



WASHINGTON STATE  
DEPARTMENT OF  
ECOLOGY

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Southwest Regional Office  
Toxics Cleanup Program  
PO Box 47775  
Olympia, WA 98504-7775  
360-407-6240

## TRANSMITTAL MEMO

Date: April 3, 2012

TO: Mr. Rob Speer

RE: Chevron Station 205413  
SW0670

Subject: Explanation of Timeline

**NOTE:** The determination date is the date Ecology approved the No Further Action status for the site. Final payment, EIM Data submission, once received, the NFA letter was released.

Ecology Determination date: April 3, 2012

Email Customer Notification: April 3, 2012

Payment received date: September 25, 2012

EIM Data successfully uploaded: November 12, 2009

Ecology Determination letter mailed/sent: September 26, 2012





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

April 2, 2012

Mr. Rob Speer  
4800 Fournace Place #5283  
Bellaire, TX 77401

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

- **Site Name:** Chevron Station 205412
- **Site Address:** 9414 NE Vancouver Mall Drive, Vancouver, WA 98662
- **Facility/Site No.:** 4532115
- **Cleanup Site ID No:** 5342
- **VCP Project No.:** SW0670

Dear Mr. Speer:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the **Chevron Station 205412** 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**

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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 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**

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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 Soil and Groundwater.



Mr. Rob Speer  
April 2, 2012  
Page 2

**Enclosure A and Figure 1** includes a detailed description and diagram of the Site, as currently known to Ecology.

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**

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

1. SAIC, **Site Assessment**, September 15, 2003.
2. Gettler-Ryan, Inc., **Groundwater Monitoring Report**, January 18, 2004.
3. Gettler-Ryan, Inc., **Groundwater Monitoring Report**, April 16, 2004.
4. Gettler-Ryan, Inc., **2004 Groundwater Sampling Report**, November 10, 2004.
5. SECOR, **Baseline Site Assessment**, November 29, 2004.
6. Gettler-Ryan, Inc., **Groundwater Monitoring and Sampling Report**, December 6, 2005.
7. Gettler-Ryan, Inc., **Groundwater Monitoring and Sampling Report for February 7, 2006**, March 17, 2006.
8. Gettler-Ryan, Inc., **Groundwater Monitoring and Sampling Report**, April 28, 2006.
9. Cambria Environmental Technology, Inc., **Soil Assessment Report**, April 28, 2006.
10. Gettler-Ryan, Inc., **Groundwater Monitoring and Sampling Report**, August 9, 2006.
11. Cambria Environmental Technology, Inc., Draft NFA Opinion Letter submitted to Scotto Rose on March 10, 2012, **Interim Action Letter**, November 16, 2006.
12. Cambria Environmental Technology, Inc., **Groundwater Monitoring Report- Third Quarter 2006**, February 26, 2007.

13. Connestoga-Rovers & Associates, **Groundwater Monitoring Report 1<sup>st</sup> Quarter 2007**, August 2, 2007.
14. Connestoga-Rovers & Associates, **Groundwater Monitoring Report 4th Quarter 2006**, August 2, 2007.
15. Conestoga-Rovers & Associates, **Groundwater Monitoring Report 3rd Quarter 2007**, January 18, 2008.
16. Connestoga-Rovers & Associates, **Interim Action Report-3<sup>rd</sup> & 4<sup>th</sup> Quarters 2007**, March 14, 2008.
17. Connestoga-Rovers & Associates, **Interim Action Report-1<sup>st</sup> & 2<sup>nd</sup> Quarters 2008**, October 3, 2008.
18. Connestoga-Rovers & Associates, **3<sup>rd</sup> & 4<sup>th</sup> Quarter 2008 Groundwater Monitoring Report**, February 16, 2009.
19. Connestoga-Rovers & Associates, **1<sup>st</sup> Quarter 2009 Groundwater Monitoring Report**, March 31, 2009.
20. Connestoga-Rovers & Associates, **Groundwater Monitoring Report**, August 11, 2009.
21. Connestoga-Rovers & Associates, **Groundwater Monitoring Report, Event of November 12, 2009**, May 6, 2010.
22. Connestoga-Rovers & Associates, **No Further Action Request**, September 27, 2011.

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

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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 and in **Enclosure A**.

As part of a Due Diligence Property Transfer, an environmental investigation was conducted by Science Applications International Corporation (SAIC) in 2003. The scope of work included drilling four exploratory borings and the collection of 23 soil samples for analysis. Four 2-inch monitoring wells (MW-1 through MW-4) were installed, developed, and sampled. MW-1 is down gradient of the existing underground storage tanks (USTs) near the center of the property. MW-2 is down gradient of the pump islands and USTs. MW-3 is up gradient of all pump islands and USTs, in the northwest portion of the property. MW-4 is located up gradient of all pump islands and USTs, in the southwest corner of the property (Fig. 1). Six soil samples were submitted to the laboratory for analysis. Analytical results of soil samples collected from MW-1, MW-2, and MW-3 were either below laboratory detection levels (ND) or below the MTCA Method A cleanup levels for soil. Samples submitted from MW-4 had detections of gasoline (TPH-G) at 110 milligrams per kilogram (mg/Kg), diesel (TPH-D) at 22 mg/Kg, and oil (TPH-O) at 90 mg/Kg with the TPH-G result being the only one above the MTCA Method A cleanup level for soil (Tables).

