

December 18, 2015

10-8240T12

Imperial Oil Limited  
Room 25023  
237 4<sup>th</sup> Avenue SW  
Calgary, Alberta  
PO Box 2480 Stn 'M'  
T2P 3M9

These documents and the information contained in them are confidential - property of Imperial Oil and any disclosure of same is governed by the provisions of each of the applicable provincial or territorial Freedom of Information legislation, the Privacy Act (Canada) 1980-81-82-83, c.111, Sch. II "1", and the Access to Information Act (Canada) 1980-81-82-83, c.111, Sch. I "1", as such legislation may be amended or replaced from time to time.

Attention: Environmental Services

Re: Performance Verification Plan  
45 Government Road  
Nelson, British Columbia  
Site ID: 2170

Further to your request, Parsons Canada Ltd. ("Parsons") is pleased to provide this Performance Verification Plan (PVP) in support of an application for a risk-based Certificate of Compliance (CofC) for the property located at 45 Government Road in Nelson, British Columbia (the "Property"). The PVP presents the principal risk management measures that must be applied at the Property for the CofC to remain valid (i.e. the key risk management controls of Schedule B of the CofC which must remain in place at the Property). The PVP was prepared in accordance with British Columbia Ministry of Environment (BCMOE) Procedure 12: Procedures for preparing and issuing contaminated sites legal instruments ("Procedure 12").

## BACKGROUND

---

A plan of the Property is provided on Drawing No. 1.

As detailed in the Detailed Site Investigation report (DSI), soil contamination of petroleum hydrocarbons (benzene, volatile petroleum hydrocarbons, light extractable petroleum hydrocarbons and heavy extractable petroleum hydrocarbons) and metals (arsenic, barium, cadmium, copper, lead and zinc) was identified and remains beneath the Property. The metals contamination is present in the shallow soils at the Property and is considered to be part of the



wider area metals contamination in soil that was sourced from historical smelter activities in the area. Groundwater contamination consisting of light extractable petroleum hydrocarbons is also present beneath the Property, where the groundwater table is situated between 2.5 and 5.0 metres below ground surface (mbgs). The remaining soil contamination was identified at depths ranging from ground surface to approximately 5 mbgs. Based on soil vapour investigations conducted at the Property, conservatively attenuated vapour concentrations did not exceed the Schedule 11 commercial land use (CL) standards for outdoor air, or for predicted indoor air concentrations for a future slab-on-grade building or existing buildings at the surrounding properties. Groundwater beneath the Property meets the standards for the protection of drinking water.

## **PRINCIPAL RISK ASSESSMENT MANAGEMENT CONTROLS**

---

A human health and ecological risk assessment (HHERA) was conducted for the Property, with the results presented in the Parsons report, "Detailed Risk Assessment, 45 Government Road, Nelson, British Columbia (December 21, 2015)". The principal risk management measures for the Property on which the detailed risk assessment was based, as presented in Schedule B of the CofC, are as follows:

- (a) Future buildings at the Property will be slab-on-grade construction;
- (b) Fruit or nut-bearing vegetation is not to be established at the Property;
- (c) Contiguous vegetation of over 1000 m<sup>2</sup> will not be established at the Property;
- (d) Children must not reside at the Property, and structures or facilities (i.e. playgrounds, play structures, daycares, or recreational areas) that would attract children to the Property must not be constructed; and

## **DETERMINATION OF PROCEDURE 12 REMEDIATION TYPE**

---

Based on the risk management measures for the Property (i.e. the use of institutional controls to mitigate/eliminate risks at the Property and lack of imminent risks in the event that controls were not implemented), the Remediation Type applicable at the Property is considered to be Type 2.

Under a Remediation Type 2 scenario, Procedure 12 indicates that a PVP is required, while an operations and maintenance plan may be required.

## **PERFORMANCE VERIFICATION PLAN**

---

A PVP is required to document the principal risk management measures, upon which the HHERA is based, that must be met for the Property.

Based on consideration of current and future land use at the Property and the results of the environmental investigations performed at the Property, including the detailed risk assessment, the following performance verification actions for the Property are recommended:

- (a) Communication with the owner of the Property that buildings are to be slab-on-grade construction. The assumptions in the vapour assessment and the risk assessment regarding future development were based on, and are consistent with, this expected future land use for the Property, which is consistent with the surrounding land use.

As such, the following advisory for the Property is considered appropriate to meet this risk management measure: future buildings at the Property must be slab-on-grade construction. The listing of this risk management measure in Schedule B of the CofC meets this requirement.

