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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
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May 28, 2020

Marla Madden  
ExxonMobil Environmental and  
Property Solutions Company  
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Huntington Beach, CA 92646  
[marla.d.madden@exxonmobil.com](mailto:marla.d.madden@exxonmobil.com)

**Re: No Further Action at the following Site:**

- **Site Name:** Exxon Station 73594
- **Site Address:** 13204 NE Hwy 99, Vancouver, Clark County, WA 98665
- **Facility/Site ID:** 53876575
- **Cleanup Site ID:** 6242
- **VCP Project No.:** SW1692

Dear Marla Madden:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Exxon Station 73594 Site. This letter provides our opinion. We are providing this opinion under the authority of the [Model Toxics Control Act \(MTCA\)](#),<sup>1</sup> chapter 70.105D Revised Code of Washington (RCW).

## Issue Presented and Opinion

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**Ecology has determined that no further remedial action is necessary to clean up the soil and groundwater contamination at the Site.**

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70.105D RCW, and its implementing regulations, Washington Administrative Code (WAC) chapter 173-340 (collectively “substantive requirements of MTCA”). The analysis is provided below.

<sup>1</sup> <https://fortress.wa.gov/ecy/publications/SummaryPages/9406.html>

## Description of the Site

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This opinion applies to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Petroleum hydrocarbons in the soil.
- Petroleum hydrocarbons and lead in the groundwater.

**Enclosure A** includes a detail description and diagram of the Site, as currently known to Ecology.

## Basis for the Opinion

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This opinion regarding the soil and groundwater at the Site is based on the information contained in the following documents:

1. Cardno ERI (Cardno), *5-Year Compliance Monitoring Work Plan, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, November 27, 2018.
2. Cardno, *Groundwater Potability Evaluation – Request for Closure Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, August 25, 2011a.
3. Cardno, *Proposal to Destroy Monitoring Wells Letter, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, August 25, 2011b.
4. Cardno, *Groundwater Monitoring Report – Second Quarter 2011, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, August 15, 2011c.
5. Cardno, *Long-Term Groundwater Sampling Work Plan, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, May 30, 2012.
6. Cardno, *Feasibility Study/Disproportionate Cost Analysis, Former Exxon Station 73594, 1320 Northeast Highway 99, Vancouver, Washington*, October 25, 2012.
7. Cardno, *Corrective Action Plan-Environmental Covenant, Former Exxon Station 73594, 1320 Northeast Highway 99, Vancouver, Washington*, October 25, 2012.
8. CH2M Hill Companies Ltd. (CH2M Hill). *Sensitive Receptor Risk Assessment and Divestment Environmental Investigation, Exxon Company USA, Store 7-3594, 13204 N.E. Highway 99, Vancouver, Washington*, July 22, 1988.
9. CH2M Hill, *Site Environmental Investigation, Exxon Company USA, R/S 7-3594, 13204 N.E. Highway 99, Vancouver, Washington*, September 26, 1988.

10. EA Engineering, Science, and Technology (EA), *Soil Vapor Extraction and Air Sparging System Installation at Former Exxon Station RS 7-3594, 13204 NE Highway 99, Vancouver, Washington*, October 17, 1998.
11. Enviro-Logic, Inc. (ELI), *Hydrocarbon Delineation Investigation, Former Exxon Service Station No. 7-3594, 13204 NE Highway 99, Vancouver, Washington*, February 25, 1992.
12. ELI, *Limited Subsurface Environmental Investigation, Former Exxon Service Station No. 7-3594, 13204 Northeast Highway 99, Vancouver, Washington*, January 3, 1994.
13. Environmental Resolutions, Inc. (ERI), *Confirmatory Boring and Soil Sampling Report, Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, Washington*, September 19, 2002.
14. ERI, *Monitoring Well Installation and Soil Sampling Report, Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, Washington*, March 18, 2003.
15. ERI, *Closure Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington, Ecology VCP ID: SW 0447*, August 20, 2008.
16. ERI, *Sparge Well Groundwater Sampling Report, 13204 Northeast Highway 99, Vancouver, Washington*, June 29, 2009b.
17. ERI, *Work Plan for Destruction and Installation of Two Groundwater Monitoring Wells, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, April 8, 2010a.
18. ERI, *Well Destruction, Installation and Groundwater Monitoring Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington*, September 14, 2010b.
19. Ecology, Letter Re: *Further Action at the following site: Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, WA*, November 24, 2008.
20. Ecology, Letter Re: *No Further Action at the following site: Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, WA*, August 20, 2013.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Information on obtaining those records can be found on [Ecology's public records requests web page](#).<sup>2</sup> Some site documents may be available on [Ecology's Cleanup Site Search web page](#).<sup>3</sup>

This opinion is void if any of the information contained in those documents is materially false or misleading.

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<sup>2</sup> <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

<sup>3</sup> <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=6242>

## Analysis of the Cleanup

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Ecology has concluded that **no further action** is necessary to clean up the soil and groundwater contamination at the Site. That conclusion is based on the following analysis:

### 1. Characterization of the Site

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

#### ***Site Background***

The Exxon Station 73594 is located at 13204 NE Highway 99, 0.25 mile south of the intersection of Interstate 5 and Interstate 205 in the City of Vancouver, Clark County, Washington (Site). The Site is surrounded by commercial properties. An operating Taco Bell restaurant currently occupies the Site with an adjacent parking lot. A Site location map and generalized Site plan (showing the former and current Site features) are included as Plate 1 and Plate 2 in Enclosure A.

Previously, the Property is known to have been used as an Exxon branded service station. The service station included a pump island with a canopy, service bays, three regular and unleaded gasoline underground storage tanks (USTs) (6,000 gallons, 8,000 gallons and 10,000 gallons), one fuel oil UST (500 gallons) and one waste oil UST (1,000 gallons). Information regarding the list of previous owners, operators, and operational history of the Site is limited.

During the service station operation, releases from some of these USTs had impacted Site soil and groundwater with petroleum related contamination. Prior to April 1988, all the USTs and pump island were removed from the Site. However, there are no records detailing the removal of the USTs or the pump island including the exact date.

#### ***Site Investigations***

In April and June 1988, CH2M Hill Companies Ltd. (CH2M Hill) installed three groundwater monitoring wells (MW-1 through MW-3) near the former USTs and pump islands. Three soil and three groundwater samples were collected for laboratory analysis. All the samples were analyzed for total petroleum hydrocarbons (TPH) (Method 418.1) and benzene, toluene, ethylbenzene and xylenes (BTEX).

The TPH results ranged from 20 milligrams per kilogram (mg/kg) in the soil samples collected from MW-1 and MW-2 to 172 mg/kg in MW-3. No other petroleum constituents of concern were detected above the laboratory detection limits.

Results of groundwater samples collected from MW-2 and MW-3 showed benzene concentrations of 184 micrograms per liter ( $\mu\text{g/L}$ ) and 14  $\mu\text{g/L}$ , respectively above the MTCA Method A cleanup level of 5  $\mu\text{g/L}$ . The lead concentration of 184  $\mu\text{g/L}$  in MW-2 sample was also above the MTCA Method A cleanup level of 15  $\mu\text{g/L}$ .

On May 24, and June 19, 1989, all three monitoring wells were again sampled and analyzed for TPH and BTEX. Water samples collected from MW-2 showed benzene concentrations (120  $\mu\text{g/L}$  to 170  $\mu\text{g/L}$ ) above the MTCA Method A cleanup level (5  $\mu\text{g/L}$ ) during both sampling events. All other contaminant concentrations were either not detected or below MTCA Method A cleanup levels.

From December 1990 through August 1991, CH2M Hill conducted four rounds of quarterly groundwater monitoring at the Site. During these sampling events, all three wells (MW-1 through MW-3) were sampled and groundwater samples were analyzed for TPH and BTEX. Results indicated that only benzene concentrations (27  $\mu\text{g/L}$  to 54  $\mu\text{g/L}$ ) exceeded MTCA Method A cleanup level (5  $\mu\text{g/L}$ ) in monitoring well MW-2.

In February 1992, Enviro-Logic, Inc. (ELI) conducted a Phase I investigation by drilling a four-inch boring to a depth of 25 feet and installing a monitoring well (MW-4). This monitoring well was placed down gradient of MW-2, which was previously found to contain petroleum hydrocarbons/benzene contamination. Soil samples collected were field screened using an organic vapor analyzer (OVA). Two samples were collected, one soil sample just above the groundwater table and one water sample from the monitoring well MW-4, and submitted for TPH and BTEX analysis. Results of soil and groundwater samples indicated that all the contaminant concentrations were either non-detects or below the MTCA Method A cleanup levels.

As a follow-up to the above Phase I investigation, ELI conducted a limited Subsurface Environmental Investigation in December 1993. Two soil borings (B-5 and B-6) were drilled to a depth of 35 feet and the borings were completed as two new groundwater monitoring wells (MW-4 and MW-5). During drilling, soil samples were collected at 5 foot intervals, field screened with an OVA, and selected soil samples were analyzed for gasoline-range petroleum hydrocarbons (TPH-G), BTEX, and total lead.

In addition, monitoring wells MW-4 and MW-5 were sampled and water samples were analyzed for the same above parameters. Results of soil and groundwater samples were all either below the laboratory detection limits or below MTCA Method A cleanup levels. Locations of all the groundwater monitoring wells are shown on Plate 3 in Enclosure B.

### ***Soil Vapor Extraction/Air Sparging System***

The groundwater monitoring results indicated that elevated benzene concentrations were present only in monitoring well MW-2. Based on these results, a pilot-study was completed by testing a soil vapor extraction (SVE) system on MW-2 during December 1989 and January-February 1990. The goal of the test was to determine whether an SVE system would reduce the level of benzene in soil and groundwater at the Site.

The 90-day pilot study was completed, and operations were discontinued prior to February 27, 1990. Air samples were periodically collected from in front of the carbon beds to determine the rate of hydrocarbon extraction. Prior to its shut-down, the results indicated that the system was removing approximately 0.9 pounds per day (lbs/day) of gasoline vapor constituents. In August of 1990, the system was given authorization to operate by the Southwest Air Pollution Control Authority. Subsequently the SVE system was operated continuously through December of 1991.

In April 1992, the SVE system was restarted and operated until September 1993 when it was shut-down pending expansion. In April 1994, SECOR International, Inc. (SECOR) installed and connected air sparging well SP1 to the SVE system. In August 1995, EA Engineering, Science, and Technology (EA) reportedly completed the installation and started the combined air sparging and soil vapor extraction (AS/SVE) system.

In June 1997, the AS/SVE system was shut-down and the system was expanded between June 1997 and June 1999 to include three additional air sparging wells (SP2 through SP4), and restarted in June 1999. The AS/SVE system operated until January 2002, when it was shut-down in preparation for the Site closure, having removed a total of approximately 1,290 pounds of hydrocarbon vapors.

### ***Soil Sampling during AS/SVE System Operation***

In May 1998, EA advanced two soil borings (B1 and B2) in the area of former pump islands and three soil samples were collected for the laboratory analysis. Laboratory results indicated that soil samples collected approximately at 10 feet and 20 feet below ground surface (bgs) from boring B2 contained TPH-G (5,960 mg/kg to 7,290 mg/kg), benzene (4.45 mg/kg to 28.9 mg/kg), toluene (195 mg/kg to 217 mg/kg), ethylbenzene (56.8 mg/kg to 190 mg/kg), and xylenes (95.4 mg/kg to 620 mg/kg) concentrations exceeding their MTCA Method A Cleanup Levels of 30 mg/kg, 0.5 mg/kg, 40 mg/kg, 20 mg/kg, and 20 mg/kg, respectively. Soil samples collected from boring B1 did not contain any contaminant concentrations exceeding the laboratory detection limits.

In July 1998, five additional soil borings (B3/MW8 through B7) were advanced in the area of the former pump islands and up-gradient of this area, and six soil samples were collected for laboratory analysis for petroleum constituents. Laboratory results indicated that soil samples collected from boring B2/MW8 and B4 in the northwest corner of the former UST basin contained petroleum hydrocarbons exceeding MTCA Method A cleanup levels, with up to 3,770 mg/kg TPH-G and 12.6 mg/kg benzene, respectively. Borings B3, B5, and B7 were completed as pressure monitoring wells PM3, PM2, PM1, respectively. Boring B2 was completed as monitoring well MW8, and boring B4 was completed as vapor extraction well VE1.

### ***Groundwater Monitoring***

Several rounds of groundwater monitoring was conducted by CH2M Hill and Environmental Resolutions, Inc. (ERI) between April 1988 and October 1999. All groundwater samples were analyzed for TPH-G, BTEX, and total lead. Results showed that groundwater samples collected from MW-2, MW-4, and MW-5 sporadically contained TPH-G, and BTEX concentrations exceeding MTCA Method A cleanup levels.

In addition, ERI conducted seven rounds of groundwater sampling events at the Site from May 2000 through June 2002. The results of groundwater samples indicated no petroleum constituent concentrations exceeded the MTCA Method A cleanup levels. Locations of all the groundwater monitoring wells are shown on Plate 3 in Enclosure B.