Groundwater samples were collected from the four monitoring wells for analysis. The results from MW-1 showed exceedances above the MTCA Method A cleanup levels for groundwater of benzene at 320 micrograms per liter ( $\mu\text{g/L}$ ) and MTBE (160  $\mu\text{g/L}$ ). In MW-2, MTBE was detected at 110  $\mu\text{g/L}$ , also above the MTCA Method A cleanup levels. All analytical results from MW-3 and MW-4 were below the laboratory detection levels. Based on the analytical results from the soil and groundwater samples, a release was reported to Ecology on July 28, 2003. Groundwater depth has varied between approximately 7.5 to 12 feet below ground surface (bgs) with a flow direction predominantly to the southeast.

Groundwater monitoring conducted by Gettler-Ryan in 2004 showed sample results exceeding the MTCA Method A cleanup levels for MTBE in MW-1 (38  $\mu\text{g/L}$ ) and in MW-2 (310  $\mu\text{g/L}$ ) and TPH-D (540  $\mu\text{g/L}$ ) in MW-1.

In October 2004, a Baseline Site Assessment was conducted by SECOR at the Site. Seven borings were advanced to depths of 13.5 to 16 feet bgs. There were no detections from the soil samples above cleanup levels. MTBE was detected above the MTCA Method A cleanup level for groundwater in Borings BA-1 through BA-6 and in MW-2, which are all located in the general area of the dispenser islands (Fig 1.).

In April 2005, the Site was enrolled in Ecology's Voluntary Cleanup Program (VCP) and an Opinion Letter issued January 24, 2006. A Draft Work Plan had been submitted to Ecology suggesting the installation of two down gradient borings in an attempt to determine whether contamination had migrated off the property. Groundwater monitoring would continue and sampling events occurred through March 2006.

Cambria Environmental Technology, Inc. (Cambria) submitted an Interim Action letter to Ecology in November 2006. Based on their review of historical data, they concluded that benzene was limited to the area near well MW-1. A vacuum truck removed 247 gallons of groundwater from well MW-1 on August 21, 2006 in an effort to reduce aqueous-phase hydrocarbons from well MW-1. The extracted groundwater was transported to a state- approved facility for disposal.

On March 20, 2006, Cambria completed two soil borings (SB-1 and SB-2) down gradient of wells MW-1 and MW-2 to assess the possible migration of petroleum compounds beyond the property boundary. Samples were collected from each boring at 2.5, 5, 7.5, and 10 feet bgs. No analyte concentrations were detected in soil above the MTCA Method A cleanup levels (Fig 1.).

Following the sampling event of October 24, 2005, contaminant levels had dropped to below MTCA Method A cleanup levels for groundwater in MW-1 with the exception of an exceedance of benzene (6 µg/L) on September 19, 2006 and TPH-O (1,700 µg/L) and TPH-D (620 µg/L) on July 10, 2007. The injection of oxygen reducing compounds (ORC) was conducted in MW-1 over 15 events during 2007 and 2008.

A request for No Further Action was submitted to Ecology on October 25, 2011. Sampling events conducted since the last exceedance noted during the July 10, 2007 event have shown the following in regards to MTCA Method A cleanup levels for groundwater: MW-1 has been below the established cleanup levels for five consecutive events. MW-2 last had one exceedance (MTBE @ 23 µg/L) in October 2004 and had 10 below cleanup level sampling events thereafter. Sampling was discontinued in MW-2 following the July 2, 2008 event. Monitoring well MW-3 and MW-4 have had 15 sampling events between July 2003 and July 2008 when sampling was discontinued. All results have been either non-detect or below MTCA Method A cleanup levels (Tables).

**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 unrestricted land use 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 excavation and removal of the USTs, dispensers and associated piping, excavation and disposal of petroleum-contaminated soil, focused groundwater remediation, and groundwater sampling and analysis.

**4. Cleanup.**

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.



The extent of contamination has been adequately defined through several Site characterizations utilizing borings and installation of monitoring wells. Groundwater has been sampled from July 2003 through July 2008 in MW-2, MW-3, and MW-4. Groundwater has been sampled in MW-1 from July 11, 2003 through January 14, 2009 both prior to and after the 15 ORC injection events that took place in 2007 and 2008. All monitoring wells have shown four consecutive events with sample results below the MTCA Method A cleanup levels for groundwater.

#### **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 and Leaking Underground Storage Tank 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 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).

Mr. Rob Speer  
April 2, 2012  
Page 8


### 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 (#SW0670).

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 360-407-6179 or e-mail at [ptur461@ecy.wa.gov](mailto:ptur461@ecy.wa.gov).