- (b) Communication with the Property owner that fruit or nut-bearing vegetation is not to be established at the Property.

There are no plans by the current owner of the Property to plant fruit or nut-bearing vegetation while it remains vacant, and they have been advised that it is not permitted in the future as per the assumptions of the risk assessment and this PVP. Furthermore, fruit and nut-bearing vegetation is not typically planted in the ornamental-type landscaping that is expected to be established at the future commercial development.

As such, the following advisory for the Property is considered appropriate to meet this risk management measure: fruit or nut-bearing vegetation is not to be established at the Property. The listing of this risk management measure in Schedule B of the CofC meets this requirement.

- (c) Communication with the Property owner that contiguous vegetation of over 1000 m<sup>2</sup> will not be established at the Property.

There are no plans by the current owner of the Property to develop over 1000 m<sup>2</sup> of contiguous vegetation while it remains vacant, and they have been advised that it is not permitted in the future as per the assumptions of the risk assessment and this PVP. Furthermore, the Property will likely be covered by buildings and/or asphalt with areas required for vehicle parking, with limited landscaping, and thus over 1000 m<sup>2</sup> of contiguous vegetation in the future is an unlikely scenario.

As such, an advisory for the Property that “contiguous vegetation of over 1000 m<sup>2</sup> will not be established at the Property” is considered sufficient to meet this risk management measure. The listing of the risk management measure in Schedule B of the CofC meets this requirement.

- (d) Communication with the owner of the Property that children must not reside at the Property, and structures or facilities (i.e. playgrounds, play structures, daycares, or recreational areas) that would attract children to the Property must not be constructed.

There are no plans by the current owner of the Property to establish a playground at the Property or develop the Property into a recreational area, and they have been advised that it is not permitted in the future as per the assumptions of the risk assessment and this PVP.

As such, an advisory for the Property that “children must not reside at the Property, and structures or facilities (i.e. playgrounds, play structures, daycares, or recreational areas) that would attract children to the Property must not be constructed” is considered sufficient to meet this risk management measure. The listing of the risk management measure in Schedule B of the CofC meets this requirement.

No associated inspection, monitoring/maintenance or other performance verification actions are required for the above conditions.

In summary, it is our opinion that the advisories listed in Schedule B of the CofC are sufficient to address the principal risk management measures required for the Property.

Imperial Oil Limited  
December 18, 2015  
Page 5

10-8240T12

We trust that the foregoing information is satisfactory for your present requirements. Should you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

PARSONS CANADA LTD.

A handwritten signature in black ink, appearing to read "D.J. Williams". The signature is written in a cursive style with a large initial "D" and "W".

D.J. Williams, P.Geol.

DJW/cer

## **LIMITATION OF LIABILITY, SCOPE OF REPORT AND THIRD PARTY RELIANCE**

---

This report has been prepared and the work referred to in this report has been undertaken by Parsons for Imperial Oil Limited. It is intended for the sole and exclusive use of Imperial Oil Limited, its affiliated companies and partners and their respective agents, employees and advisors (collectively, "Imperial Oil"). Any use, reliance on or decision made by any person other than Imperial Oil based on this report is the sole responsibility of such other person. Imperial Oil and Parsons make no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

The investigations undertaken by Parsons with respect to this report and any conclusions or recommendations made in this report reflect Parsons' judgment based on the site conditions observed at the time of the site inspection on the date(s) set out in this report and on information examined at the time of preparation of this report. This report has been prepared for specific application to this site and it is based, in part, upon visual observation of the site, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site which were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site, substances addressed by this investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the locations from which samples were taken.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

Other than by Imperial Oil, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of Parsons. Nothing in this report is intended to constitute or provide a legal opinion.

