

Performance Verification Plan for 2489 Main Street

Residual Contamination Associated
with 2495 Main Street, West Kelowna, BC

Relka Holdings Corp.

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Kelowna, BC V1V 1M1

Prepared by:

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1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR), on behalf of Relka Holdings Corp. (Relka), prepared this Performance Verification Plan (PVP) for 2489 Main Street in Kelowna, BC (PID 003-498-832) (the “site”) to support an application for a risk-based Certificate of Compliance (CofC).

This PVP presents the principal risk control that must remain in place and be managed appropriately at the site so that risk from exposure will be mitigated. The PVP was prepared in accordance with BC Ministry of Environment and Climate Change Strategy (BC ENV) guidance (BC ENV 2022) and lists and describes the basis for the risk control necessary to confirm the site poses an acceptable risk to human health and the environment, in accordance with the BC Contaminated Sites Regulation (CSR) Protocol 1 (BC ENV 2021) and the exposure pathways evaluation and risk characterization sections of the HHERA (SLR 2023a). This PVP also outlines the actions needed to support implementation and maintenance of the risk control at the site.

2.0 Background

A Human Health and Ecological Risk Assessment (HHERA) was completed by SLR in January 2023 for 2489 Main Street to estimate potential risk to human receptors from the residual soil contamination associated with historical releases from the former gas station adjacent to the site at 2495 Main Street. Non-cancer risk was quantified for commercial workers and the general public from exposure to tetraethyl lead (TEL) under a future scenario that assumed pavement in the impacted area may be breached or removed. Results of the HHERA indicated unacceptable risks to both commercial workers (Hazard Index [HI] = 7.1) and the general public (toddler HI = 30) from exposure to TEL through combined soil pathways (incidental ingestion, dermal contact and inhalation of soil particulates).

3.0 Risk Management Controls and PVP Elements

Based on the unacceptable risks identified, the following principal risk management controls must be maintained at the site is as follows:

- Contaminated soil in the area defined by the metes and bounds shown on Figure 1, must remain at depths greater than 1.0 metre below surface grade unless covered by pavement or building foundations.

The extent of the area subject of the risk controls is shown in Figure 1 and is defined by the waypoints identified in Table 1.

Table 1: Management Area Waypoints Metes and Bounds Description

Point #	Easting (11U)	Northing (11U)
1	310834.188	5522963.309
11	310837.406	5522964.542
12	310838.411	5522966.609
13	310839.508	5522970.139
14	310839.750	5522976.375

Point #	Easting (11U)	Northing (11U)
15	310839.970	5522978.352
16	310841.638	5522980.431
3	310843.176	5522980.834
4	310847.359	5522979.716
5	310854.497	5522975.356
6	310857.130	5522973.666
7	310861.118	5522971.771
8	310860.671	5522950.041
9	310843.879	5522954.396
10	310834.073	5522958.158
1	310834.188	5522963.309

This risk control is mitigating human health exposure to contamination greater than BC ENV Schedule 3.1 Numerical Soil Standards and was the basis of the HHRA conclusion to render soil pathways incomplete. The site is classified as a Risk-Based Remediation Type 2 Site on the basis that engineering control measures are required to mitigate risk. T229 Enterprises Limited is the current owner of the site who will be the responsible party for maintaining compliance with this PVP.

The current land use designation for the site is commercial (CL) and the land is currently occupied by two tenants: a software company (Quantech Software Inc.) and a tailor (Katrina's Fashion Design and Alterations). No future change in land use designation is expected. The site is covered by a building and pavement in its entirety. All pathways were identified as incomplete for commercial workers under the current scenario. TEL contamination in excess of the CSR Schedule 3.2 CL Numerical Standard was identified in the upper 1 m of soil that is currently covered by a parking lot and represents unacceptable risk if the pavement was breached in the future.