Sincerely,



Paul Turner, L.HG.  
SWRO Toxics Cleanup Program

PT/ksc:Chevron Station 205412 VCP SW0670 NFA

Enclosures: Enclosure A -- Site Description and Site Location Map  
Figure 1 -- Site Plan with Monitoring Well Locations  
Tables-- Soil and Groundwater Analytical Results

By certified mail: (7010 0780 0002 3403 3237)

cc: Mr. Edwin Turner, L.HG, Connestoga-Rovers & Associates  
Mr. Bryan DeDoncker, Clark County Public Health  
Scott Rose -- Ecology  
Paul Turner - Ecology  
Dolores Mitchell -- Ecology (w/o enclosures)

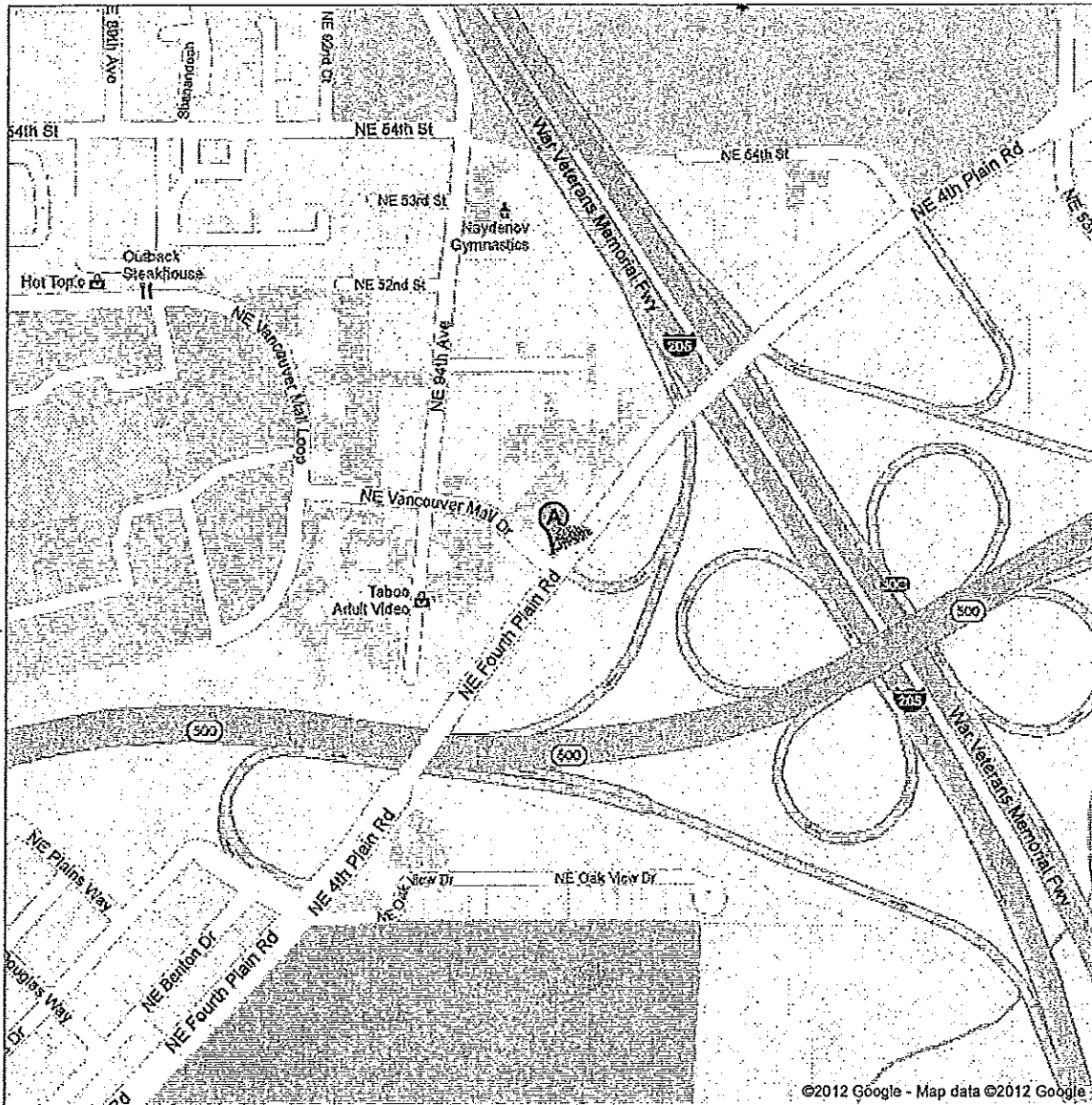
Mr. Rob Speer  
April 2, 2012  
Page 9

## **Enclosure A**

### **Site Description and Location Map**

The subject Site is located at 9414 Vancouver Mall Drive in Vancouver, Washington. The Clark County Assessor lists the property's parcel number as 159861000 located in the northwest quarter of Section 16, Township 2 North, and Range 2 East. The nearest surface water body is Burnt Bridge Creek, located approximately ½-mile to the southeast. The Site occupies approximately 0.42 acres. The property is zoned for commercial use. It is bordered by an urgent care clinic and a chiropractic clinic to the east; residences, a vacant lot, and a Best Western Hotel to the north; office buildings to the west; and a Shell-branded service station to the south. The property is currently used as an operating Chevron-branded service station and an automotive repair shop.