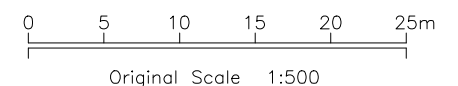
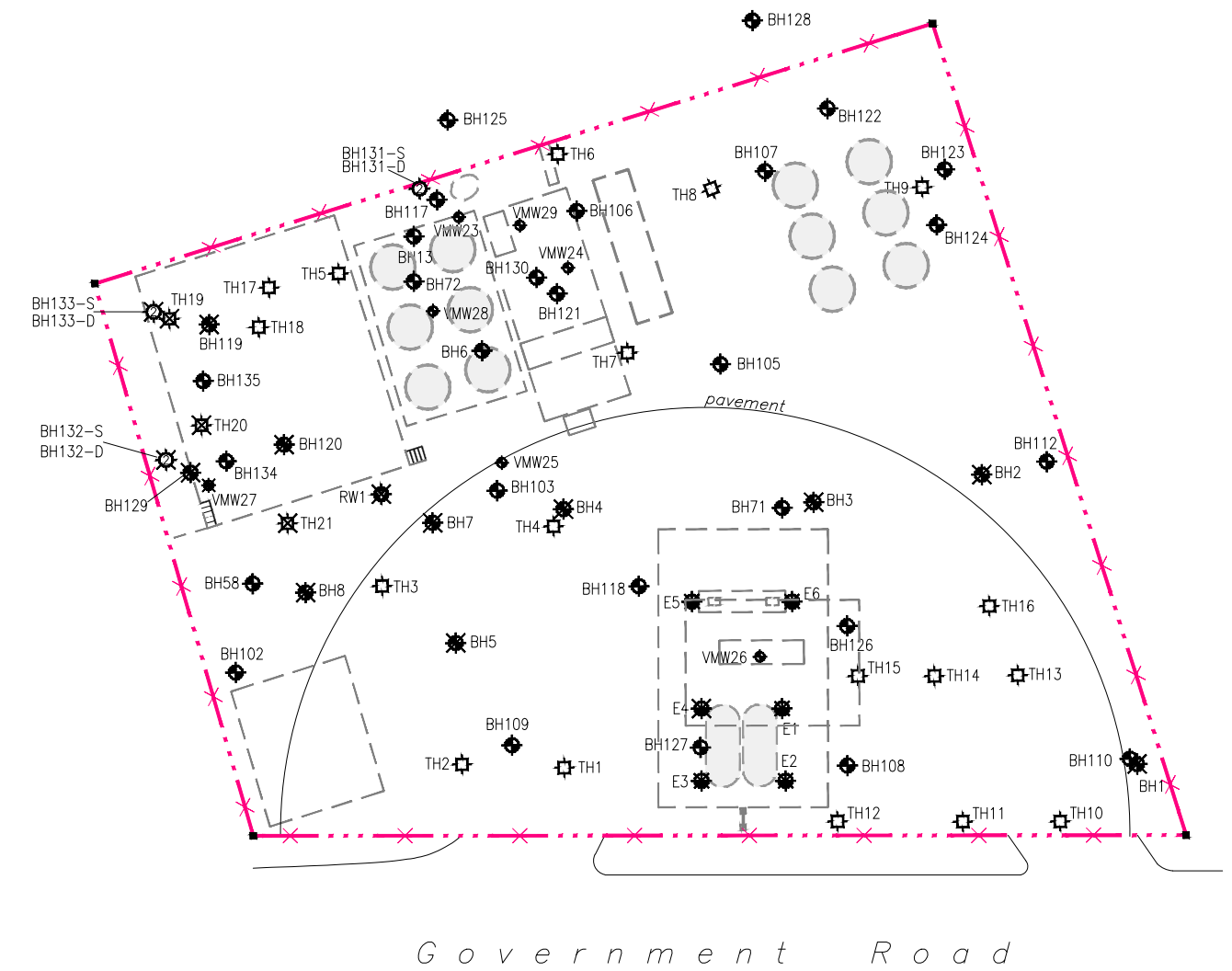
### **BRITISH COLUMBIA MINISTRY OF ENVIRONMENT'S RELIANCE**

Notwithstanding the above, the British Columbia Ministry of Environment is permitted to rely on this report and the information contained herein to the extent necessary to confirm that Imperial Oil has met their statutory obligations with respect to the Performance Verification Plan.



LEGEND

- Former feature
- .-.- Fence on property line
- Property boundary pin
- 2015/01/31 Date format: yyyy/mm/dd
- ⊕ Monitoring well
- ⊕ Recovery monitoring well
- ⊕ Nested monitoring well
- ⊕ Vapour monitoring well
- ⊕ Test hole
- ⊕ Destroyed monitoring well
- ⊕ Destroyed recovery well
- ⊕ Destroyed test hole
- ⊕ Destroyed nested monitoring well
- ⊕ Destroyed vapour monitoring well



<b>Subject Property Location Plan</b>		
<b>Boreholes, Monitoring Wells and Test Holes</b>		
Imperial		
45 Government Road, Nelson, British Columbia		
Drawn: CMB	Page Size: 11 x 17 in.	Ref. No.: 10-8240
Reviewed: DJW	File No.: 8240 PLAN	Date: 2015/06/29
<b>PARSONS</b>		Drawing No.: 1

NOTE: All features are approximate.