administrative Guidance 14: *Performance Verifications Plans, Contingency Plans, and Operations and Maintenance Plans* (BC MOE, 2014).

## 2.0 BACKGROUND

The Property, the former cardlock and the service station owned by Suncor is located in a commercial/light industrial area of Prince George, BC. The operations at the Property ceased in 2004 and removal of all infrastructures was completed by 2007. The Property is currently occupied by a single building housing Lucien's Auto Service Ltd., Shooter's Liquor Store, and the Hart Wheel Inn Restaurant which lease the Property from Suncor.

Investigations conducted by SLR and other consultants between 1993 and 2016 have identified petroleum hydrocarbon (PHC)-related contamination in soil and groundwater associated with the historical use of the Property. Most of the soil contamination from the Property has been removed through remedial excavation as part of the facility decommissioning and through operation of vapour extraction system (VES) and nutrient injection.

The Human Health and Ecological Risk Assessment (HHERA) for the Property was completed by SLR in April 2016 to estimate potential risk to human and ecological receptors from potential exposure to PHC related contamination (SLR, 2016). This HHERA was conducted under the assumption that the current commercial land (CL) use designation for the Property will remain unchanged in the future. Additionally, potable water use was assessed under hypothetical future water use scenario. Receptors of concern and pathways quantified at the Property included:

- Commercial Worker (adults) – ingestion of groundwater, dermal exposure to groundwater and inhalation of volatile organic compounds (VOCs) from groundwater.
- General Public (adult and toddler exposure to non-carcinogenic compounds; and adult and lifetime exposure to carcinogens) - ingestion of groundwater, dermal exposure to groundwater and inhalation of VOCs from groundwater.

Results of the HHERA indicated unacceptable risk to the commercial worker receptor and general public receptors from exposure to 1,2-Dichloroethane (DCA) in groundwater.

Groundwater from the Property may discharge to surface water, McMillan Creel, located 445 m east of the Property. Naphthalene was identified as a contaminant of concern (COPC) in groundwater for the protection of aquatic ecological receptors. However, potential exposure to aquatic receptors through contact with groundwater is considered an incomplete and insignificant pathway as naphthalene was vertically and horizontally delineated within the Property and its concentrations are stable and/or decreasing. As such, naphthalene is not

expected to reach receiving environment at concentrations exceeding applicable water standards.

### **3.0 REQUIRED RISK CONTROLS**

The required risk controls to manage potential risk identified in the HHERA included the following:

- The groundwater at the Property must not be used as a source of potable water.

### **4.0 REQUIRED ACTIONS TO IMPLEMENT THE REQUIRED RISK CONTROLS**

Based on consideration of current/future land use at the Property and the results of HHERA (SLR, 2016), the following performance verification actions are recommended and will be the responsibility of Suncor:

1. Inclusion of an advisory (as item (a) in clause 2 of Schedule B of any Certificate of Compliance issued for the site) that “The groundwater at the Property must not be used as a source of potable water”.

Notification to the Director is required if the subject of this advisory is breached. The listing of the risk management measure in Schedule B of the CoC meets this requirement.

### **5.0 SUMMARY RATIONALE FOR SELECTING REQUIRED PVP ELEMENTS**

The Property is classified as a Risk-Based Remediation Type 2 Site on the basis that risk management measures are required but failure of risk management measures will not result in the imminent exposure of site contaminants to humans, or discharge of contaminants to the aquatic receiving environment at concentrations above BC water quality guidelines, or imminent exposure of contaminants to terrestrial ecological receptors at levels 10 times site-specific risk-based concentrations, or contaminant spreading at concentrations above upper cap concentrations.

The incremental lifetime cancer risk (ILCR) derived for commercial worker receptor and general public (lifetime exposure) through ingestion of 1,2-DCA in groundwater assumed to be used as a potable water source in the future were  $3.7E-05$  and  $1.2E-05$ , respectively. The excess cancer risk derived for both receptors for combined exposure through all groundwater pathways (ingestion, inhalation and dermal) are  $3.8E-05$  (commercial worker) and  $1.2E-05$  (general public – lifetime exposure). Based on the 1,2-DCA risk estimates in excess of CSR risk-based standard of  $1E-05$ , protection of commercial workers and general public by restricting the installation of potable water well on the Property was included as a risk management measure in Schedule B of the CoC.

## 6.0 REFERENCES

BC MOE. 2014. British Columbia Ministry of the Environment. Administrative Guidance 14: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans. Version 1.0. February, 2014.

SLR, 2016. Human Health and Ecological Risk Assessment. Suncor Energy Products Partnership. 6055 Monterey Road, Prince George, BC. MOE Identification No: 3218. April 22, 2016.