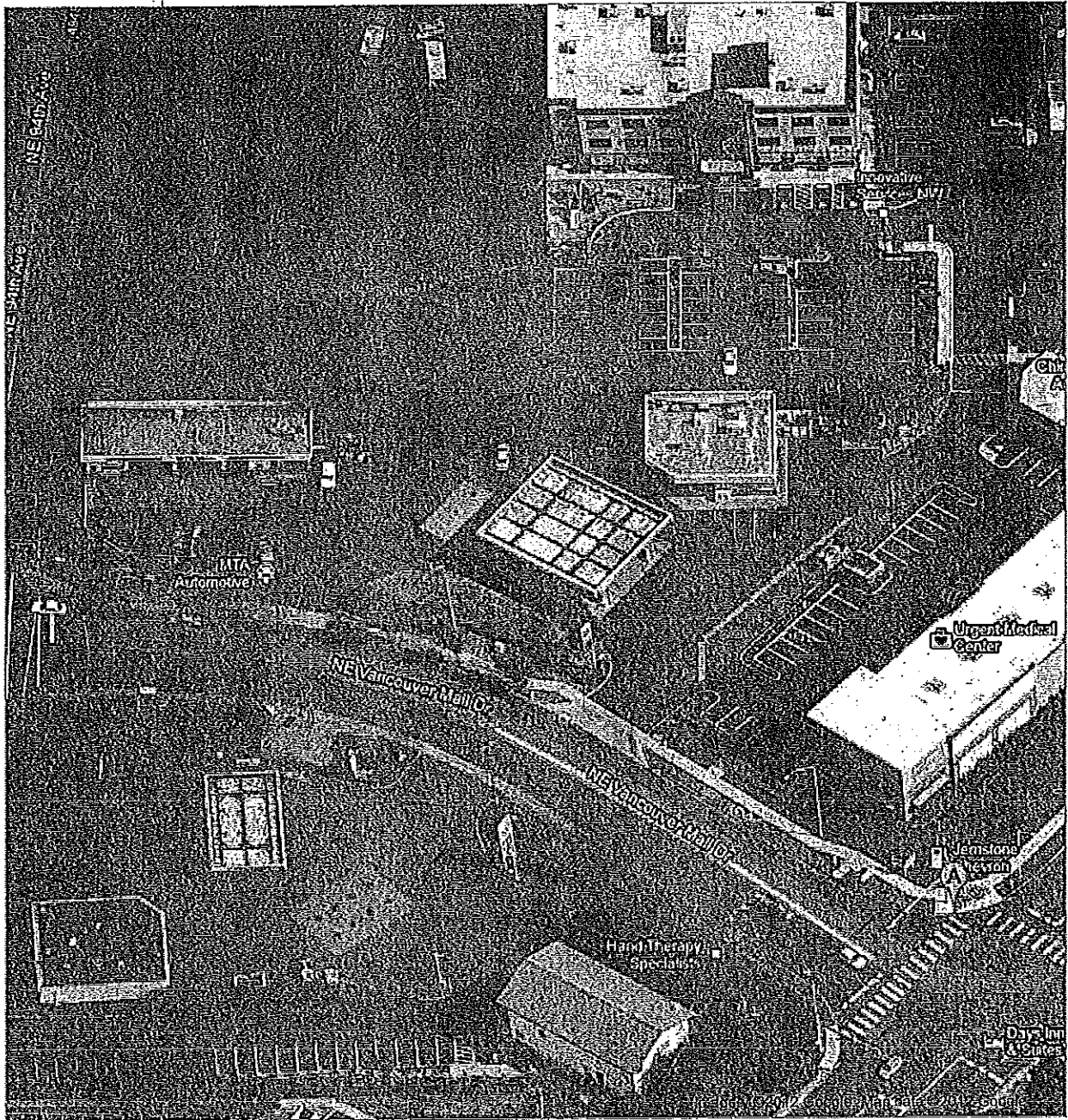






Google

To see all the details that are visible on the screen, use the "Print" link next to the map.