### ***Confirmation Soil Sampling***

In April 2002, ERI advanced seven confirmation soil borings (B1 through B7) to a depth of 20 to 24 feet bgs near the former pump islands and USTs, in the areas of impacted soil identified during previous investigations. Following field screening, 13 soil samples were collected for laboratory analysis. All the soil samples were analyzed for TPH-G, BTEX, and lead. No soil samples analyzed contained any contaminant concentrations exceeding MTCA Method A cleanup levels. Soil boring locations and soil sample results are shown on Plate 4 in Enclosure C.

However, Ecology, in its response letter of January 16, 2007, expressed concerns regarding the lack of information in the vicinity of former used oil and waste oil USTs and northeast of the pump island and requested additional investigation. As a part of this additional investigation, three soil borings (B8 through B10) were advanced to a depth of 30 feet and soil and groundwater samples were collected for laboratory analysis. No petroleum hydrocarbons were detected in either soil or groundwater samples above MTCA Method A cleanup levels.

Groundwater samples were also analyzed for total and dissolved lead. Results from these samples indicated that both total and dissolved lead in groundwater samples exceeded the MTCA Method A cleanup level of 15 µg/L in MW-2 (88.7 µg/L total lead and 85.3 µg/L dissolved lead) and MW-8 (35.7 µg/L total lead and 34.9 µg/L dissolved lead). A second round of sampling in these wells confirmed that the results were representative of the previous sampling event. At that time, only total and dissolved lead in groundwater in MW-2 and MW-8 were in exceedance of the MTCA Method A cleanup level.

As a follow-up to the above ERI investigation, in September 2010, Cardno decommissioned monitoring wells MW-2 and MW-8 and replaced them with new wells (MW-2a and MW-8a). These two new wells were sampled and the results indicated similar total and dissolved lead concentrations exceeding MTCA Method A cleanup levels. After discussions with Ecology, Cardno decommissioned all the wells on the Site and advanced a series of temporary monitoring wells to collect additional total and dissolved lead data.

The results indicated that the total and dissolved lead concentrations (39.7 µg/L and 29.2 µg/l respectively) were above the MTCA Method A cleanup level (15 µg/L) in only one of the temporary wells (TMW17). Locations of groundwater monitoring wells, temporary well locations, and approximate extent of lead impacted groundwater are shown on Plate 5 and Plate 6 in Enclosure D.

## 2. Establishment of Cleanup Levels

Ecology has determined the cleanup levels and points of compliance you established for soil and groundwater at the Site have met the substantive requirements of MTCA.

### a. Cleanup Levels

MTCA Method A Cleanup Levels for unrestricted land use were used at the Site to characterize and demonstrate compliance for soil and groundwater.

The MTCA Method A Cleanup Levels are:

Contaminant	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)
TPH-G	30	800
TPH-D	2,000	500
TPH-O	2,000	500
Benzene	0.03	5
Toluene	7	1,000
Ethylbenzene	6	700
Xylenes	9	1,000
Lead	250	15

### b. Points of Compliance

Standard points of compliance were used for the Site. The point of compliance for the soil was established throughout the Site from ground surface to 15 feet bgs based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway. The concentrations of constituents of concern in soil samples will need to be below the MTCA method A cleanup levels.

The point of compliance for the groundwater was established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

## 3. Selection of Cleanup Action

Ecology has determined the cleanup actions you selected for the Site meets the substantive requirements of MTCA.



### ***Feasibility Study/Disproportionate Cost Analysis: Groundwater***

Cardno used the September 2010 groundwater investigation data to develop a feasibility study and disproportionate cost analysis (FS/DCA) that was submitted to Ecology in October 2012. The FS/DCA was prepared to demonstrate that the establishment of an Environmental Covenant (EC) is the most practicable alternative cleanup action and the costs of the most practicable permanent cleanup action alternative are disproportionate to the degree of benefits achieved by that alternative. As part of FS/DCA, the following three alternatives were evaluated:

- EC with long-term groundwater monitoring plan.
- Excavation, off-site transport/disposal.
- Groundwater pump and treatment system installation and operation.

Based on the analysis of the above three alternatives, the first alternative, EC with long-term groundwater monitoring, was selected as the most viable remedial alternative for the Site. The long-term groundwater plan included the initial temporary well sampling event and one additional event in five years to assess the groundwater conditions for the 5-year Ecology review.

#### **4. Cleanup of the Site**

Ecology has determined the cleanup you performed has meets the applicable Site cleanup standards within the Property. The cleanup activities conducted at the Site included:

- **Underground Storage Tanks Removal**

Prior to April 1988, all four USTs and pump island were removed from the Site. However, there are no records detailing the removal of USTs or the pump island, including the exact date.

- **Soil Vapor Extraction/Air Sparging System**

An SVE system was operated intermittently from December 1989 through September 1993. Also the SVE system with air sparging was operated in combination intermittently from August 1995 through January 2002. During this operational period, a total of 1,290 pounds of hydrocarbons were calculated to have been removed from the Site.

- **Confirmation Soil and Groundwater Sampling**

In April 2002 and July 2008, ten soil borings (seven in 2002 and three in 2008) were drilled within the area of soil contamination and confirmation soil samples were collected. All soil samples were analyzed for TPH-G, BTEX, and lead. Results of all the confirmation soil samples were below the laboratory detection limits. Soil boring locations and soil sample results are shown on Plate 4 in Enclosure C.

However, lead concentrations exceeded the MTCA Method A cleanup level in the groundwater samples collected from two monitoring wells (MW-2 and MW-8). In September 2010, these wells were decommissioned and replaced with two new wells (MW-2a and MW-8a). These two new wells were sampled and the results indicated similar total and dissolved lead concentrations exceeding MTCA Method A cleanup levels.

After discussions with Ecology, Cardno decommissioned all the wells on the Site and advanced a series of temporary monitoring wells to collect additional total and dissolved lead data. The results showed the total and dissolved lead concentrations of 39.7 µg/L and 29.2 µg/L, respectively, above the MTCA Method A cleanup level of 15 µg/L at only one boring location. Locations of temporary groundwater wells and approximate extent of lead impacted groundwater are shown on Plate 5 and Plate 6 in Enclosure D.

Ecology issued a no further action (NFA) letter for the Site on August 21, 2013, (Enclosure E) with an Environmental Covenant (Enclosure F) and long-term groundwater monitoring. The long-term groundwater monitoring plan required a groundwater sampling event to be conducted at the 5-year mark, coinciding with the periodic review, to assess the total and dissolved lead concentrations in groundwater. This sampling event was to be conducted by geoprobe/temporary sampling well points placed at the location where lead exceedance was detected previously.

- **5-Year Groundwater Compliance Investigation/Sampling**

In October 2018, as required by the NFA letter, Cardno drilled five temporary groundwater monitoring wells (TMW-19 through TMW-23) within the area of lead contamination to depths ranging from 20 feet to 35 feet. Groundwater samples were collected from all five TMWs and samples were analyzed for total and dissolved lead.

The laboratory results indicated that the total and dissolved lead was detected at 10.5 µg/L and 11.4 µg/L, respectively, in only TMW-21 and all other sample results were below the laboratory detection limits. The detected lead concentrations were below MTCA Method A cleanup level of 15 µg/L. The temporary monitoring well locations and water sample results are shown on Plate 7 in Enclosure G.

Based on the soil information (submitted previously) and the above additional 5-year groundwater compliance investigation information submitted to Ecology, Site soil and groundwater meet the MTCA Method A cleanup levels and the Site requires no additional soil and groundwater cleanup.

## Listing of the Site

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Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.

## Limitations of the Opinion

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### 1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

### 2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70.105D.080 and WAC 173-340-545.

### 3. State is immune from liability

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70.105D.030(1)(i).

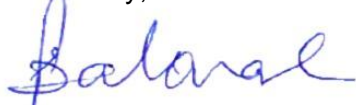
## Termination of the Agreement

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Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project #SW1692.

For more information about the VCP and the cleanup process, please visit our [Voluntary Cleanup Program web site](#).<sup>4</sup> If you have any questions about this opinion or the termination of the agreement, please contact me at (360) 407-6335 or by e-mail at [panjini.balaraju@ecy.wa.gov](mailto:panjini.balaraju@ecy.wa.gov).

Sincerely,



Panjini Balaraju, P.E.  
Toxics Cleanup Program  
Southwest Regional Office

Enclosures: A – Site Description, Site Vicinity Map, and Site Plan  
B – Groundwater Monitoring Well Locations and Groundwater Sample Results  
C – Soil Boring Locations and Soil Sample Results  
D – Temporary Well Locations, Locations of Groundwater Monitoring Wells, and Approximate Extent of Lead Impacted Groundwater  
E – August 21, 2013, No Further Action Letter  
F – Environmental Covenant Recorded on May 14, 2013  
G – 5-Year Groundwater Compliance Investigation, Temporary Groundwater Monitoring Well Locations, and Groundwater Sample Results

cc by email: Bobby Thompson, Cardno [Robert.thompson@cardno.com](mailto:Robert.thompson@cardno.com)  
Nick Acklam, Ecology [nicholas.acklam@ecy.wa.gov](mailto:nicholas.acklam@ecy.wa.gov)  
Ecology Site File

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<sup>4</sup> <http://www.ecy.wa.gov/vcp>

## **Enclosure A**

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Site Description, Site Vicinity Map, and Generalized Site Plan

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## Site Description

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Exxon Station 73594 is located at 13204 NE Highway 99, 0.25 mile south of the intersection of Interstate 5 and Interstate 205 in the City of Vancouver, Clark County, Washington (Site). The Site is bounded on the north, west, and south by commercial properties and on the east by Northeast Highway 99. An operating Taco Bell restaurant currently occupies the Site with an adjacent parking lot.

The current and previous Site Plans with locations of former USTs, service bays, canopy, groundwater monitoring wells, current Taco Bell building, and other selected features are shown on Plate 2 and Figure 2. Also, the current Taco Bell restaurant building in relation to the previous Site Plan is shown on Plate 2. Following remedial activities, a Restrictive Covenant was recorded for the property on May 14, 2013. The Site received an NFA determination on August 20, 2013.

Previously, the Property is known to have been used as an Exxon branded service station. The service station included a pump island with a canopy, service bays, three regular and unleaded gasoline USTs (6,000 gallons, 8,000 gallons, and 10,000 gallons), one fuel oil UST (500 gallons) and one waste oil UST (1,000 gallons). There is lack of information regarding the list of previous owners and operators and operational history.

During the service station operation, releases from some of these USTs had impacted the Site's soil and groundwater with petroleum related contamination. Prior to April 1988, all the USTs and pump island were removed from the Site. However, there are no records detailing the removal of the USTs or the pump island including the exact date. Approximate locations of former USTs, pump islands, and other site features are shown on Plate 2.

The Site is located on a level terrace north of the Portland Basin in Township 3 North, Range 1 East of the Willamette Meridian. The region is underlain by consolidated volcanic rocks of Eocene to Miocene age. These bedrock formations are overlain by semi-consolidated Pliocene deposits of fine grained sands, silts, and clays, which comprise the lower member of the Troutdale Formation.

Soils present at the Site are classified by the United States Geological Survey (USGS) as somewhat poorly drained, stratified silt loams of the Hillsboro-Gee-Odne Association. Semi-consolidated Quaternary-aged periglacial flood gravel, sand, and silt deposits are mapped as underlying the Site and are underlain by Quaternary/Pliocene continental rocks and volcanic rocks of Grande Ronde Basalt flows of Miocene age (Geologic Map GM-34, Washington Division of Geology and Earth Resources, 2002).