The area, as defined by waypoints (Figure 1) and described in Table 1, represents a conservative estimate of the area in which soil below the ground cover is impacted by contaminant concentrations that could result in unacceptable risks to future commercial workers or the general public. The HHRA concluded that risk could be mitigated if ground remain covered. The waypoints defining the area to remain covered were selected based on the following rationale: Soil impacts across the site were generally encountered starting at approximately 2.6 mbg, indicative of contaminant dispersal from the source site through groundwater with 2.6 mbg representing the typical depth to the annual high-water table. Tetraethyl lead (TEL) in one soil sample collected from MW21-07 at 0.9-1.1 mbg exceeded the CL standard; this was the only soil sample collected from a depth shallower than 2.6 mbg with contaminant concentrations that exceeded the applicable standards. As TEL is a fuel additive, it is expected to occur in areas impacted with other PHCs such as VPH, as was observed in each of the other sample locations with TEL exceedances.

Based on soil quality data from surrounding boreholes, the total area of TEL soil impacts shallower than 1 m depth is estimated to be less than 100 m². This conclusion is further supported by the fact that groundwater is present at depths of 2.6 mbg or more thus, transport of TEL in groundwater could not have possibly resulted in impacts at 0.9-1.1 mbg, fuel was not handled on this parcel, and the TEL concentration in the sample collected from 1.9-2.1 m in the same borehole (MW21-07) did not contain detectable TEL. This shallow TEL exceedance appears to be an anomaly or representative of incorrect labelling in the field.

As the site does not meet ENV Protocol 1 (ENV 2021) definition of potential terrestrial habitat due to ground surface cover, or presence of sensitive habitat within 300 meters (m) of the site, no terrestrial receptors of concern were not identified at the site. TEL is not regulated under CSR for terrestrial receptors. Contaminants of potential concern (COPCs) identified for the protection of ecological receptors were measured in excess of CSR Schedule 3.1 CL standards at depths (≥ 2.3 mbg) where ecological receptors are not expected to be present, and the site met risk based standards based on incomplete exposure pathways. No risk controls are needed for protection of terrestrial receptors.

4.0 Actions Required to Implement the Required Risk Control

In consideration of current and future land use at the site and the results of the HHERA (SLR 2023a) for the site, the following performance verification actions are recommended:

- Inclusion of an advisory (as item (a) in clause 2 of Schedule B of any Certificate of Compliance issued for the site) that *“Contaminated soil in the area defined by the metes and bounds shown on Figure 1 must remain at depths greater than 1.0 metre below surface grade unless covered by pavement or building foundations.”*

Any intrusive work involving soil excavation to be conducted within the metes and bounds area must be approved by the site owner. The excavated area must be backfilled so that no less than 1.0 m of fill overlies the contaminated soil, or the area is covered by pavement or building foundations. The owner must be notified of this required PVP element. Notification to the Director in the case that the subject of this advisory is breached, is required. Should performance verification actions indicate that there is a failure of the risk control, notification must be made to the Director at BC ENV.

5.0 Record Keeping

Up-to-date records of the above performance verification should be maintained by the responsible person(s) or their agent and must be provided to ENV if requested by a Director designated under the *Environmental Management Act*.

6.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Relka Holdings Corp., referred to as the “Client”. It is intended for the sole and exclusive use of Relka Holdings Corp. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

This report has been prepared for specific application to this site and the three properties that comprise it, and conditions existing at the time work for the report was completed. Any conclusions or recommendations made in this report reflect SLR’s professional opinion based on limited investigations including visual observation of the site, surface and subsurface investigation at discrete locations and depths, and laboratory analysis of specific chemical parameters. The results cannot be extended to previous or future site conditions, portions of the site that were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters and materials that were not addressed. Substances other than those addressed by the investigation may exist within the site; and substances addressed by the investigation may exist in areas of the site not investigated in concentrations that differ from those reported. SLR does not warranty information from third party sources used in the development of investigations and subsequent reporting.

Nothing in this report is intended to constitute or provide a legal opinion. SLR expresses no warranty to the accuracy of laboratory methodologies and analytical results. SLR expresses no warranty with respect to the toxicity data presented in various references or the validity of toxicity studies on which it was based. Scientific models employed in the evaluations were selected based on accepted scientific methodologies and practices in common use at the time and are subject to the uncertainties on which they are based.