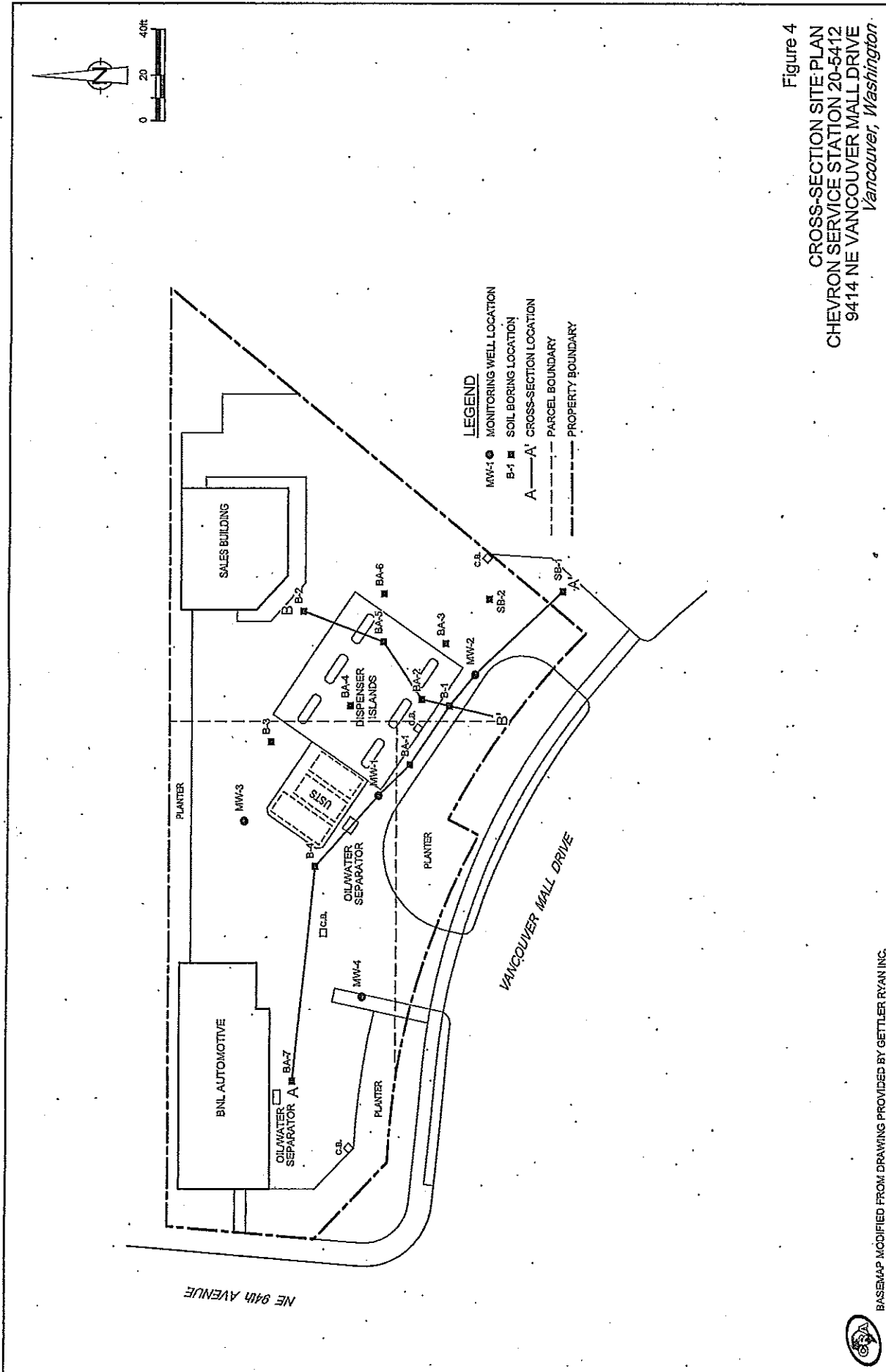


**Figure 1.**

**Site Plan**

**With Monitoring Well Locations**





BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER RYAN INC.  
612088-00(05)G34-WA004 JUN 07/2010



## **Tables.**

### **Soil and Groundwater Analytical Results**



TABLE 1

SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA  
CHEVRON SERVICE STATION 20-5412  
9414 NORTHEAST VANCOUVER MALL DRIVE  
VANCOUVER, WASHINGTON