BC/ijk

N:\Vancouver\Projects\Suncor Energy Inc\201.03502 Hart Wheel Inn PG 68185\2016 Risk Assessment\2\_PVP\_Property\ V2\1. On-Property - Performance Verification Plan\_Rev.docx

## **DRAWING**

Performance Verification Plan  
6055 Monterey Road, Prince George, BC  
SLR Project No.: 201.03502.00016

**Metes and Bounds description**

**Area 1**

A portion of land lying over a portion of Monterey Road in the vicinity of 6055 Monterey Road within District Lot 4039 Cariboo District, more particularly described as follows:

From a standard iron post at the most easterly corner of Parcel B (S35060) District Lot 4039 Plan 28088, in a north westerly direction, along the north easterly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, on a curve to the left with a radius of 440.000 metres, and a starting azimuth of 232°05'37", having an arc length of 53.280 metres, more or less, to a point thence;

On an azimuth of 315° 02' 24", in a north westerly direction, along the north easterly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, a distance of 2.181 metres, more or less, to a point, thence;

On an azimuth of 269° 17' 08", in a westerly direction, along the northerly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, a distance of 6.961 metres, more or less, to a point, thence;

On an azimuth of 223° 24' 20", in a south westerly direction, along the north westerly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, a distance of 8.124 metres, more or less, to the Point Of Commencement 1, thence;

On an azimuth of 223° 24' 20", in a south westerly direction, along the north westerly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, a distance of 15.511 metres, more or less, to a point, thence;

On an azimuth of 315° 33' 54" a distance of 4.616 metres, more or less, to a point, thence;

On an azimuth of 45° 23' 41" a distance of 15.500 metres, more or less, to a point, thence;

On an azimuth of 135° 33' 54" a distance of 4.078 metres, more or less, to the Point Of Commencement 1, containing 67.4 square metres, more or less.

**Area 2**

A portion of land lying over a portion of Hartway Drive in the vicinity of 6055 Monterey Road within District Lot 4039 Cariboo District, more particularly described as follows:

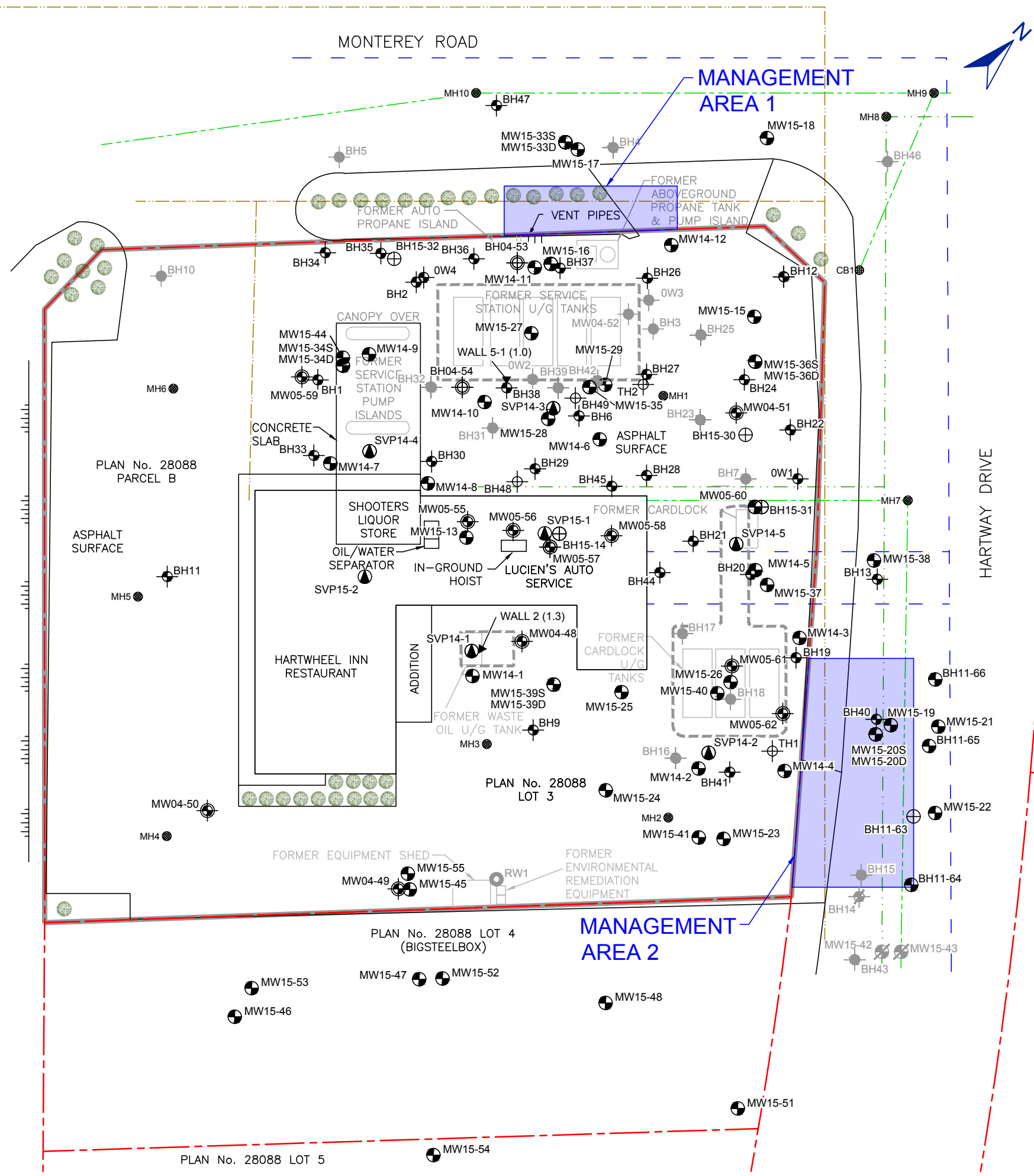
From a standard iron post at the most easterly corner of Parcel B (S35060) District Lot 4039 Plan 28088, in a north westerly direction, along the north easterly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, on a curve to the left with a radius of 440.000 metres, and a starting azimuth of 232°05'37", having an arc length of 0.896 metres, more or less, to the Point Of Commencement 2, thence;