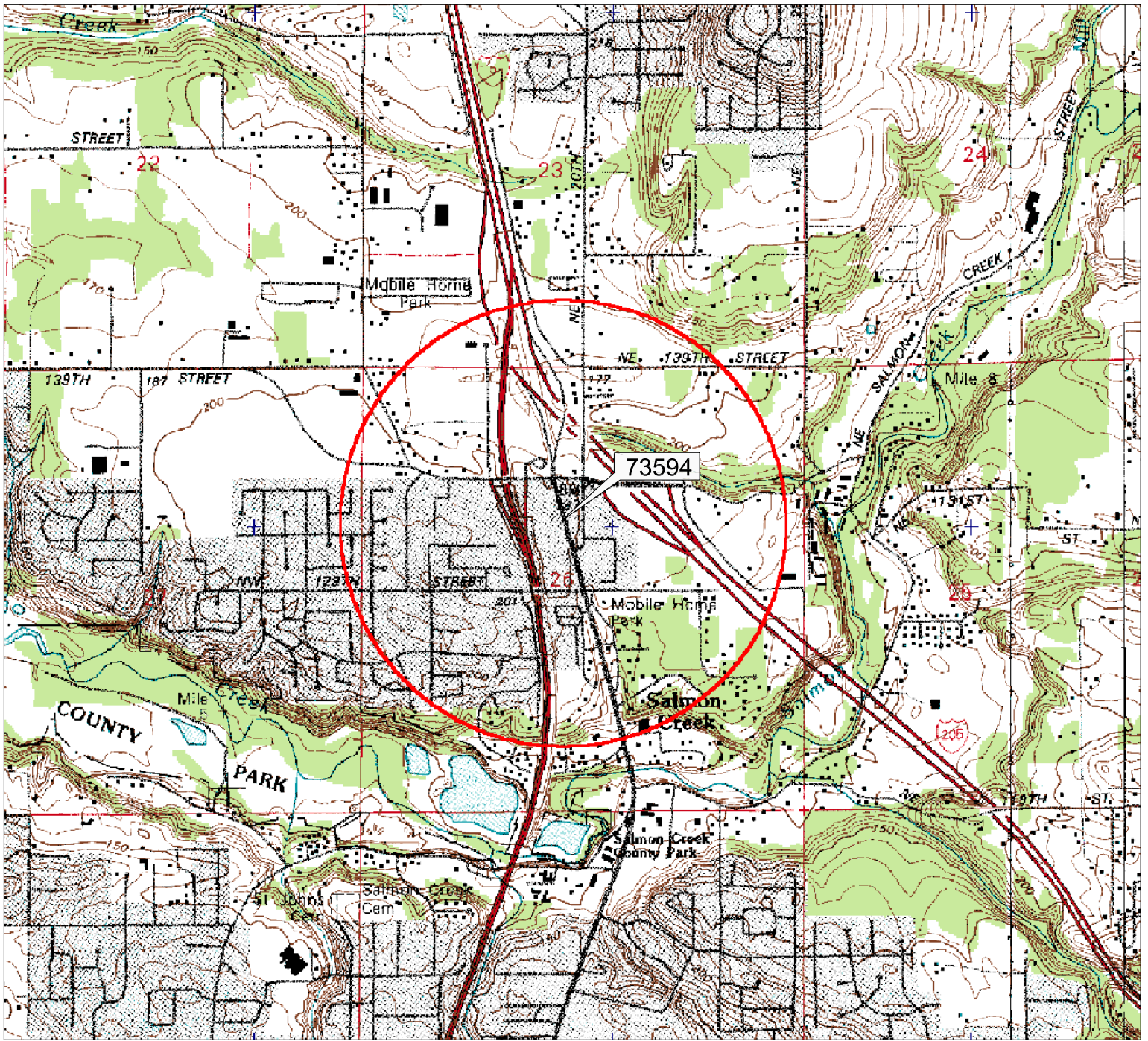
The Site lies at an elevation of 200 feet above mean sea level, and the local topography slopes generally to the southeast. During the groundwater monitoring events, the depth to groundwater ranged from approximately 23 feet to 24 feet bgs. The water elevation contour maps indicated that the groundwater appears to be flowing in an east and southeast direction and there was no significant variation in the flow direction during all sampling events.

Several rounds of soil and groundwater investigations were conducted at the Site and the soil and groundwater samples results indicated the exceedances of TPH-G and BTEX in the soil and/or groundwater. As part of the contaminated soil and groundwater treatment, an SVES/AS system was operated intermittently from 1989 through 2002 and approximately 1,290 pounds of hydrocarbons vapors were removed.

The results of confirmation soil samples indicated that the concentrations of all the petroleum constituents were all below the laboratory detection limits. However, results of groundwater samples collected from two monitoring wells exceeded the lead concentration. An NFA letter was issued on August 21, 2013, with an EC and long-term groundwater monitoring.

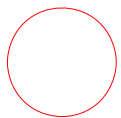
The long-term monitoring required a groundwater-sampling event to be conducted through the installation of temporary monitoring wells in five years coinciding with the five-year review to assess the groundwater conditions. Per this requirement, in October 2018, 5-year groundwater compliance investigation was conducted by drilling five temporary monitoring wells within the lead contaminated area. Results indicated that the total and dissolved lead were detected at 10.5 µg/L and 11.4 µg/L, respectively, in only boring TWW-21. These concentrations are below the MTCA Method A cleanup level of 15 µg/L. All other groundwater sample results were below the laboratory detection limits.





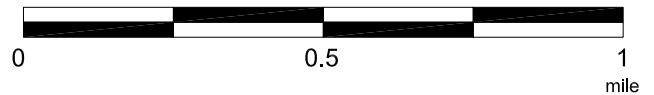
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**EXPLANATION**



1/2-mile radius circle

**APPROXIMATE SCALE**



SOURCE:  
Modified from a map  
provided by  
DeLorme 3-D TopoQuads



**SITE LOCATION MAP**

FORMER EXXON STATION 73594  
13204 Northeast Highway 99  
Vancouver, Washington

**PROJECT NO.**

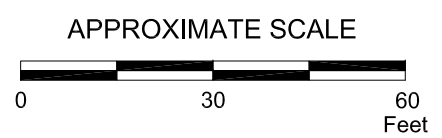
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**PLATE**

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NAG: 09/11/12

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SOURCE: Modified from a map provided by ExxonMobil Oil Corporation

FN 0311110002

**GENERALIZED SITE PLAN**  
 FORMER EXXON STATION 73594  
 13204 Northeast Highway 99  
 Vancouver, Washington



**EXPLANATION**

- MW10 Destroyed Groundwater Monitoring Well
- TMW18 Destroyed Temporary Groundwater Monitoring Well
- PM3 Destroyed Pressure Monitoring Well
- SP4 Destroyed Air Sparging Well
- VE1 Destroyed Soil Vapor Extraction Well
- B3 Historical Soil Boring
- TMW20 5-Year Compliance Destroyed Temporary Groundwater Monitoring Well

**PROJECT NO.**  
031111

**PLATE**  
2

NAG: 10/18/12

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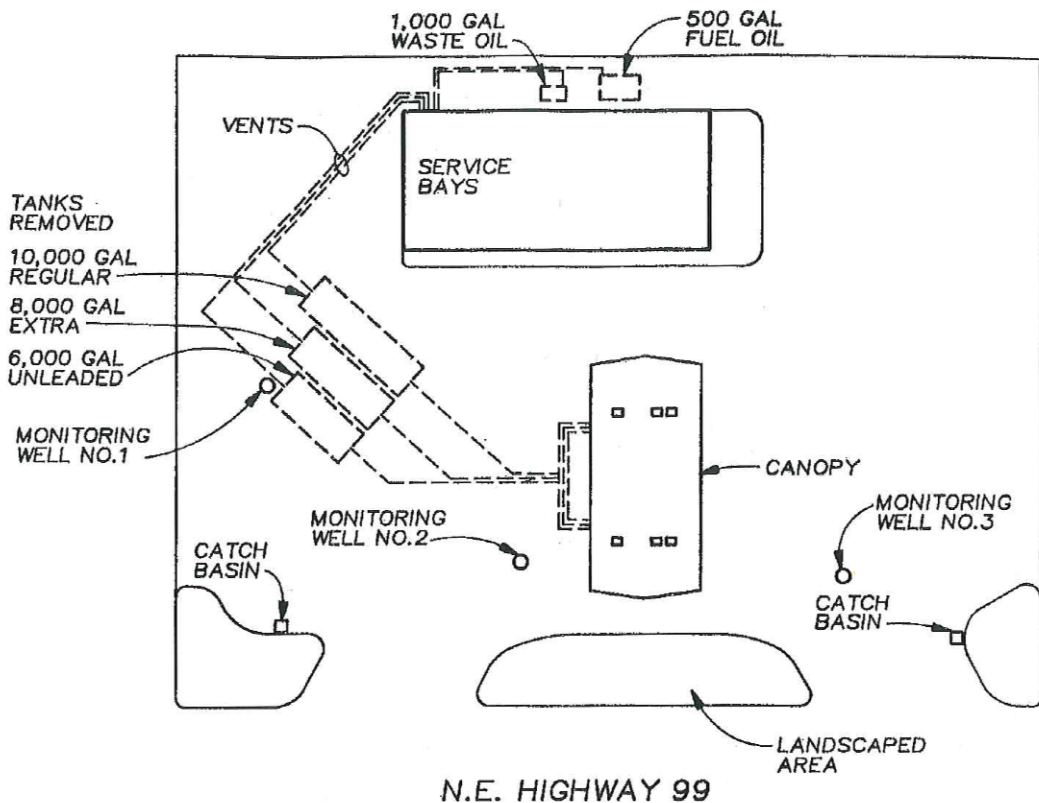


FIGURE 2

**SITE DIAGRAM**



**Station No. 7-3594**  
 N.E. HIGHWAY 99 AND  
 134TH STREET  
 VANCOUVER, WA  
 EXXON COMPANY, U.S.A.



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## **Enclosure B**

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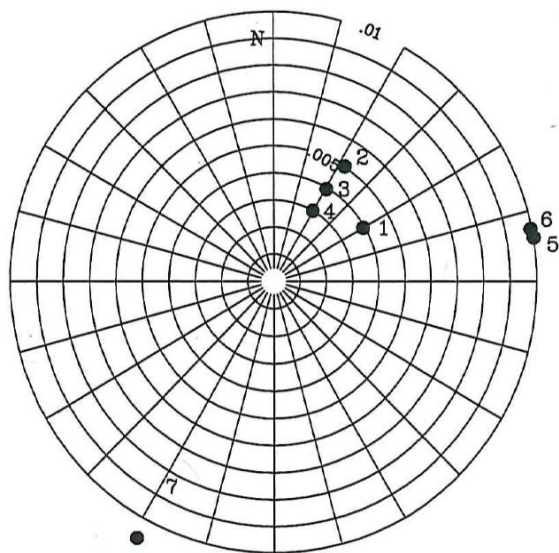
Groundwater Monitoring Well Locations

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Groundwater monitoring wells in black have contained hydrocarbon concentrations exceeding MTCA Method A Cleanup Levels on more than two occasions, but have not contained any hydrocarbon concentrations exceeding MTCA in at least four sampling events  
 Groundwater monitoring wells in blue have contained hydrocarbon concentrations exceeding MTCA Method A Cleanup Levels on fewer than two occasions

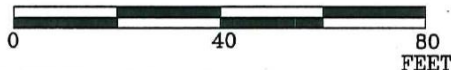
Groundwater Gradient Diagram for MW10



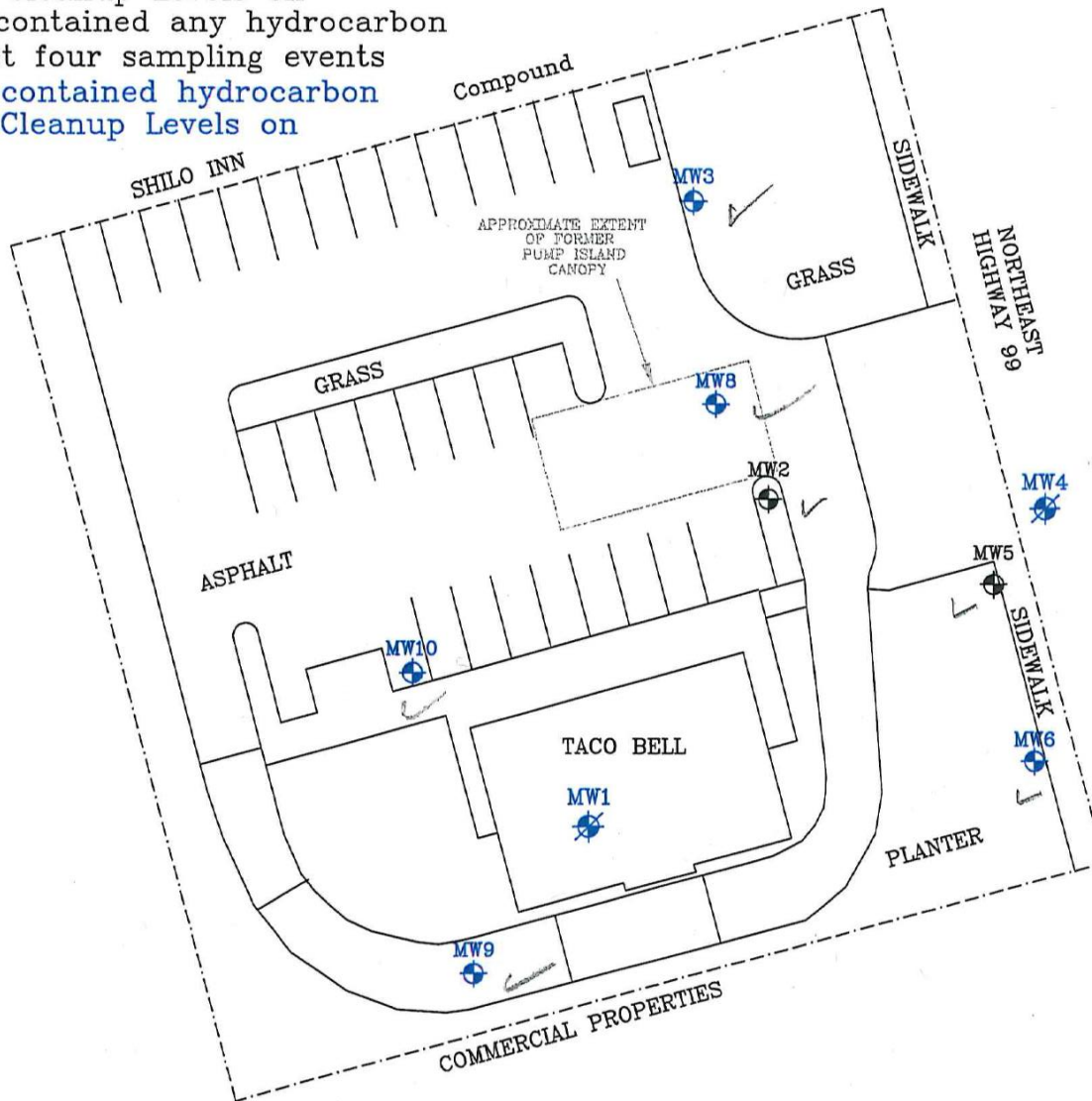
Magnitude and direction of hydraulic gradient at MW10 for dates shown

1. 05/19/03
2. 03/11/04
3. 06/16/04
4. 09/15/04
5. 11/24/04
6. 02/10/05
7. 03/20/06

APPROXIMATE SCALE



SOURCE: Modified from a map provided by ExxonMobil Oil Corporation



FN 31111.14.R03.P5



## Groundwater Monitoring Well Locations

FORMER EXXON STATION 7-3594  
 13204 Northeast Highway 99  
 Vancouver, Washington

### EXPLANATION

MW10  
 Groundwater Monitoring Well

MW4  
 Destroyed Groundwater Monitoring Well

VE1  
 Soil Vapor Extraction Well  
 PM2  
 Pressure Monitoring Well  
 SP4  
 Air Sparging Well

PROJECT NO.