Sample Location	Report Referenced	Sample Date	Sample Depth	HYDROCARBONS			PRIMARY VOCs							LEAD		gPAHs		PCBs
				TPH-HRO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE	EDB	EDC	Total	Total	Total		
MTCA Method A Cleanup Levels				2000	2000	100	0.03	7	6	9	0.1	0.005	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MW-1	SAIC 2003	7/3/2003	ft															
MW-1	SAIC 2003	7/3/2003	4	<10	<3	<1*	<0.005*	<0.005*	<0.005*	<0.02*	<0.005*	-	-	-	-	-	-	-
MW-2	SAIC 2003	7/3/2003	12.5	<10	<3	<1*	<0.005*	<0.005*	<0.005*	<0.02*	<0.005*	-	-	-	-	-	-	-
MW-2	SAIC 2003	7/3/2003	4	<10	<3	<1*	<0.005*	<0.005*	<0.005*	<0.02*	<0.005*	-	-	-	-	-	-	-
MW-2	SAIC 2003	7/3/2003	10	<10	<3	<1*	<0.005*	<0.005*	<0.005*	<0.02*	<0.005*	-	-	-	-	-	-	-
MW-3	SAIC 2003	7/3/2003	10	<10	<3	<1*	<0.005*	<0.005*	<0.005*	<0.02*	<0.005*	-	-	-	-	-	-	-
MW-4	SAIC 2003	7/3/2003	8	90	22	110**	<0.5**	<0.5**	<0.5**	<1.5**	<5.0**	-	-	-	-	-	-	-
BA-1	SECOR 2004	10/19/2004	5	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	0.003	-	-	-	-	-	-	-
BA-1	SECOR 2004	10/22/2004	11	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-2	SECOR 2004	10/19/2004	5	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	0.003	-	-	-	-	-	-	-
BA-2	SECOR 2004	10/22/2004	11	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-3	SECOR 2004	10/19/2004	5	24	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	0.002	-	-	-	-	-	-	-
BA-3	SECOR 2004	10/22/2004	11	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-4	SECOR 2004	10/19/2004	5	11	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	0.01	-	-	-	-	-	-	-
BA-4	SECOR 2004	10/22/2004	11	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-5	SECOR 2004	10/19/2004	5	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-5	SECOR 2004	10/22/2004	10.5	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-6	SECOR 2004	10/19/2004	5	49	11	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-6	SECOR 2004	10/22/2004	11	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-7	SECOR 2004	10/19/2004	5	310	74	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
BA-7	SECOR 2004	10/22/2004	10	<10	<3	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	-	-	-	-	-	-	-
SB-1	Cambria 2006	3/20/2006	2.5	<10	<3.0	<0.8	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.0009	<0.0009	15.0	0.0074730	-	-	-
SB-1	Cambria 2006	3/20/2006	5	<10	<3.0	<1.2	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.0009	<0.0009	5.83	0.0008143	-	-	-
SB-1	Cambria 2006	3/20/2006	7	<10	<3.0	<1	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.001	<0.001	4.91	<0.001	-	-	-
SB-1	Cambria 2006	3/20/2006	10	<10	<3.0	<1.1	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.001	<0.001	4.03	<0.001	-	-	-
SB-2	Cambria 2006	3/20/2006	2.5	<10	<3.0	<0.8	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.0009	<0.0009	6.83	0.0006293	-	-	-
SB-2	Cambria 2006	3/20/2006	5	<10	<3.0	<0.8	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.0008	<0.0008	5.53	<0.001	-	-	-
SB-2	Cambria 2006	3/20/2006	7	22	<3.0	<0.8	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.001	<0.001	5.18	<0.001	-	-	-
SB-2	Cambria 2006	3/20/2006	10	<10	<3.0	<0.8	<0.0500 a	<0.0500	<0.0500	<0.100	<0.0500	<0.0008	<0.0008	4.46	<0.001	-	-	-
B-1	Cambria 2006	11/15/2006	10	<50	<25	<3	<0.01	<0.01	<0.01	<0.02	<0.01	<0.005	<0.01	<2.3	<0.002	-	-	-
B-1	Cambria 2006	11/15/2006	14	<50	<25	<3	<0.01	<0.01	<0.01	<0.02	<0.01	<0.005	<0.01	<2.0	<0.002	-	-	-
B-2	Cambria 2006	11/15/2006	10	<50	<25	<3	<0.01	<0.01	<0.01	<0.02	<0.01	<0.005	<0.01	3.4	<0.002	-	-	-





TABLE 2

SUMMARY OF GROUNDWATER MONITORING DATA  
CHEVRON SERVICE STATION 20-5412  
9414 NORTHEAST VANCOUVER MAIL DRIVE  
VANCOUVER, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE ft	HYDROCARBONS				PRIMARY VOCs					LEAD	
					TPH-HRO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE	EDC	EDB	Total
					500 ug/L	500 ug/L	800/1000 ug/L	5 ug/L	1000 ug/L	700 ug/L	1000 ug/L	20 ug/L	5 ug/L	0.01 ug/L	15 ug/L
MW-1	7/11/2003	100.29	10.03	90.26	<200	<160	<50	<0.5	<0.5	<0.5	<1.5	13	160	—	—
MW-1	1/18/2004	100.29	8.33	91.96	290	540	<50	<0.5	<0.5	<0.5	<1.5	5.3 / 6	—	—	—
MW-1	4/16/2004	100.29	9.52	90.77	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	38 / 35	—	—	—
MW-1	7/19/2004	100.29	10.61	89.68	<250	<250	<50	120	1.5	<0.5	2.3	18 / 16	—	—	—
MW-1	10/3/2004	100.29	10.81	89.48	<250	<250	330	330	34	1.5	42	<50	—	—	—
MW-1	1/30/2005	100.29	9.96	90.33	<250	<250	<50	82	2.1	<0.5	<1.5	<5.0	—	—	—
MW-1	4/27/2005	100.29	9.72	90.57	470	580	52	4.5	<0.5	<0.5	<1.5	<2.5	<0.5	<0.5	6.2
MW-1	8/11/2005	100.29	10.75	89.54	13,000	58,000	180	66	6	1	21	8	—	—	—
MW-1	10/24/2005	100.29	10.62	89.67	3,000	6,800	140	4	<0.5	2	2	<0.5	—	—	—
MW-1	2/7/2006	100.29	7.38	92.91	270	180	<48	<0.5	<0.5	<0.5	<0.5	<0.5	—	—	—
MW-1	3/24/2006	100.29	8.76	91.53	<100	<81	<48	<0.5	<0.5	<0.5	<0.5	<0.5	—	—	—
MW-1	9/19/2006	100.29	10.49	89.80	<100	<81	<48	6	<0.5	<0.5	<0.5	2	—	—	—
MW-1	11/6/2006	100.29	9.21	91.08	240	280	<48	<0.5	<0.5	<0.5	<0.5	0.5	—	—	—
MW-1	1/10/2007	100.29	8.61	91.68	<260	<130	99	80	4.7	<1.0	16	<1.0	—	—	—
MW-1	7/10/2007	100.29	10.25	90.04	1,700	620	<50	<1.0	<1.0	<1.0	<2.0	—	—	—	—
MW-1	7/2/2008	100.29	10.08	90.21	<95	<76	<50	<0.5	<0.5	<0.5	<0.5	<0.5	—	—	—
MW-1	10/27/2008	100.29	10.88	89.41	—	—	<50	<0.5	<0.5	<0.5	<0.5	<0.5	—	—	—
MW-1	1/14/2009	100.29	8.30	91.99	<67	<29	—	<0.5	<0.5	<0.5	<0.5	—	—	—	—
MW-1	7/6/2009	100.29	10.75	89.54	<68	<29	—	—	—	—	—	—	—	—	—
MW-1	11/12/2009	100.29	9.72	90.57	<69	<30	—	—	—	—	—	—	—	—	—
MW-2	7/11/2003	100.24	11.41	88.83	<200	<160	<50	<0.5	<0.5	<0.5	<1.5	110	—	—	—
MW-2	1/18/2004	100.24	10.05	90.19	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	310 / 300	—	—	—
MW-2	4/16/2004	100.24	11.22	89.02	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	78 / 70	—	—	—
MW-2	7/19/2004	100.24	11.78	88.46	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	46 / 45	—	—	—



