



Your Project
Meets the
Environment

CSR ENVIRONMENTAL LTD.
206 – 3855 Henning Drive
Burnaby, BC V5C 6N3
Phone: 604.559.7100
www.csrenviro.com

November 3, 2021

Villa Cathay Care Home Society
970 Union Street
Vancouver, BC, V6A 3V1

Attention: Ms. Szuchi Lee, Executive Director
Via e-mail: administrator@villacathay.ca

Reference: Performance Verification Plan
970 Union Street, Vancouver, BC

1.0 INTRODUCTION

CSR Environmental Ltd. (CSR Environmental) is pleased to provide this Performance Verification Plan (PVP) in support of a risk-based Certificate of Compliance (COC) application for Villa Cathay Care Home Society (the Client), at 970 Union Street, Vancouver, BC (the Site). The objective of this PVP is to highlight principal risk management measures taken at the Site in order to confirm that the COC application remains valid, whereby key risk management controls of Schedule B of the COC are required to stay in place. This PVP has been prepared according to previous reports provided by CSR Environmental, and the Performance Verification Plan guidance provided by the Ministry of Environment and Climate Change Strategy¹ (BC ENV). Site identification information is included in Table 1, below.

Table 1: Site Identification Information

Civic Address	970 Union Street, Vancouver, BC
Site ID (BC Online Site Registry)	21330
Current Land Use	Care Home Facility - High-Density Residential (RL _{HD})
Future Land Use	Care Home Facility – High-Density Residential (RL _{HD})
Land Use Zoning	Comprehensive Development, CD-1 (505)
Parcel Identifier (PID) Number	007-584-415
Legal Description	Block 125 Plan VAP16060 District Lot 181 Land District 36 & DL 2037
Latitude¹	49° 16' 37.37" N
Longitude¹	123° 5' 0.46" W
Site Area (square meters (m²))	4,490
¹ Latitude and longitude determined using Google Earth software. ² As per City of Vancouver GIS (VanMap Property Viewer, 2021) (approximate)	

¹ Ministry of Environment and Climate Change Strategy Guidance for PVPs: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/site-remediation/guidance-resources/performance-verification-plans>. Accessed: November 2, 2021.

2.0 RISK CONTROL TYPE

The Site is classified as Type 2 risk control according to BC ENV guidelines, and therefore requires institutional or engineering risk controls as part of the PVP. These controls must be present on the Site to mitigate future risks.

3.0 REQUIRED RISK CONTROL

The principal risk control described in the COC and Section 5.2 of the Summary of Site Conditions (SOSC), which is required to be maintained at the Site at all times, is the following:

- *Soil containing metals and petroleum hydrocarbon constituents at concentrations exceeding the standards protective of human health (direct contact) and/or ecological health (soil invertebrates and plants) must remain at a depth of at least 1 metre (m) below grade (current grade approximately 7.3 m above sea level) and not be redistributed as surface soil, nor is a change permitted in future grade elevation from the current elevation that would cause current soil contamination to be within 1 m of grade; or the soils must be covered with a permanent barrier (e.g., pavement or concrete).*

4.0 REQUIRED ACTIONS TO IMPLEMENT THE REQUIRED RISK CONTROLS

Actions related to the Performance Verification must be performed consistently so that risk controls are continuously maintained at the Site. The following are performance verification actions that CSR Environmental recommends for the Site:

- The owner or operator of Villa Cathay Care Home Society must make certain that the existing grade of the soil at the Site is not altered from the current elevation in a way that would cause soil contamination to be within 1 m of grade.

Soil exposure pathways are not expected to be a concern at this time, since there is at least 1 m or more of clean soil above the contaminated soil that is currently on the Site. Regular inspections are not required, unless required by the Director of BC ENV, or if further development or changes to the Site occur that impact the existing grade of the soil.

4.1 OTHER CONSIDERATIONS AND CONTINGENCY PLANNING

If the current grading of the soil on the Site were to change for any reason, the risk of exposure to the contaminated soil could increase. Immediate unacceptable risk is not expected since most of the surface area of the Site is covered by a building or paving stones (impervious surface), other than a landscaped area (approximately 6 m by 50 m) along the western side of the Site that has a grassy area and a few large trees planted in soil.

At the time of this PVP report, CSR Environmental does not expect this area to pose any threat or risk of exposure, since contaminated soil is buried over 1 m below ground surface (bgs). Should a change occur, the area should be paved over with concrete or a different, equally effective product, to seal the area. In the case of risk controls failing, the Client and the Director should be notified immediately. The Director can provide assistance with determining required actions.

5.0 LIMITATIONS

CSR Environmental has prepared this PVP for the exclusive use of the Client, and it may be relied upon by the Client for private business purposes. Any use that any other third party makes of this report, or any reliance on the decisions made based on it are at the risk of the responsible third party. CSR Environmental is not liable or responsible for any damages or losses of any kind as a result of third-party decisions made based on this report.

This PVP is based on data, information, and observations collected during investigations conducted by CSR Environmental personnel, as well as communications between CSR Environmental and the Client, the Society of Contaminated Sites Approved Professional of British Columbia (CSAP), and BC ENV. This report may be relied upon by the BC ENV and/or the CSAP in support of a regulatory instrument for the Site.

The requirements described in this PVP are based solely on the guidelines outlined by the BC ENV, and on conditions of the Site at the time of the investigation carried out between July 2017 to August 2021 as described in the Updated Stage 1 & 2 PSI, DSI, COR, and SLRA Report², and information available at that time. The findings, conclusions, and recommendations documented in this PVP have been prepared specifically for the instrument application, and have been developed in a manner consistent with the level of care normally exercised by environmental professionals currently practicing under similar conditions in the jurisdiction, to the best of their knowledge and experience.

Under the circumstances that new information is discovered, or additional work is completed that impacts the recommendations of this PVP, CSR Environmental asks to be contacted so this PVP can be re-evaluated in light of the new information and provide the proper amendments, if required.

² CSR Environmental. October 4, 2021. *Updated Stage 1 & 2 Preliminary Site Investigation, Detailed Site Investigation, Confirmation of Remediation and Screening Level Risk Assessment Report.*

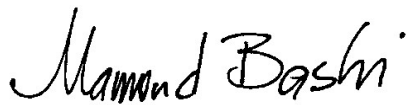
6.0 CLOSURE

We trust the information provided in this report meets your requirements at the present time. Should any questions arise, please do not hesitate to contact the undersigned at your convenience.

Yours sincerely,

CSR Environmental Ltd.

Primary:



Mamoud G. Bashi, MBA, PEng
Principal, Environmental Engineer

Prepared by:



Danae Shephard, B.Sc.
Environmental Technologist