31111

PLATE

5

JHM: 07/21/06

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TABLE 2  
HISTORICAL GROUNDWATER ANALYTICAL RESULTS  
Former Exxon Station 7-3594  
13204 Northeast Highway 99  
Vancouver, Washington  
Page 1 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Total Pb	Diss Pb	TSS
MW1 100.03	04/05/88	22.49	77.54	--	--	--	<25.0	<1.0	<1.0	<1.0	--	--	--
	07/20/88	22.90	77.13	--	--	--	--	--	--	--	--	--	--
	03/27/89	21.70	78.33	--	--	--	<1.0	0.5	0.6	1.7	--	--	--
	05/24/89	21.55	78.48	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	06/19/89	NM	--	--	--	--	<1.0	1.0	<1.0	<1.0	--	--	--
	12/03/90	NM	--	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	12/10/90	22.78	77.25	--	--	--	--	--	--	--	--	--	--
	03/05/91	22.04	77.99	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	05/20/91	21.25	78.78	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	08/28/91	22.64	77.39	--	--	--	<0.5	<0.5	<0.5	1.1	--	--	--
NE	04/23/92	21.67	--	52	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	07/16/92	22.67	--	70	--	--	0.8	0.6	<0.5	<0.5	--	--	--
	10/19/92	23.68	--	90	--	--	<0.5	0.7	0.7	<0.5	--	--	--
	02/25/93	22.35	--	<50	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	06/04/93	NM	--	--	--	--	<1.0	<1.0	--	<1.0	--	--	--
	06/15/93	21.23	--	<50	--	--	<0.5	<0.5	<0.5	<0.5	5.0	5.0	--
	12/03/93	NM	--	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	02/18/94	NM	--	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	09/01/94	NM	--	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	12/04/94	NM	--	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
Destroyed	--	--	--	--	--	--	--	--	--	--	--	--	
MW2 99.60	04/05/88	22.74	76.86	--	--	--	184	8.0	2.0	5.0	--	--	--
	07/20/88	22.40	77.20	--	--	--	--	--	--	--	--	--	--
	03/27/89	21.45	78.15	--	--	--	210	2.2	0.7	4.8	--	--	--
	05/24/89	21.65	77.95	--	--	--	120	3.0	2.0	19.0	--	--	--
	06/19/89	NM	--	--	--	--	170	5.0	<1.0	12.0	--	--	--
	12/03/90	NM	--	--	--	--	27	19.0	2.7	12.0	--	--	--
	12/10/90	22.76	76.84	--	--	--	--	--	--	--	--	--	--
	03/05/91	22.13	77.47	--	--	--	31	52.0	3.1	23.0	--	--	--
	05/20/91	21.30	78.30	--	--	--	14	<1.0	2.1	1.4	--	--	--
	08/28/91	22.45	77.15	--	--	--	54	12.0	1.2	7.9	--	--	--
76.52	04/23/92	21.75	54.77	1,400	--	--	9.5	0.6	2.4	1.1	--	--	--
	07/16/92	22.42	54.10	2,200	--	--	310	66.0	6.9	40.0	--	--	--
	10/19/92	23.44	53.08	2,300	--	--	500	150.0	8.9	100.0	--	--	--
	02/25/93	22.14	54.38	2,900	--	--	370	220.0	12.0	150.0	--	--	--
	06/15/93	21.22	55.30	3,300	--	--	650	390.0	81.0	290.0	6.0	<3.0	--
	12/27/93	22.86	53.66	--	--	--	--	--	--	--	--	--	--
	06/13/94	22.63	75.93	1,500	--	--	340	2.6	75.0	17.0	4.0	<3.0	--
	09/12/94	23.32	75.24	4,600	--	--	2,700	340.0	270.0	560.0	7.9	<3.0	--
	12/12/94	22.31	76.25	1,100	--	--	67	0.5	20.0	0.9	<3.0	--	--
	02/22/95	NM	--	1,400	--	--	23	0.7	4.1	2.6	<2.0	--	--
98.56	05/22/95	NM	--	11,000	--	--	4,200	510	410	970	<2.0	--	--
	08/01/95	NM	--	21,000	--	--	9,900	3,700	700	2,500	<2.0	--	--
	01/24/96	NM	--	<50	--	--	0.6	<0.5	<0.5	<1.0	13.0	--	--
	04/18/96	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	10.0	--	--
	06/20/97	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/98	20.76	77.80	115	--	--	96.7	<1.0	6.3	<2.0	--	--	--
	11/19/98	22.87	75.69	3,380	--	--	1,750	<25.0	<25.0	<50.0	--	--	--
	11/23/99	24.07	74.49	<250	--	--	<1	<1	<1	<1	--	--	--
	05/09/00*	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1	--	--	--
	03/20/01	23.05	75.51	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
06/22/01	23.62	74.94	<50.0	--	--	<0.500	0.593	<0.500	<1.00	--	--	--	
09/14/01	23.86	74.70	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	
03/26/02	21.08	77.48	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	--	--	
07/11/02	22.35	76.21	<100	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--	
02/11/03	20.50	78.06	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<3.0	<3.0	64,100	
05/19/03	21.10	77.46	--	--	--	--	--	--	--	--	--	--	
03/11/04	21.05	77.51	--	--	--	--	--	--	--	--	--	--	
06/16/04	NM	--	--	--	--	--	--	--	--	--	--	--	
09/15/04	NM	--	--	--	--	--	--	--	--	--	--	--	
11/24/04	NM	--	--	--	--	--	--	--	--	--	--	--	
02/10/05	NM	--	--	--	--	--	--	--	--	--	--	--	
09/02/05	NM	--	--	--	--	--	--	--	--	--	--	--	
12/29/05	NM	--	--	--	--	--	--	--	--	--	--	--	
03/20/06	NM	--	--	--	--	--	--	--	--	--	--	--	
MTCA Method A Cleanup Levels				1,000 <sup>a</sup>	5	40	30	20	5	5	NA		

Continued on page 2

TABLE 2  
HISTORICAL GROUNDWATER ANALYTICAL RESULTS  
Former Exxon Station 7-3594  
13204 Northeast Highway 99  
Vancouver, Washington  
Page 2 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Total Pb	Diss Pb	TSS
MW3	07/20/88	22.72	77.08	--	<50	--	14.0	<1.0	<2.0	4.0	--	--	--
99.80	03/27/89	21.55	78.25	--	--	--	<4.1	<0.5	<0.6	<1.0	--	--	--
	05/24/89	21.16	78.64	--	--	--	--	--	--	--	--	--	--
	12/10/90	22.26	77.54	--	--	--	1.4	<1.0	<1.0	<1.0	--	--	--
	03/05/91	21.51	78.29	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	05/20/91	20.60	79.20	--	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	08/28/91	22.20	77.60	--	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
76.66	04/23/92	21.21	55.45	<50	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	07/16/92	22.23	54.43	<50	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	10/19/92	23.30	53.36	70	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	02/25/93	21.97	54.69	<50	--	--	1.1	<0.5	<0.5	<0.5	--	--	--
	06/15/93	20.82	55.84	<50	--	--	<0.5	<0.5	<0.5	<0.5	3.0	<3.0	--
	12/27/93	22.16	54.50	--	--	--	--	--	--	--	--	--	--
98.00	06/13/94	21.94	76.06	<50	--	--	<0.5	<0.5	<0.5	<0.5	16.0	<3.0	--
	09/12/94	22.71	75.29	<50	--	--	<0.5	0.6	<0.5	<0.5	6.3	<3.0	--
	12/12/94	21.54	76.46	<50	--	--	<0.5	<0.5	<0.5	<0.5	<3.0	--	--
	02/22/95	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	<2.0	--	--
	08/01/95	NM	--	<50	--	--	0.9	1.4	<0.5	2.0	<2.0	--	--
	01/24/96	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	4.3	--	--
	06/20/97	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/19/98	21.95	76.05	--	--	--	--	--	--	--	--	--	--
	11/23/99	22.27	75.73	--	--	--	--	--	--	--	--	--	--
	03/20/01	23.15	74.85	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	06/22/01	23.70	74.30	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	09/14/01	23.42	74.58	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	03/26/02	20.06	77.94	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	--	--
	07/11/02	21.43	76.57	<100	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	02/11/03	20.75	77.25	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<3.0	<3.0	181,000
	05/19/03	20.11	77.89	--	--	--	--	--	--	--	--	--	--
	03/11/04	19.06	78.94	--	--	--	--	--	--	--	--	--	--
	06/16/04	21.53	76.47	--	--	--	--	--	--	--	--	--	--
	09/15/04	22.40	75.60	--	--	--	--	--	--	--	--	--	--
	11/24/04	22.37	75.63	--	--	--	--	--	--	--	--	--	--
	02/10/05	22.36	75.64	--	--	--	--	--	--	--	--	--	--
	09/02/05	23.52	74.48	--	--	--	--	--	--	--	--	--	--
	12/29/05	NM	--	--	--	--	--	--	--	--	--	--	--
	03/20/06	20.91	77.09	--	--	--	--	--	--	--	--	--	--
MW4	04/23/92	19.84	--	<50	--	--	<0.5	20.0	--	440	--	<3	--
NM	07/16/92	20.82	--	<50	--	--	<0.5	<0.5	140.0	0.8	--	<3	--
	10/19/92	21.85	--	--	--	--	--	--	--	--	--	--	--
	02/25/93	20.60	--	--	--	--	--	--	--	--	--	--	--
	10/25/93	NM	--	<50	<50	--	<0.5	0.5	<0.5	0.9	--	<3	--
	06/15/93	21.32	--	<50	160	--	1.2	<0.5	<0.5	<0.5	<3	<3	--
	Destroyed	--	--	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels					1,000*		5	40	30	20	5	5	NA