TABLE 2

SUMMARY OF GROUNDWATER MONITORING DATA  
CHEVRON SERVICE STATION 20-5412  
9414 NORTHEAST VANCOUVER MALL DRIVE  
VANCOUVER, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE	HYDROCARBONS				PRIMARY VOCs						LEAD	
					TPH-HRO	500	TPH-DRO	800/1000	B	T	E	X	MTBE	EDC	EDB	Total
	Units				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-2	10/3/2004	100.24	11.78	88.46	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	20	5	0.01	15
MW-2	1/30/2005	100.24	11.29	88.95	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	23 / 24	-	-	-
MW-2	4/27/2005	100.24	10.91	89.33	<100	<100	<81	<48	<0.5	<0.5	<0.5	<1.5	18 / 15	-	-	-
MW-2	8/11/2005	100.24	11.79	88.45	<100	<100	<80	<48	<0.5	<0.5	<0.5	<1.5	18	<0.5	<0.5	9.5
MW-2	10/24/2005	100.24	11.59	88.65	<99	<99	<79	<48	<0.5	<0.5	<0.5	<1.5	4	-	-	-
MW-2	2/7/2006	100.24	9.53	90.71	<100	<100	<82	<48	<0.5	<0.5	<0.5	<1.5	5	-	-	-
MW-2	3/24/2006	100.24	10.64	89.60	<100	<100	<81	<48	<0.5	<0.5	<0.5	<1.5	1	-	-	-
MW-2	9/19/2006	100.24	11.70	88.54	<100	<100	<83	<48	<0.5	<0.5	<0.5	<1.5	0.9	-	-	-
MW-2	11/6/2006	100.24	10.07	90.17	<100	<100	<80	<48	<0.5	<0.5	<0.5	<1.5	5	-	-	-
MW-2	1/10/2007	100.24	9.34	90.90	<260	<260	<130	<50	<1.0	<1.0	<1.0	<3.0	3.6	-	-	-
MW-2	7/10/2007	100.24	11.84	88.40	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	7/2/2008	100.24	11.50	88.74	<97	<97	<78	<50	<0.5	<0.5	<0.5	<1.5	<0.5	-	-	-
MW-2	10/27/2008	100.24	11.81	88.43	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	1/14/2009	100.24	10.13	90.11	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	7/6/2009	100.24	11.70	88.54	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	11/12/2009	100.24	11.03	89.21	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	7/11/2003	100.61	10.26	90.35	<200	<200	<160	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-
MW-3	1/18/2004	100.61	8.51	92.10	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-
MW-3	4/16/2004	100.61	9.76	90.85	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-
MW-3	7/19/2004	100.61	10.80	89.81	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-
MW-3	10/3/2004	100.61	11.02	89.59	<250	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-
MW-3	1/30/2005	100.61	10.24	90.37	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	4/27/2005	100.61	9.76	90.85	140	140	<82	<48	<0.5	<0.5	<0.5	<1.5	<2.5	<0.5	<0.5	1.9
MW-3	8/11/2005	100.61	10.98	89.63	<100	<100	<80	<48	<0.5	<0.5	<0.5	<1.5	<0.5	-	-	-