On a curve to the left with a radius of 440.000 metres, and a starting azimuth of 231°58'37", having an arc length of 20.089 metres, more or less, in a northwesterly direction, along the north easterly boundary of Parcel B (S35060) District Lot 4039 Plan 28088, to a point, thence;

On an azimuth of 45° 20' 01" a distance of 9.068 metres, more or less, to a point, thence;

On an azimuth of 134° 57' 23" a distance of 20.000 metres, more or less, to a point, thence;

On an azimuth of 225° 20' 01" a distance of 11.067 metres, more or less, to the Point Of Commencement 2, containing 199.8 square metres, more or less.



**NOTES:**  
 REFERENCED FROM: WORLEYPARSONS KOMEX DRAWING, PROJECT No. B2025 FIGURE 2, WORLEYPARSONS KOMEX DRAWING: UST REMOVAL PLAN AND SOIL EXCEEDANCES SUMMARY, PROJECT No. B2025 FIGURE 3 (DATE: 07/27/03), WORLEYPARSONS KOMEX DRAWING: WASTE OIL TANK EXCAVATION DETAIL AND SOIL EXCEEDANCES SUMMARY, PROJECT No. B2025 FIGURE 3 (DATE: 07/18/12), O'CONNOR ASSOCIATES DRAWING: VAPOUR CONCENTRATIONS IN SHALLOW PROBE HOLES OCTOBER 1993, PROJECT No. 10-3055 FIGURE 1.4 (DATE: 93/11/02), O'CONNOR ASSOCIATES DRAWING: SOIL SAMPLE LOCATIONS AND VAPOUR CONCENTRATION MEASUREMENTS, PROJECT No. 10-3055 FIGURE 1.5 (DATE: 93/11/02), AND SITE RECONNAISSANCE INFORMATION.

**LEGEND:**

- PROPERTY BOUNDARY
- PREOPRTY LOCATION
- METES AND BOUNDS / MANAGEMENT AREA
- FORMER FACILITY/FEATURE
- FORMER LIMITS OF EXCAVATION
- BOREHOLE LOCATION (SLR)
- BOREHOLE LOCATION (OTHERS)
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL (SLR)
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL (OTHERS)
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL (WORLEY PARSONS KOMEX)
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL (DESTROYED)
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL (OTHERS) (DECOMMISSIONED)
- SOIL VAPOUR POINT
- RECOVERY WELL (OTHERS) (DECOMMISSIONED)
- TREE
- UTILITIES AND SYMBOLS**
- CATCH BASIN
- MANHOLE
- U/G NATURAL GAS
- U/G SANITARY SEWER
- U/G STORM SEWER
- U/G WATER LINE

0 2.5 5 10 15 20 25 m  
 SCALE 1:400  
 WHEN PLOTTED CORRECTLY ON A 11 x 17 PAGE LAYOUT  
 NAD 1983 UTM Zone 10U  
 THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

**SUNCOR ENERGY PRODUCTS PARTNERSHIP  
 6055 MONTEREY ROAD  
 PRINCE GEORGE, BC**

**PERFORMANCE VERIFICATION PLAN  
 6055 MONTEREY ROAD, PRINCE GEORGE, BC**

**PROPERTY PLAN**

Date: April 15, 2016	Drawing No. 1
Project No. 201.03502.00016	



Cadfile name: S\_201-03502-00016-A2.dwg





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