Continued on page 3

TABLE 2  
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS  
 Former Exxon Station 7-3594  
 13204 Northeast Highway 99  
 Vancouver, Washington  
 Page 3 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Total Pb	Diss Pb	TSS
MW5	12/20/93	NM	--	<50	--	--	<0.5	<0.5	<0.5	2.5	<3.0	--	--
76.26	12/27/93	21.76	54.50	--	--	--	--	--	--	--	--	--	--
97.20	06/13/94	21.37	75.83	98	--	--	<0.5	<0.5	3.6	4.4	33.0	7.0	--
	09/12/94	21.92	75.28	290	--	--	0.8	40.0	<0.5	<0.5	44.0	<3.0	--
	12/12/94	20.65	76.55	<50	--	--	1.4	6.6	<0.5	0.6	22.0	--	--
	02/22/95	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	<2.0	--	--
	05/22/95	NM	--	--	--	--	--	--	--	--	<2.0	--	--
	08/01/95	NM	--	<50	--	--	17.0	<0.5	<0.5	<1.0	<2.0	--	--
	10/31/95	NM	--	150	--	--	350	<0.5	9.4	5.6	11.0	--	--
	01/24/96	NM	--	<50	--	--	21.0	<0.5	1.5	<1.0	9.1	--	--
	04/18/96	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	13.0	--	--
	06/20/97	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/98	18.32	78.88	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/19/98	21.45	75.75	--	--	--	--	--	--	--	--	--	--
	11/23/99	21.49	75.71	--	--	--	--	--	--	--	--	--	--
	05/09/00	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	03/20/01	22.58	74.62	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	06/22/01	22.40	74.80	<50.0	--	--	<0.500	0.528	<0.500	<1.00	--	--	--
	09/14/01	22.65	74.55	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	03/26/02	19.59	77.61	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	--	--
	07/11/02	20.78	76.42	<100	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	02/11/03	20.40	76.80	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<3.0	<3.0	67,700
	05/19/03	19.25	77.95	--	--	--	--	--	--	--	--	--	--
	03/11/04	NM	--	--	--	--	--	--	--	--	--	--	--
	06/16/04	NM	--	--	--	--	--	--	--	--	--	--	--
	09/15/04	21.90	75.30	--	--	--	--	--	--	--	--	--	--
	11/24/04	22.90	74.30	--	--	--	--	--	--	--	--	--	--
	02/10/05	22.85	74.35	--	--	--	--	--	--	--	--	--	--
	09/02/05	22.04	75.16	--	--	--	--	--	--	--	--	--	--
	12/29/05	NM	--	--	--	--	--	--	--	--	--	--	--
	03/20/06	20.40	76.80	--	--	--	--	--	--	--	--	--	--
MW6	12/20/93	NM	--	<50	--	--	<0.5	<0.5	<0.5	<0.5	4.0	--	--
76.24	12/27/93	21.75	54.49	--	--	--	--	--	--	--	--	--	--
97.29	06/13/94	21.46	75.83	<50	--	--	<0.5	<0.5	<0.5	<0.5	<3.0	<3.0	--
	09/12/94	22.08	75.21	<50	--	--	<0.5	<0.5	<0.5	<0.5	3.7	<3.0	--
	12/12/94	21.19	76.10	<50	--	--	<0.5	<0.5	<0.5	<0.5	<3.0	--	--
	02/22/95	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	<2.0	--	--
	08/01/95	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	<2.0	--	--
	01/24/96	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	<2.0	--	--
	06/20/97	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/19/98	21.20	76.09	--	--	--	--	--	--	--	--	--	--
	11/23/99	21.64	75.65	--	--	--	--	--	--	--	--	--	--
	03/20/01	22.72	74.57	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	06/22/01	22.32	74.97	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	09/14/01	22.62	74.67	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	03/26/02	19.68	77.61	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	--	--
	07/11/02	20.90	76.39	<100	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	02/11/03	20.53	76.76	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<3.0	<3.0	168,000
	05/19/03	19.68	77.61	--	--	--	--	--	--	--	--	--	--
	03/11/04	19.71	77.58	--	--	--	--	--	--	--	--	--	--
	06/16/04	21.10	76.19	--	--	--	--	--	--	--	--	--	--
	09/15/04	21.90	75.39	--	--	--	--	--	--	--	--	--	--
	11/24/04	21.97	75.32	--	--	--	--	--	--	--	--	--	--
	02/10/05	21.90	75.39	--	--	--	--	--	--	--	--	--	--
	09/02/05	NM	--	--	--	--	--	--	--	--	--	--	--
	12/29/05	NM	--	--	--	--	--	--	--	--	--	--	--
	03/20/06	20.49	76.80	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels					1,000 <sup>a</sup>		5	40	30	20	5	5	NA

Continued on page 3

TABLE 2  
HISTORICAL GROUNDWATER ANALYTICAL RESULTS  
Former Exxon Station 7-3594  
13204 Northeast Highway 99  
Vancouver, Washington  
Page 4 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Total Pb	Diss Pb	TSS
MW8 98.36	11/19/98	22.48	75.88	117,000	--	--	23,600	26,300	2,020	12,200	--	--	--
	11/26/99	22.72	75.64	460	--	--	<1	<1	4.3	87	--	--	--
	05/09/00*	NM	--	<50	--	--	<0.5	<0.5	<0.5	<1.0	--	--	--
	03/20/01	22.05	76.31	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	06/22/01	23.34	75.02	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	09/14/01	24.20	74.16	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--
	03/26/02	20.81	77.55	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	--	--
	07/11/02	22.10	76.26	<100	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	02/11/03	21.50	76.86	<100	626	210	<1.0	<1.0	<1.0	<1.0	<3.0	4.0	67,700
	05/19/03	20.80	77.56	--	--	--	--	--	--	--	--	--	--
	03/11/04	NM	--	--	--	--	--	--	--	--	--	--	--
	06/16/04	22.25	76.11	--	--	--	--	--	--	--	--	--	--
	09/15/04	NM	--	--	--	--	--	--	--	--	--	--	--
	11/24/04	NM	--	--	--	--	--	--	--	--	--	--	--
	02/10/05	NM	--	--	--	--	--	--	--	--	--	--	--
	09/02/05	24.02	74.34	--	--	--	--	--	--	--	--	--	--
	12/29/05	NM	--	--	--	--	--	--	--	--	--	--	--
03/20/06	NM	--	--	--	--	--	--	--	--	--	--	--	
MW9 99.08	02/11/03	21.81	77.27	<100	<143	<143	<1.0	<1.0	<1.0	<1.0	19.0	<3.0	1,030,000
	05/19/03	21.33	77.75	<100	136	<111	4.30	9.0	1.5	10.1	20.0	<3.0	1,550,000
	03/11/04	21.24	77.84	<100	<111	<111	<1.00	<1.0	<1.0	<1.0	<5.0	<5.0	--
	06/16/04	22.76	76.32	<100	<111	<111	<1.00	<1.0	<1.0	<1.0	20.0	<5.0	--
	09/15/04	23.57	75.51	<100	229	<100	<1.00	<1.0	<1.0	<1.0	18.0	<5.0	--
	11/24/04	23.50	75.58	<100	--	--	1.9	1.90	1.5	5.1	18.0	<5.0	--
	02/10/05	23.12	75.96	<100	--	--	<1.00	<1.0	<1.0	1.7	35.0	<5.0	--
	09/02/05	25.31	73.77	<100	--	--	1.45	1.56	<1.00	3.38	89.7	<5.00	--
12/29/05	24.48	74.60	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	<5.00	--	
03/20/06	22.51	76.57	<100	--	--	<1.00	16.2	<1.00	<3.00	--	<5.00	--	
MW10 98.88	02/11/03	21.87	77.01	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	41.0	<3.0	9,960,000
	05/19/03	21.35	77.53	134	<111	<111	8.10	21.1	3.8	26.2	22.0	<3.0	3,660,000
	03/11/04	21.25	77.63	<100	<143	<143	<1.00	<1.0	<1.0	<1.0	10.0	<5.0	--
	06/16/04	22.78	76.10	<100	<111	<111	<1.00	2.1	1.2	4.8	17.0	<5.0	--
	09/15/04	23.57	75.31	<100	654	<100	<1.00	<1.0	<1.0	<1.0	25.0	<5.0	--
	11/24/04	23.52	75.36	255	--	--	16.8	13.2	10.7	34.7	28.0	<5.0	--
	02/10/05	23.25	75.63	<100	--	--	<1.00	1.2	1.1	3.5	23.0	<5.0	--
	09/02/05	24.97	73.91	<100	--	--	<1.00	1.71	<1.00	2.45	31.8	<5.00	--
12/29/05	24.21	74.67	<100	--	--	<1.00	<1.00	<1.00	<1.00	--	<5.00	--	
03/20/06	22.41	76.47	<100	--	--	<1.00	<1.00	<1.00	<3.00	--	<5.00	--	

MTCA Method A Cleanup Levels

1,000<sup>a</sup>

5

40

30

20

5

5

NA

EXPLANATION:

All concentrations are in ug/L (ppb).

Wellhead elevations were taken from prior consultant reports.

DTW = Depth to water in feet below top of casing

GW Elev. = Groundwater elevation relative to top of casing elevations

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method NWTPH-Gx

TPH-D and TPH-O = Total Petroleum Hydrocarbons as Diesel and Oil, respectively, by Ecology Method NWTPH-Dx

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds by EPA Method 8021B

Total Pb = Total Lead; Diss Pb = Dissolved lead

Total and Dissolved Pb analyses by EPA Method 7421 and 6010B, refer to laboratory reports

TSS = Total Suspended Solids by EPA Method 160.2

NE = Not Established; NM = Not Measured; -- = Not Analyzed or Sampled; NA = Not Applicable

< = Less than the stated laboratory reporting limit

Shaded values equal or exceed MTCA Method A Cleanup Levels.

<sup>a</sup> Total Petroleum Hydrocarbons

\* Methyl Tert-Butyl Ether not detected

Data collected before 03/20/01 were taken from prior consultants.

Samples on 12/29/05 and 03/20/06 were collected using low-flow sampling techniques.

## **Enclosure C**

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Soil Boring Locations and Soil Sample Results

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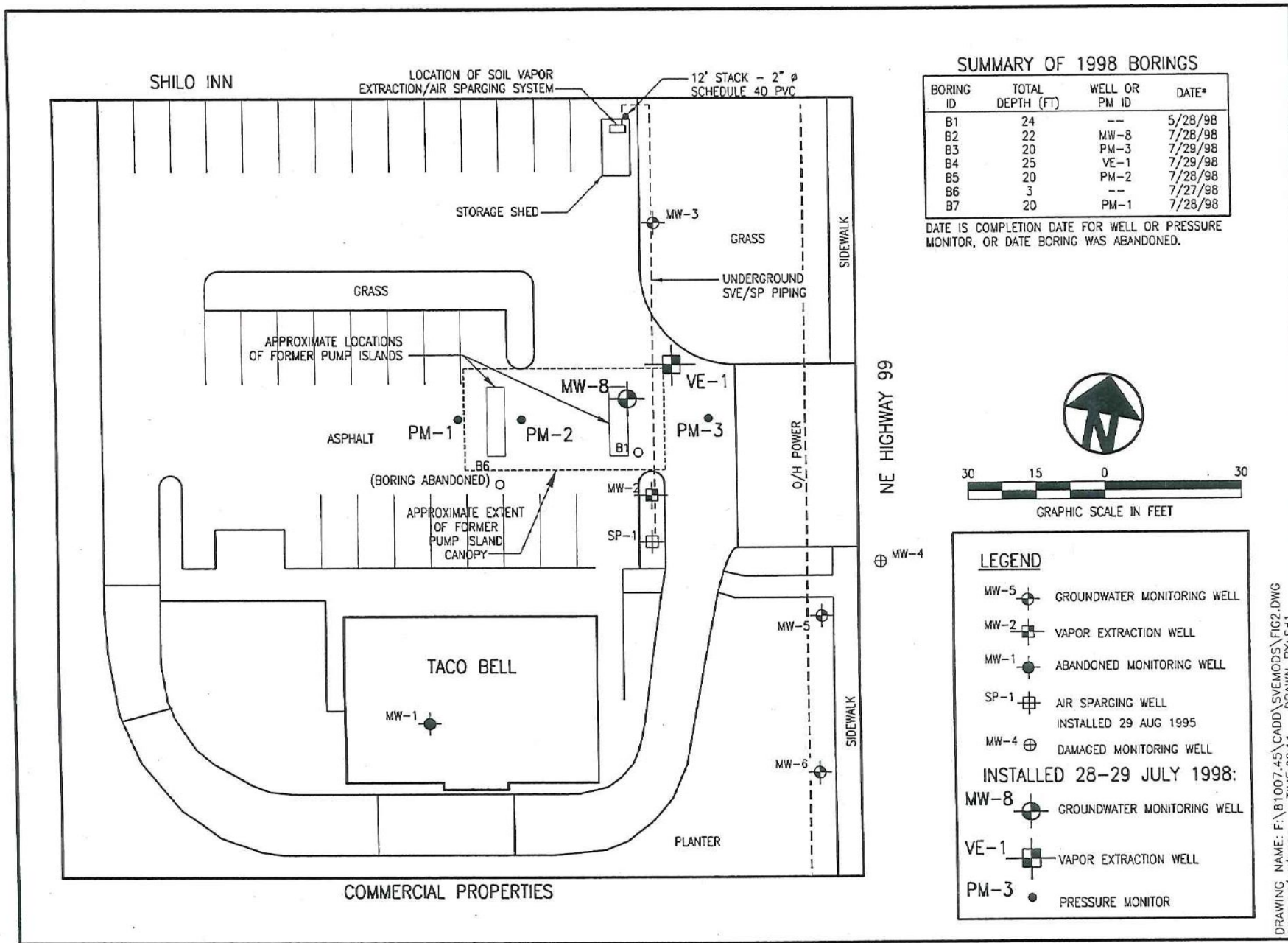


Figure 2. Site plan. Former Exxon 7-3594, Vancouver, Washington.