TABLE 2

SUMMARY OF GROUNDWATER MONITORING DATA  
CHEVRON SERVICE STATION 20-5442  
9414 NORTHEAST VANCOUVER MALL DRIVE  
VANCOUVER, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE ft	HYDROCARBONS			PRIMARY VOCs						LEAD Total ug/L		
					TPH-HRO 500 ug/L	TPH-DRO 500 ug/L	TPH-GRO 800/1000 ug/L	B 5 ug/L	T 1000 ug/L	E 700 ug/L	X 1000 ug/L	MTBE 20 ug/L	EDC 5 ug/L		EDB 0.01 ug/L	
					MTCA Method A Cleanup Levels											
MW-3	10/24/2005	100.61	10.80	89.81	<99	<79	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	2/7/2006	100.61	7.56	93.05	<100	<80	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	3/24/2006	100.61	8.88	91.73	<100	<80	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	9/19/2006	100.61	10.73	89.88	<110	<86	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	11/6/2006	100.61	9.46	91.15	<100	<80	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	1/10/2007	100.61	7.72	92.89	<260	<130	<50	<1.0	<1.0	<1.0	<3.0	<1.0	-	-	-	-
MW-3	7/10/2007	100.61	9.33	91.28	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	7/2/2008	100.61	10.25	90.36	<95	<76	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-3	10/27/2008	100.61	11.11	89.50	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	1/14/2009	100.61	8.61	92.00	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	7/6/2009	100.61	10.91	89.70	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	11/12/2009	100.61	10.02	90.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	7/11/2003	100.06	9.68	90.38	<96	<76	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-
MW-4	1/18/2004	100.06	8.16	91.90	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-
MW-4	4/16/2004	100.06	9.32	90.74	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-
MW-4	7/19/2004	100.06	10.28	89.78	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-
MW-4	10/3/2004	100.06	10.50	89.56	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-
MW-4	1/30/2005	100.06	9.43	90.63	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	4/27/2005	100.06	9.28	90.78	110	<79	<48	<0.5	<0.5	<0.5	<1.5	<2.5	<0.5	<0.5	0.87	-
MW-4	8/11/2005	100.06	10.39	89.67	<100	<82	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-4	10/24/2005	100.06	10.28	89.78	<98	<79	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-4	2/7/2006	100.06	7.04	93.02	<100	<81	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-4	3/24/2006	100.06	8.46	91.60	<100	<81	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-
MW-4	9/19/2006	100.06	10.33	89.73	<110	<85	<48	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-



TABLE 2

SUMMARY OF GROUNDWATER MONITORING DATA  
CHEVRON SERVICE STATION 20-5412  
9414 NORTHEAST VANCOUVER MALL DRIVE  
VANCOUVER, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE ft	HYDROCARBONS				PRIMARY VOCs						LEAD		
					TPH-HRO		TPH-DRO		TPH-GRO	B	T	E	X	MTBE	EDC	EDB	Total
					500 ug/L	500 ug/L	800/1000 ug/L	5	1000 ug/L								
MW-4	11/6/2006	100.06	9.08	90.98	210	150	<48		<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	
MW-4	1/10/2007	100.06	7.33	92.73	<260	<130	<50		<1.0	<1.0	<1.0	<3.0	<1.0	-	-	-	
MW-4	7/10/2007	100.06	8.87	91.19	-	-	-		-	-	-	-	-	-	-	-	
MW-4	7/2/2008	100.06	9.89	90.17	<95	<76	<50		<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	
MW-4	10/27/2008	100.06	10.56	89.50	-	-	-		-	-	-	-	-	-	-	-	
MW-4	1/14/2009	100.06	8.28	91.78	-	-	-		-	-	-	-	-	-	-	-	
MW-4	7/6/2009	100.06	10.38	89.68	-	-	-		-	-	-	-	-	-	-	-	
MW-4	11/12/2009	100.06	9.70	90.36	-	-	-		-	-	-	-	-	-	-	-	
BA-1	10/22/2004	-	11.15	-	<96	<77	<50		<0.5	<0.5	<0.5	<0.5	3	-	-	-	
BA-2	10/22/2004	-	11.9	-	<95	<76	<50		<0.5	<0.5	<0.5	<0.5	60	-	-	-	
BA-3	10/22/2004	-	11.33	-	<96	<77	<50		<0.5	<0.5	<0.5	<0.5	30	-	-	-	
BA-4	10/22/2004	-	11.85	-	<95	<76	<50		<0.5	<0.5	<0.5	<0.5	6	-	-	-	
BA-5	10/22/2004	-	10.98	-	<100	<80	<50		<0.5	<0.5	<0.5	<0.5	23	-	-	-	
BA-6	10/22/2004	-	11.41	-	<96	<77	<50		<0.5	<0.5	<0.5	<0.5	2	-	-	-	
BA-7	10/22/2004	-	11.18	-	<97	<77	<50		<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	
B-1	11/15/2006	-	15	-	<250	<130	<50		<1	<1	<1	<3	<2	-	-	25	
B-4	11/15/2006	-	12	-	<250	<130	<50		6	<1	<1	<3	<2	-	-	<3	