SLR makes no representation as to the requirements of compliance with environmental laws, rules, regulations or policies established by federal, provincial or local government bodies. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.

The Client may submit this report to the BC ENV and/or related BC environmental regulatory authorities or persons for review and comment purposes. BC ENV may rely on the information contained in this report regarding the Client’s property, as described in this report. BC ENV may copy the report as required to fulfil regulatory obligations.

Sincerely,

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Distribution: 1 electronic copy – Relka Holdings Corp.
 1 electronic copy – SLR Consulting (Canada) Ltd.

7.0 References

- BC ENV. 2021. Ministry of Environment and Climate Change Strategy. Protocol 1: Detailed Risk Assessment. Version 2.0. May 2021.
- BC ENV. 2022. BC Ministry of Environment and Climate Change Strategy. Performance Verification Plans. Retrieved November 26, 2022, from <https://www2.gov.bc.ca/gov/content/environment/air-landwater/site-remediation/remediation-planning/remediation-plan-aip/performance-verification-plans>
- SLR Consulting (Canada) Ltd. 2023a. Human Health and Ecological Risk Assessment for 3711 Elliott Road, and 2483 and 2489 Main Street, Kelowna, BC. January 2023.
- SLR Consulting (Canada) Ltd. 2023b. Stage 1 Preliminary Site Investigation, Detailed Site Investigation, and Confirmation of Remediation, 3711 Elliott Road, 2483 and 2489 Main Street, West Kelowna, BC. January 2023.

Figure

Performance Verification Plan for 2489 Main Street

Residual Contamination Associated with 2495 Main Street, West Kelowna, BC

Relka Holdings Corp.

SLR Project No. 219.30004.00000

March 3, 2023



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8	310860.671	5522950.041
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10	310834.073	5522958.158



LEGEND:

- PROPERTY BOUNDARY
- SITE BOUNDARY
- FORMER FACILITY/FEATURE
- MANAGEMENT AREA DEFINED BY WAYPOINTS
- BOREHOLE
- BOREHOLE COMPLETED AS A MONITORING WELL
- SOIL VAPOUR PROBE

UTILITIES AND SYMBOLS

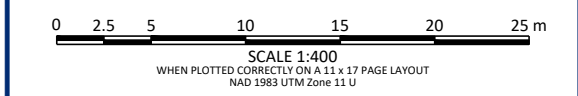
- CATCH BASIN
- DRY WELL
- U/G SANITARY SEWER LINE
- U/G STORM SEWER LINE
- U/G WATER LINE

SOIL LABORATORY ANALYSIS RESULTS

- TETRAETHYL LEAD CONCENTRATIONS LESS THAN OR EQUAL TO APPLICABLE CSR STANDARDS 0.7-1.1 mbg
- TETRAETHYL LEAD CONCENTRATION(S) GREATER THAN APPLICABLE CSR STANDARD(S) 0.7-1.1 mbg

NOTES:
 NOT A LEGAL SURVEY. DO NOT USE FOR CONSTRUCTION.
 REFERENCED FROM: CITY OF WEST KELOWNA GIS DATA, EBA ENGINEERING CONSULTANTS DRAWING SITE PLAN AND GROUNDWATER MONITORING WELL (POST-REMEDIATION) LOCATION PLAN AND SITE RECONNAISSANCE INFORMATION. NOT A LEGAL SURVEY. IMAGERY © 2021 CITY OF WEST KELOWNA. IMAGE DATE: 2019.

LEGAL DESCRIPTION:
 BLK C, DL 486 PLAN KAP761, PID 012-065-765 AND LOT A, DL 486 PLAN KAP19916, PID 007-933-371 WEST KELOWNA, BC



RELKA HOLDINGS CORP.
 3711 ELLIOTT ROAD, 2483 AND 2489 MAIN STREET
 WEST KELOWNA, BC

**PERFORMANCE VERIFICATION PLAN FOR
 2489 MAIN STREET**

**MANAGEMENT AREA FOR
 2489 MAIN STREET**

SLR FIGURE NO:
1

Cadfile name: S_219-30004-00000-A13.dwg

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