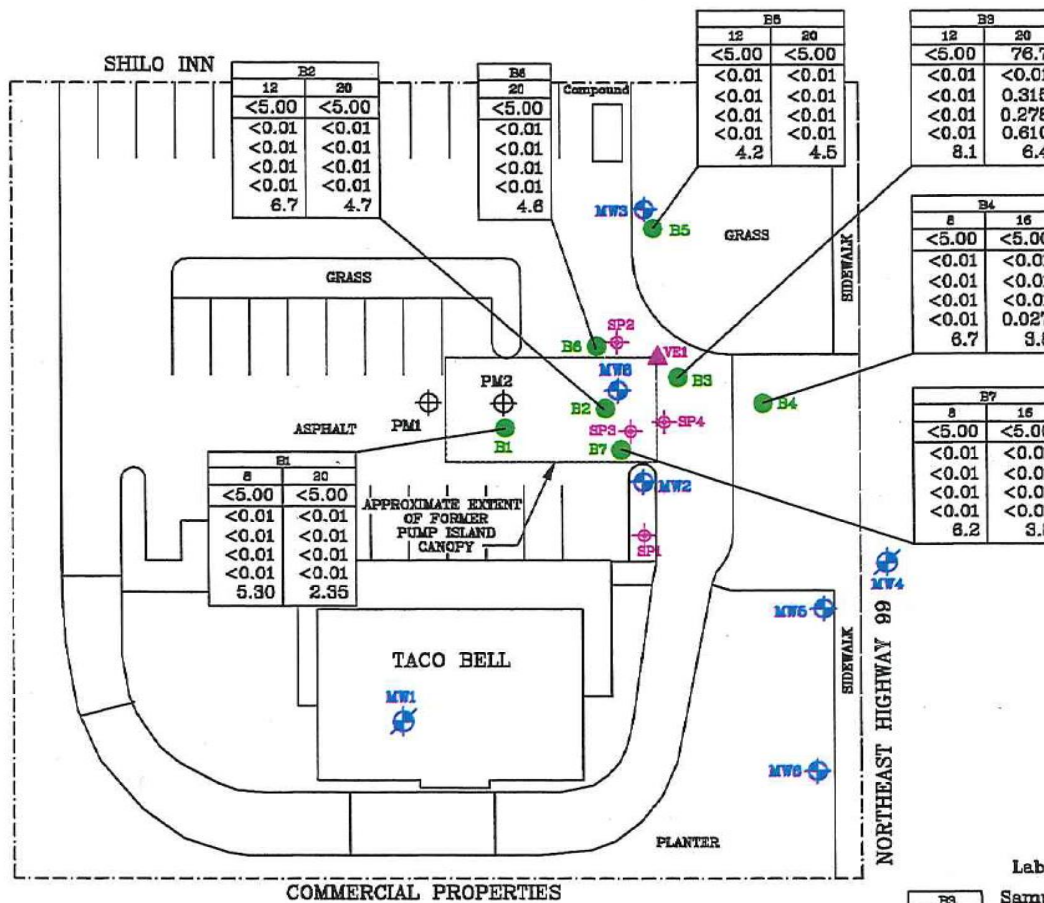
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TABLE 1  
 SOIL SAMPLE ANALYTICAL RESULTS  
 Former Exxon Station 7-3594  
 13204 Northeast Highway 99  
 Vancouver, Washington  
 October 4, 2005  
 Page 1 of 1

Sample Name	Sample Date	Depth	TPH-G	B	T	E	X	Total Pb
<u>Site Environmental Investigation CH2M Hill September 26, 1988</u>								
MW-1	4/4/1988	15-16.5	<20	<0.2	<0.2	<0.2	<0.2	--
MW-2	4/4/1988	10-11.5	<20	<0.2	<0.2	<0.2	<0.2	--
MW-3	7/19/1988	15-16.5	172	<0.1	<0.1	<0.1	<0.1	--
<u>Hydrocarbon Delineation Investigation Envirologic February 25, 1992</u>								
S-10-B4/MW4	2/7/1992	10	<1	<0.005	<0.005	<0.005	<0.005	--
<u>Limited Subsurface Environmental Investigation Enviro-Logic January 13, 1994</u>								
B5-S-20/MW5	12/14/1993	20	<5.0	<0.1	<0.1	<0.1	<0.1	11
B5-S-35/MW5	12/14/1993	35	<5.0	<0.1	<0.1	<0.1	<0.1	<10
B6-S-25/MW6	12/14/1993	25	<5.0	<0.1	<0.1	<0.1	<0.1	19
B6-S-35/MW6	12/14/1993	35	<5.0	<0.1	<0.1	<0.1	<0.1	11
<u>Stock Pile Sample</u>								
SP-1	12/14/1993	--	<5.0	<0.1	<0.1	<0.1	<0.1	10
<u>1998 Confirmation Borings/ Well Install. E. A.</u>								
B1-B	5/27/98-5/28/98	8	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--
B2-10	5/27/98-5/28/98	10	7,290	4.45	217	190	620	--
B2-20	5/27/98-5/28/98	20	5,960	28.9	195	56.8	425	--
B2/MW8	7/29/1998	unknown	--	<1.00	4.92	12.9	95.4	--
B2/MW8	7/29/1998	unknown	2,560	5.92	101	34.3	214	--
B3/PM3	7/29/1998	unknown	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--
B3-13-15/PM3	7/29/1998	13-15	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--
B4/VE1	7/29/1998	unknown	3,770	12.6	142	53.4	331	--
B5/PM2	7/29/1998	unknown	341	<0.0500	0.163	0.518	3.18	--
B5/PM2	7/29/1998	unknown	--	<0.0500	<0.0500	<0.300	<0.400	--
B7/PM1	7/29/1998	unknown	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--
<u>Confirmatory Boring and Soil Sampling Report ERI- September 19, 2002</u>								
S-8-B1*	1/8/2002	8	<5.00	<0.0100	<0.0100	<0.0100	<0.0100	5.30
S-20-B1*	1/8/2002	20	<5.00	<0.0100	<0.0100	<0.0100	<0.0100	2.35
S-12-B2	1/8/2002	12	<6.48	<0.013	<0.013	<0.013	<0.013	8.92
S-20-B2	1/8/2002	20	<5.15	<0.010	<0.010	<0.010	<0.010	4.79
S-12-B3	1/8/2002	12	<6.54	<0.013	<0.013	<0.013	<0.013	10.6
S-20-B3	1/8/2002	20	99.1	<0.013	0.359	0.407	0.788	8.31
S-8-B4	1/8/2002	8	<6.33	<0.013	<0.013	<0.013	<0.013	8.52
S-16-B4	1/8/2002	16	<6.09	<0.012	<0.012	<0.012	<0.012	4.57
S-12-B5	1/8/2002	12	<6.23	<0.012	<0.012	<0.012	<0.012	5.25
S-20-B5	1/8/2002	20	<6.27	<0.013	<0.013	<0.013	<0.013	5.62
S-20-B6	1/8/2002	20	<6.44	<0.013	<0.013	<0.013	<0.013	5.90
S-8-B7	1/8/2002	8	<6.52	<0.013	<0.013	<0.013	<0.013	8.04
S-16-B7	1/8/2002	16	<5.80	<0.012	<0.012	<0.012	<0.012	4.38
<u>Monitoring Well Installation and Soil Sampling Report ERI- March 18, 2003</u>								
MW9	1/8/2003	20	<5.85	<0.001	<0.001	<0.001	0.001	3.96
MW10	1/8/2003	20	<5.99	<0.001	<0.001	<0.001	<0.001	3.88
<u>MTCA Method A Cleanup Level</u>			100	0.5	40	20	20	250
<u>EXPLANATION:</u>								
All concentrations in mg/kg (ppm).								
Depths are in feet below ground surface.								
TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method NWTPH-Gx.								
B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes.								
BTEX = Aromatic compounds by EPA Method 8021B.								
Total Pb = Total Lead by EPA Method 6010B.								
< = Less than the stated laboratory reporting limit.								
* = Indicates samples were reported on a wet weight basis.								
Depth marked unknown is sampled from Cullings								

30

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SOURCE: Modified from a map provided by ExxonMobil

Laboratory Results in mg/kg (ppm)

B9	Sample Location
20	Sample Depth
78.7	Total Petroleum Hydrocarbons as Gasoline
<0.01	Benzene
0.315	Toluene
0.278	Ethylbenzene
<0.610	Total Xylenes
6.4	Total Lead

<1.00 = Less Than The Stated Laboratory Reporting Limit

FN: 311110003



**SOIL SAMPLE ANALYSIS MAP - 4/4/02**  
 FORMER EXXON STATION 7-3594  
 13204 Northeast Highway 99  
 Vancouver, Washington

- EXPLANATION**
- MW6 Groundwater Monitoring Well
  - 74.87 Groundwater Elevation
  - MW1 Abandoned Groundwater Monitoring Well
  - SP4 Soil Vapor Extraction Well
  - SP1 Air Sparging Well
  - PM1 Pressure Monitoring Well
  - PM1 Pressure Monitoring Well

**PROJECT NO.**  
 31111

**PLATE**  
 2

AJL: 05/21/02

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Laboratory Results in µg/L			
TMW17	Well ID		
08/22/12	Sample Date	-- = Not Sampled	
39.7	Total Lead	<4.06 = Less than the Stated	
29.2	Dissolved Lead	Laboratory Reporting Limit	
<p>● Numbers and Well Symbols in Red Indicate Dissolved and Total Lead Concentrations Which Exceed MTCA Method A Cleanup Levels</p> <p>● Numbers and Well Symbols in Blue Indicate Dissolved and Total Lead Concentrations Below MTCA Method A Cleanup Levels</p>			



SOURCE: Modified from a map provided by ExxonMobil Oil Corporation

FN 311110002



## WELL DECOMMISSIONING AND GRAB GROUNDWATER SAMPLING ANALYSIS MAP - 08/21 & 08/22/12

FORMER EXXON STATION 73498  
13204 Northeast Highway 99  
Vancouver, Washington

### EXPLANATION

- MW10 Destroyed Groundwater Monitoring Well
- PM3 Pressure Monitoring Well
- SP4 Former Air Sparging Well
- VE1 Former Soil Vapor Extraction Well
- TMW18 Temporary Well Location
- Decommissioned Well Location

### PROJECT NO.

31111

### PLATE

3

NAG: 10/18/12

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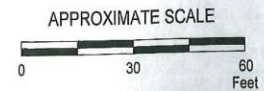
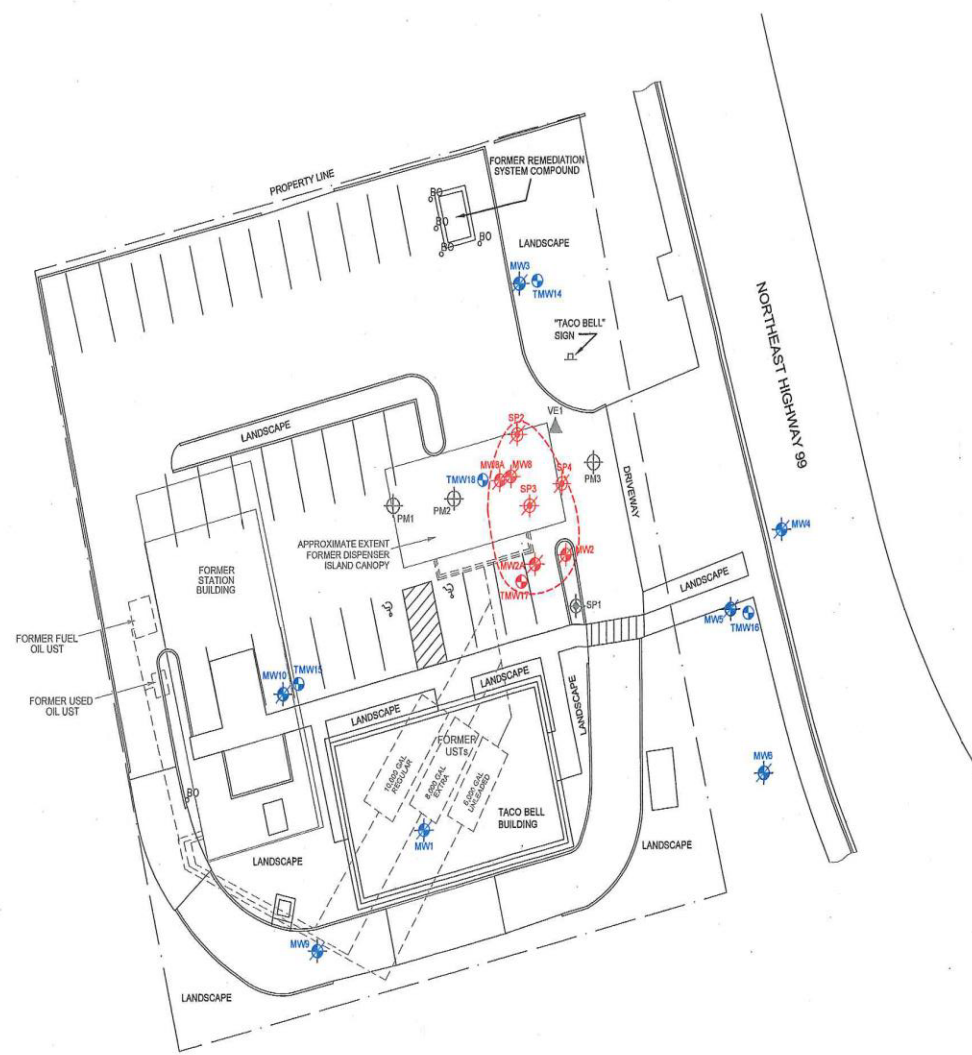
## **Enclosure D**

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Temporary Well Locations, Locations of Groundwater Monitoring Wells and Approximate Extent of Lead Impacted Groundwater

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- Well Symbols in Red Indicate Dissolved and Total Lead Concentrations Which Exceed MTCA Method A Cleanup Levels
- Well Symbols in Blue Indicate Dissolved and Total Lead Concentrations Below MTCA Method A Cleanup Levels



SOURCE: Modified from a map provided by ExxonMobil Oil Corporation

FN 311110002



## HORIZONTAL EXTENT OF TOTAL AND DISSOLVED LEAD

FORMER EXXON STATION 73498  
13204 Northeast Highway 99  
Vancouver, Washington

EXPLANATION	
	Destroyed Groundwater Monitoring Well
	Temporary Groundwater Monitoring Well
	Destroyed Pressure Monitoring Well
	Destroyed Air Sparging Well
	Destroyed Soil Vapor Extraction Well

- Approximate Horizontal Extent of Lead Exceeding MTCA Method A Cleanup Level

<b>PROJECT NO.</b>	31111
<b>PLATE</b>	3
	NAG: 10/16/12

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## **Enclosure E**

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August 21, 2013, No Further Action Letter

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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

August 20, 2013

Mr. Lee Hanley  
ExxonMobil Environmental Services  
1464 Madera Road, Suite N, #265  
Simi Valley, CA 93065

**Re: No Further Action at the following Site:**

- **Site Name:** Former Exxon Station 7-3594
- **Site Address:** 13204 Northeast Highway 99, Vancouver, WA
- **Facility/Site No.:** 53876575
- **Cleanup Site ID No.:** 6242
- **VCP Project No.:** SW0447

Dear Mr. Hanley:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Former Exxon Station 7-3594 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

**Issue Presented and Opinion**

---

Is further remedial action necessary to clean up contamination at the Site?

**No. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.**

**This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.**

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

**Description of the Site**

---

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:



- Petroleum Constituents in the Soil
- Petroleum Constituents and Lead in the Groundwater

Please note that a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

### **Basis for the Opinion**

---

This opinion is based on the information contained in the following documents:

1. Corrective Action Plan – Environmental Covenant, Former Exxon Station 73594, 1320 Northeast Highway 99, Vancouver, WA, dated October 25, 2012 by Cardno ERI.
2. Feasibility Study/Disproportionate Cost Analysis, Former Exxon Station 73594, 1320 Northeast Highway 99, Vancouver, WA, dated October 25, 2012 by Cardno ERI.
3. Former Exxon 73594, Model Restrictive (Environmental) Covenant, filed at Clark County Auditor's Office 5/14/2013.

These documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in this document is materially false or misleading.

### **Analysis of the Cleanup**

---

Ecology has concluded that no **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

#### **1. Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described below.

This Site is located at 13204 Northeast Highway 99, Vancouver, Clark County, Washington. The Site is a former Exxon gasoline station and is located in the vicinity of the intersection of Interstate 5 and Interstate 205. An operating Taco Bell restaurant currently occupies the Site with an adjacent parking lot. A Site location map and generalized Site layout map are included as Figures 1 and 2 in the Enclosures.



Prior to 1988, the underground storage tanks (USTs) and pump islands were removed from the Site. In April and June 1988, CH2M HILL installed three groundwater monitoring wells (MW-1 through MW-3). Soil samples collected did not exceed MTCA Method A cleanup levels; however, the three groundwater samples did. A soil vapor extraction (SVE) system was installed and operated from August 1990 to December 1991.

Between February 1992 and December 1993, Enviro-Logics, Inc. (ELI) installed three additional groundwater monitoring wells (MW-4 through MW-6), abandoned MW-1, and collected additional soil and groundwater samples. No exceedance of MTCA Method A cleanup levels were noted for either soil or groundwater. In April 1992, the SVE system was restarted and operated until September 1993, when it was shut down pending expansion. In April 1994, SECOR International, Inc. (SECOR) installed and connected air sparging well SP1 to the SVE system. In August 1995, EA Engineering, Science, and Technology (EA) completed installation and started the combined air sparging and soil vapor extraction (AS/SVE) system. In June 1997, the AS/SVE system was shut down and the system was again restarted in June 1999.

In May 1998, two soil borings (B1 and B2) were advanced in the area of the former pump islands, and three soil samples collected for analysis. Laboratory results indicated that soil samples collected from approximately 10 feet and 20 feet below ground surface (bgs) from boring B2 contained petroleum hydrocarbon concentrations exceeding MTCA Method A cleanup levels, with up to 7,290 milligrams per kilogram (mg/kg) gasoline-range total petroleum hydrocarbons (TPH-G). The soil sample collected from boring B1 did not contain any concentrations exceeding MTCA Method A cleanup levels. In July 1998, six additional soil borings (B2 through B7) were advanced in the area of the former pump islands and up-gradient of this area, and six soil samples were collected for laboratory analysis for petroleum products. Laboratory results indicated that soil samples collected from borings B2 and B4 in the northwest corner of the former UST basin contained petroleum hydrocarbon concentrations exceeding MTCA Method A cleanup levels, with up to 3,770 mg/kg TPH-G and 12.6 mg/kg benzene in boring B4. Borings B3, B5, and B7 were completed as pressure monitoring wells PM3, PM2, and PM1, respectively. Boring B2 was completed as monitoring well MW8, and boring B4 was completed as vapor extraction well VE1. Boring B6 was abandoned.

In April 1988, periodic groundwater monitoring and sampling activities were initiated by CH2M HILL. Results of subsequent monitoring and sampling events conducted by previous consultants between April 1988 and October 1999 indicated that groundwater samples from MW-2, MW-3, MW-4, MW-5, and MW-6 periodically contained petroleum hydrocarbon concentrations exceeding MTCA Method A cleanup levels. Results of these investigations are presented in quarterly groundwater monitoring and status reports prepared by previous consultants. In October 2000, Environmental Resolutions, Inc. (ERI) assumed environmental management of the Site to continue to monitor groundwater and operate and maintain the AS/SVE system. The system operated until January 2002, when it was shut

down in preparation for Site closure, having removed a total of approximately 1,268 pounds of hydrocarbons as vapors. Results of periodic groundwater monitoring and sampling activities conducted by ERI and previous consultants indicated that groundwater samples from on-Site monitoring wells have not contained any petroleum hydrocarbon concentrations exceeding MTCA Method A cleanup levels since October 1999.

On April 4, 2002, ERI personnel visited the Site to observe advancement of confirmation soil borings near the former pump islands and USTs, in areas of impacted soil identified during previous investigations, and to collect soil samples for laboratory analysis for petroleum products. A total of seven soil borings (B1 through B7) were advanced to depths ranging between approximately 20 and 24 feet bgs. Soil samples were collected at approximately 5-foot intervals and screened for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). Soil encountered consisted of moist to damp, light to dark brown, semi-consolidated sands, silts, and clays from the surface to approximately 24 feet bgs. Groundwater was encountered at approximately 19 to 22 feet bgs. Laboratory results indicated that none of the soil samples analyzed contained any analyte concentrations exceeding MTCA Method A cleanup levels.

An Ecology opinion letter dated January 16, 2007 identified items of concern for which additional information was requested. ERI submitted an Agency Response and Work Plan on March 18, 2008 to address the concerns outlined in the opinion. On July 11, 2008, ERI completed the work outlined in the proposed work plan. Soil and groundwater in the vicinity of the former used oil and waste oil USTs, and in the vicinity northeast of the former pump islands were investigated. No concentrations of petroleum hydrocarbons were detected above MTCA Method A cleanup levels in either the soil or groundwater in the vicinity of the former used oil and waste oil USTs or to the northeast of the former pump islands. Groundwater samples were also collected from each well for characterization of total and dissolved lead. Results from these samples indicated that both total and dissolved lead in groundwater exceeded the MTCA Method A cleanup level of 15 micrograms per liter ( $\mu\text{g/L}$ ) in MW-2 (88.7  $\mu\text{g/L}$  total lead and 85.3  $\mu\text{g/L}$  dissolved lead) and MW-8 (35.7  $\mu\text{g/L}$  total lead and 34.9  $\mu\text{g/L}$  dissolved lead). A second sampling round in these wells confirmed that the results were representative of the current groundwater conditions in this area. It was also surmised that the lead results were not a result of lead in suspended sediments in the samples. At this point, only total and dissolved lead, in groundwater in these two wells is in exceedance of the MTCA Method A cleanup level.

Cardno ERI (Cardno) decommissioned wells MW-2 and MW-8 and replaced them with new wells in September 2010. These wells (MW-2a and MW-8a) were sampled and yielded similar total and dissolved lead concentrations in groundwater (which continued to exceed the MTCA Method A cleanup levels). After discussions with Ecology, Cardno decommissioned the wells on the Site and advanced a series of temporary monitoring wells to collect additional total and dissolved lead data. The results are presented in the corrective action plan submitted to Ecology in October 2012 and shown on Figure 3 included in the

Enclosures. These data were used to prepare a feasibility study and disproportionate cost analysis (FS/DCA) that was submitted to Ecology in October 2012. Three alternatives were reviewed including:

- Restrictive Covenant with long-term groundwater monitoring plan,
- Excavation, Off-Site Transport/Disposal, and
- Groundwater pump and treat system installation and operation.

Based on the analysis of available options, the restrictive covenant with a long-term groundwater monitoring plan was selected as the most viable approach for the Site. As part of the FS/DCA, a Figure outlining the extent of the lead-impacted groundwater was prepared (Figure 3 in the Enclosures). The long-term groundwater plan included the initial temporary well sampling event and one additional event in five years to assess groundwater conditions for the 5-year Ecology review. A summary of all the groundwater results is included as Table 1 included in the Enclosures.

Soils at the Site are noted as a small layer of gravel, sand, and cobble fill underlain by a silty clay with sand to the total depth drilled of approximately 40 feet bgs. Groundwater is present at approximately 20 to 25 feet bgs and flows either northwest or southeast, depending on season, under a flat and low hydraulic gradient.

## **2. Establishment of cleanup standards.**

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

### **a. Cleanup levels.**

MTCA Method A cleanup levels for soil and groundwater were used to characterize the Site.

### **b. Points of compliance.**

Standard points of compliance were used for the Site. The point of compliance for protection of groundwater was established in the soils throughout the Site. For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance was established in the soils throughout the Site from the ground surface to 15 feet bgs. In addition, the point of compliance for the groundwater was established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

## **3. Selection of cleanup action:**

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

Cleanup actions conducted at the Site to date have included the operation of a SVE system, and long-term groundwater monitoring.

**4. Cleanup.**

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. This determination is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Approximately 1,268 pounds of hydrocarbons were calculated to have been removed from the Site during the operation of the SVE system. Currently, only total and dissolved lead in groundwater remain in one area of the Site (near former wells MW-2 and MW-8) at concentrations greater than MTCA Method A cleanup levels.

An Environmental Covenant has been prepared and filed on Title. This covenant documents the location of impacted groundwater greater than the MTCA Method A cleanup levels that were not able to be removed during the cleanup of the Site. In addition, a long-term groundwater monitoring plan has also been appended to the covenant and outlines a sampling event to be conducted at the 5-year mark to assess the total and dissolved lead in groundwater concentrations. This sampling event is to be conducted by geoprobe/temporary sampling well points placed in the same location as the temporary wells advanced in October 2012 (TMW-14 through TMW-18). This sampling event is scheduled to coincide with Ecology's 5-year review of the Site and following this review, future sampling requirements will be determined.

**Post-Cleanup Controls and Monitoring**

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Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

**1. Compliance with institutional controls.**

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional control is necessary at the Site:

- Restriction on groundwater use.

To implement that control, an Environmental Covenant has been recorded on the following parcel of real property in Clark County:

- 186754000.

Ecology approved the recorded Covenant. A copy of the Covenant is included in **Enclosure A.**

**2. Performance of confirmational monitoring.**

Confirmational monitoring is necessary at the Site to confirm the long-term effectiveness of the cleanup. The monitoring data will be used by Ecology during periodic reviews of post-cleanup conditions. Ecology has approved the monitoring plan you submitted. A copy of the plan is included with the Environmental Covenant in **Enclosure A.**

**Periodic Review of Post-Cleanup Conditions**

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Ecology will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain protective of human health and the environment. If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

**Listing of the Site**

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Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

**Limitations of the Opinion**

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**1. Opinion does not settle liability with the state.**

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

**2. Opinion does not constitute a determination of substantial equivalence.**

Mr. Lee Hanley  
August 20, 2013  
Page 8

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

**3. State is immune from liability.**

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

**Termination of Agreement**

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Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW0447)

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at 360-407-7263 or e-mail at [tmid461@ecy.wa.gov](mailto:tmid461@ecy.wa.gov).

Sincerely,



Thomas Middleton L.H.G.  
SWRO Toxics Cleanup Program

TMM/ksc: Former Exxon 73594 Env Cov NFA 08202012

**Enclosures:**

- Figure 1 – Site Location Map (Oct 2012)
- Figure 2 – Generalized Site Plan (Oct 2012)
- Figure 3 – Well Decommissioning and Grab Groundwater Sampling Plan (Oct 2012)
- Table 1 – Cumulative Groundwater Analytical Results
- Figure 3 – Horizontal Extent of Total and Dissolved Lead (FS/DCA Oct 2012)
- A – Restrictive Environmental Covenant and Long Term Groundwater Monitoring Plan

By certified mail: (7012 1010 0003 0195 4659)

cc: Bryan DeDoncker, Clark Co Health  
Scott Rose – Ecology  
Paul Turner – Ecology  
Dolores Mitchell – Ecology (w/o enclosures)

## **Enclosure F**

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Environmental Covenant Recorded on May 14, 2013

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for double-sided copying.*



4971334 COV

RecFee - \$162.00 Pages: 41 - WASHINGTON STATE DEPARTMENT  
Clark County, WA 05/14/2013 11:36



RETURN ADDRESS

Thomas Middleton L.H.G  
Washington State Dept of Ecology SWRO  
PO Box 47775  
Olympia, WA 98504-7440

Please print neatly or type information  
Document Title(s)

Environmental Covenant

Reference Numbers(s) of related documents:

Additional Reference #'s on page \_\_\_\_\_

Grantor(s) (Last, First and Middle Initial)

Border Express LLC

Additional grantors on page \_\_\_\_\_

Grantee(s) (Last, First and Middle Initial)

State of Washington Department of Ecology

Additional grantees on page \_\_\_\_\_

Legal Description (abbreviated form: i.e. lot, block plat or section, township, range, quarter/quarter)

#263 SEC 26 T3N R1E WM .60A

Additional legal is on page \_\_\_\_\_

Assessor's Property Tax Parcel/Account Number

186754000

Additional parcel #'s on page \_\_\_\_\_

The Auditor/Recorder will rely on the information provided on this form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

*Justin Fisher*

Signature of Requesting Party

RECEIVED

APR 05 2013

WA State Department  
of Ecology (SWRO)

After Recording Return to:  
Thomas Middleton L.H.G.  
Washington State Department of Ecology  
Southwest Regional Office  
P.O. Box 47775  
Olympia, Washington 98504-7440

RECEIVED

MAY 16 2013

WA State Department  
of Ecology (SWRO)

### Environmental Covenant

Grantor: Border Express LLC  
Grantee: State of Washington, Department of Ecology  
Legal: #263 SEC 26 T3N R1EWM .60A  
Tax Parcel Nos.: 186754000  
Cross Reference: N/A

Grantor, Border Express LLC., hereby binds Grantor, its successors and assigns to the land use restrictions identified herein and grants such other rights under this environmental covenant (hereafter "Covenant") made this 14th day of February 2013 in favor of the State of Washington Department of Ecology (Ecology). Ecology shall have full right of enforcement of the rights conveyed under this Covenant pursuant to the Model Toxics Control Act, RCW 70.105D.030(1)(g), and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec. 12.

This Declaration of Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Border Express LLC, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

A remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Covenant. The Remedial Action conducted at the property is described in the following documents:

Cardno ERI. October 25, 2012. *Corrective Action Plan – Environmental Covenant Submittal, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

Cardno ERI. October 25, 2012. *Feasibility Study/Disproportionate Cost Analyses, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

Cardno ERI. August 25, 2011. *Groundwater Potability Evaluation – Request for Closure, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

Cardno ERI. January 7, 2011. *ExxonMobil Environmental Services Aquifer Test Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

Cardno ERI. June 13, 2011. *ExxonMobil Environmental Services Groundwater Monitoring Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

CH2M HILL Companies Ltd. (CH2M Hill). July 22, 1988. *Sensitive Receptor Risk Assessment and Divestment Environmental Investigation, Exxon Company USA, Store 7-3594, 13204 N.E. Highway 99, Vancouver, Washington.*

CH2M HILL Companies Ltd. (CH2M Hill). September 26, 1988. *Site Environmental Investigation, Exxon Company USA, R/S 7-3594, 13204 N.E. Highway 99, Vancouver, Washington.*

BA Engineering, Science, and Technology (BA). October 17, 1995. *Soil Vapor Extraction and Air Sparging System Installation at Former Exxon Station RS 7-3594, 13204 NE Highway 99, Vancouver, Washington.*

Enviro-Logic, Inc. (ELI). February 25, 1992. *Hydrocarbon Delineation Investigation, Former Exxon Service Station No. 7-3594, 13204 NE Highway 99, Vancouver, Washington.*

Enviro-Logic, Inc. (ELI). January 3, 1994. *Limited Subsurface Environmental Investigation, Former Exxon Service Station No. 7-3594, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). September 19, 2002. *Confirmatory Boring and Soil Sampling Report, Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). March 18, 2003. *Monitoring Well Installation and Soil Sampling Report, Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). September 8, 2006. *Site Characterization Summary and Site Conceptual Model, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). August 20, 2008. *Closure Report, Former Exxon Station 73594, 13204 Northeast Highway 99, Vancouver, Washington, Ecology VCP ID: SW 0447.*

Environmental Resolutions, Inc. (ERI). June 29, 2009. *ExxonMobil Environmental Services Sparge Well Groundwater Sampling Report, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). December 3, 2009. *ExxonMobil Environmental Services Sensitive Receptor Survey, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). September 14, 2010. *ExxonMobil Environmental Services Sparge Well Destruction, Installation and Groundwater Sampling Report, 13204 Northeast Highway 99, Vancouver, Washington.*

Environmental Resolutions, Inc. (ERI). January 29, 2010. *ExxonMobil Environmental Services Groundwater Monitoring Report, 13204 Northeast Highway 99, Vancouver, Washington.*

Washington State Department of Ecology (Ecology). November 24, 2008. *Letter Requiring Further Action at the following site: Former Exxon Station 7-3594, 13204 Northeast Highway 99, Vancouver, WA.*

These documents are on file at Ecology's Southwest Regional Office.

This Covenant is required because the Remedial Action resulted in residual concentrations of total and dissolved lead, which exceed the Model Toxics Control Act Method A Cleanup Level for groundwater established under WAC 173-340-704. Plate 3 from the FS/DCA report is attached to illustrate the remaining extent of total and dissolved lead present at the site.

The undersigned, Border Express LLC., is the fee owner of real property (hereafter "Property") in the County of Clark, State of Washington, that is subject to this Covenant. The Property is legally described as follows: #263 SEC 26 T3N R1EWM .60A.

Border Express LLC makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner")

Section 1.

No groundwater may be taken for any use from the Property.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The Owner must restrict leases to uses and activities consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, to determine compliance with this Covenant, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

Border Express LLC

*Thomas M. Cook*  
Thomas M. Cook  
President

Dated: March 26, 2013

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

*Rebecca S. Lawson*  
Rebecca S. Lawson, P.E. LHG  
Section Manager  
Toxics Cleanup Program  
Southwest Regional Office

Dated: March 26, 2013

STATE OF Washington  
COUNTY OF Clark

On this 26<sup>th</sup> day of March, 2013, I certify that Thomas M. Cook  
personally appeared before me, acknowledged that he/she signed this instrument, on  
oath stated that he/she was authorized to execute this instrument, and acknowledged it as the  
President [type of authority] of Border Express LLC [name of  
party being represented] to be the free and voluntary act and deed of such party for the uses  
and purposes mentioned in the instrument.

VONDA K. LARA  
NOTARY PUBLIC  
STATE OF WASHINGTON  
COMMISSION EXPIRES  
APRIL 9, 2013

*Vonda K. Lara*  
Notary Public in and for the State of  
Washington, residing at Vancouver  
My appointment expires April 9, 2013.

## Exhibit A

### Legal Description

Abbreviated Legal Description from the Clark County Property Information Center:#263 SEC 26 T3N  
R1EWM .60A



## **Enclosure G**

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5-Year Groundwater Compliance Investigation Temporary  
Groundwater Monitoring Well Locations and Groundwater  
Sample Results

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for double-sided copying.*

Laboratory Results in µg/L

TMW21	Well ID
10/31/18	Sample Date
10.5	Total Lead
11.4	Dissolved Lead

-- = Not Sampled  
 <5.00 = Less than the Stated Laboratory Reporting Limit

Numbers in Red Indicate Dissolved and Total Lead Concentrations Which Exceed MTCA Method A Cleanup Levels  
 Numbers and Well Symbols in Blue Indicate Dissolved and Total Lead Concentrations Less Than MTCA Method A Cleanup Levels  
 No Data Available for Numbers and Well Symbols in Black

MW3			
01/24/96	02/11/03	07/02/08	06/28/09
4.3	<3.0	<5.00	5.10
--	<3.0	<5.00	<5.00

TMW19	10/30/18
<10.0	<10.0

TMW22	10/30/18
<10.0	<10.0

MW8A			
09/16/10	12/10/10	03/17/11	06/07/11
62.5	111	138	130
60.0	98.3	131	138

TMW21	10/31/18
10.5	11.4

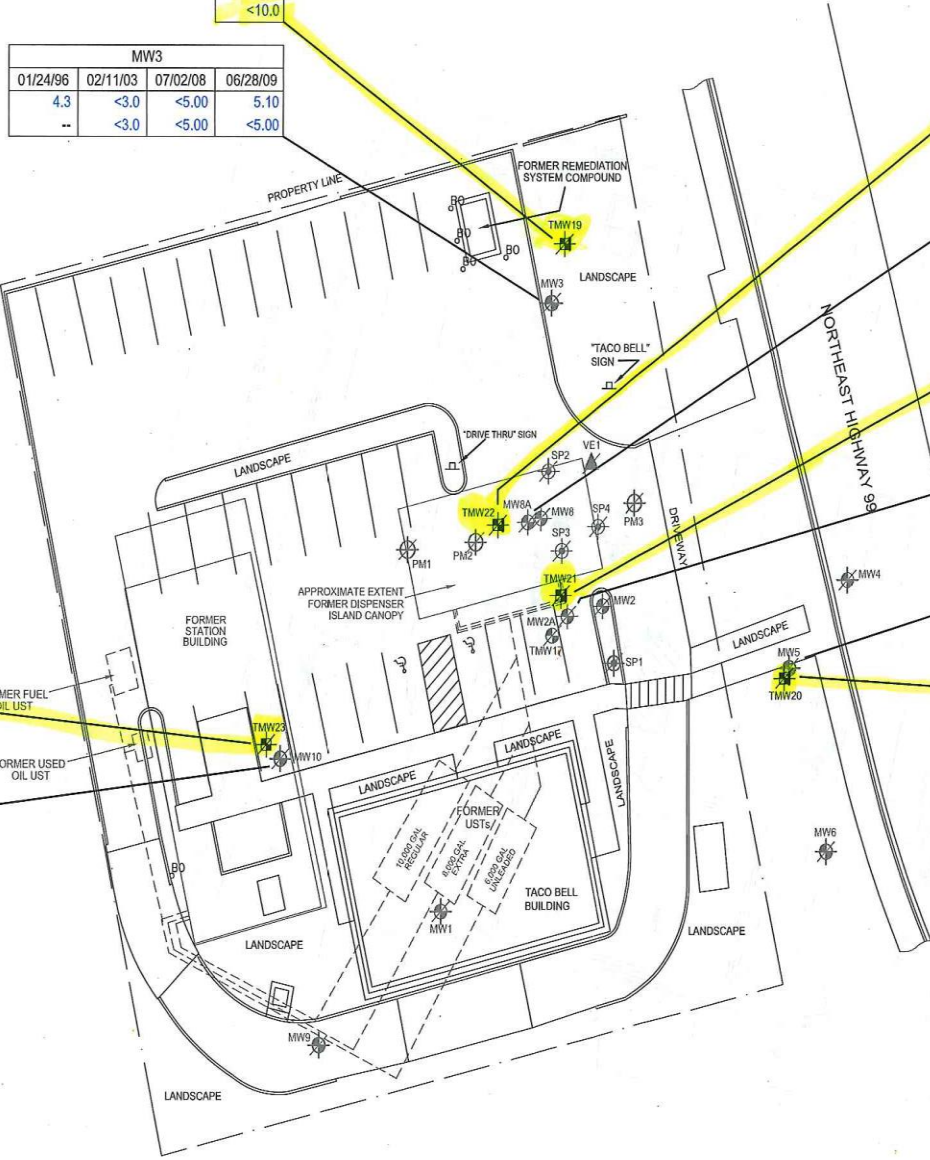
MW2A			
09/16/10	12/10/10	03/17/11	06/07/11
13.5	63.5	48.2	43.2
14.9	45.1	46.2	54.7

MW5			
04/18/96	02/11/03	07/02/08	06/28/09
13.0	<3.0	<5.00	5.80
--	<3.0	<5.00	<5.00

TMW23	10/30/18
<10.0	<10.0

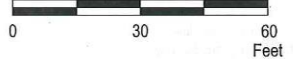
MW10			
02/10/05	09/02/05	07/02/08	06/28/09
23.0	31.8	<5.00	<5.00
<5.0	<5.00	<5.00	<5.00

TMW20	10/30/18
<10.0	<10.0



**DRAFT**

APPROXIMATE SCALE



SOURCE: Modified from a map provided by ExxonMobil Oil Corporation

FN 0311110002

**5-YEAR COMPLIANCE GROUNDWATER SAMPLE ANALYSIS MAP - 10/30 TO 10/31/18**  
 FORMER EXXON STATION 73594  
 13204 Northeast Highway 99  
 Vancouver, Washington

**EXPLANATION**

- MW10 Destroyed Groundwater Monitoring Well
- TMW18 Destroyed Temporary Groundwater Monitoring Well
- PM3 Destroyed Pressure Monitoring Well
- SP4 Destroyed Air Sparging Well
- VE1 Destroyed Soil Vapor Extraction Well
- TMW20 5-Year Compliance Destroyed Temporary Groundwater Monitoring Well

**PROJECT NO.**

031111

**PLATE**

3

CPA: 11/05/18

