



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

April 30, 2013

Mr. Don Cramer  
4610 NE 125 Circle  
Vancouver, WA 98686

**Re: Further Action at the following Site:**

- **Site Name:** ACGH Joint Ventures
- **Site Address:** 8111 NE Hwy 99, Vancouver, WA
- **Facility/Site No.:** 9954245
- **Cleanup Site ID No.:** 5507
- **Former VCP Project No.:** SW0271

Dear Mr. Cramer:

The Washington State Department of Ecology (Ecology) received a report from PBS Engineering and Environmental, dated June 29, 2007, that confirmed both soil and groundwater contamination above the Model Toxics Control Act (MTCA) Method A cleanup levels exists at this Site. The Site had previously been issued a determination of No Further Action (NFA) on July 11, 2000. This letter provides our opinion. We are providing this opinion under the authority of the MTCA, Chapter 70.105D RCW.

**This letter replaces the Ecology NFA determination of July 11, 2000. Ecology's NFA determination of July 11, 2000 issued to this Site is hereby rescinded while you conduct the necessary additional and final cleanup at this Site to address the MTCA substantive requirements for the petroleum hydrocarbons.**

**Issue Presented and Opinion**

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

**YES. Ecology has determined that 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 hydrocarbons and related constituents into the Soil and Groundwater.

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

Please note 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. 3 Kings Environmental, Soil Removal Report/UST Removal Report, Site Location, ACGH Joint Ventures, 8111 Highway 99, Vancouver, WA 98665, October 1997.
2. A.C.G.H. Joint Ventures, Final Report, Cleanup and Disposal of Petroleum Contaminated Soil at 8111 N.E. Hwy 99, Vancouver, WA (Site No. 404424), Cleanup Started-September 1997, Cleanup Completed-October 28, 1998, January 15, 1999.
3. PBS Engineering and Environmental, Technical Environmental Services, June 29, 2007.

Those 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 those documents is materially false or misleading.

### **Analysis of the Cleanup**

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Ecology has concluded that **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 not sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in Enclosure A.

Between August 13 and September 25, 1997, 3 Kings Environmental (3 Kings) conducted a Site assessment and underground storage tank (UST) removal project on the ACGH Joint Ventures property located at 8111 Highway 99 in Vancouver, Washington. Six test pits were dug to a maximum depth of 12 feet below ground surface (bgs) and soil samples collected for analysis. Three 675-gallon USTs were decommissioned, removed, and transported to Floyd's Recycling on October 27, 1997. Approximately 600 cubic yards of petroleum- contaminated soil (PCS) was excavated and stockpiled on Site to be treated prior to disposal. Groundwater was not encountered during the UST removals or during the exploratory trenching activities. It was estimated that approximately 20 cubic yards of PCS remained along the southwest margin of the property extending under the sidewalk and Highway 99 (Fig. 2). In January 1998, the previously stockpiled soil was returned to the excavation. The sample results from the nine stockpile samples collected are shown in Figure 3. Based on a review of the submitted data, Ecology issued a determination of No Further Action on July 11, 2000 (Fig. 4).

PBS Engineering and Environmental (PBS) conducted a geotechnical subsurface investigation on April 19, 2007 on the subject property. While advancing a boring located near the northwest corner of the Site (Fig. 5), the PBS field geologist noted a petroleum hydrocarbon odor in the soil cuttings from depths of 6 to 12 feet bgs.

On May 23, 2007, PBS performed an environmental subsurface investigation based on the results of the geotechnical soils sampling conducted on April 19, 2007 and a Phase 1 Environmental Site Assessment (ESA) completed in May 2007. PBS completed the Phase 1 ESA on the property to determine the possible source(s) for the petroleum hydrocarbons encountered during the geotechnical subsurface investigation. According to various sources, the portion of the property that fronts Highway 99 was a gasoline station in the 1960s and 1970s. The property is listed as a battery repair shop in 1977. A neighbor indicated that there was a radiator repair shop on the property in the 1990s, prior to the demolition.

Drilling was conducted on May 23, 2007, with drilling services provided by Boart Longyear from Tualatin, Oregon. Direct push drilling was conducted using a track-mounted Geoprobe 6620DT. Ten borings were advanced to a total depth of 15 feet bgs and one boring to a total depth of 20 feet bgs. Borings were designated as B-1 through B-11.

Soil samples were collected from the soil/groundwater interface, at approximately 8 to 10 feet bgs. Soil samples from B-2 through B-9 were submitted for hydrocarbon identification using Method NWTPH-HCID. No petroleum hydrocarbons were identified. To verify the HCID

results, soil samples from B-1, B-2, B-3, B-4, and B-9 were submitted for gasoline analysis by NWTPH-Gx. Soil samples from B-2 and B-9 were submitted for diesel-range petroleum hydrocarbons by NWTPH-Dx. Soil from B-3 was submitted for selected petroleum-related volatile organic compounds (VOCs). The analytical results (Fig. 6) indicated gasoline detected in the soils from B-1 and B-4 and low concentrations of ethylbenzene in the soil samples from B-3. Only the gasoline concentration of 247 milligrams per kilogram (mg/kg) from boring B-1 was above the MTCA Method A cleanup value of 100 mg/kg (30 mg/kg when benzene has been detected, 100 mg/kg if no benzene detection).

Groundwater samples from B-1 and B-9 were submitted for hydrocarbon identification using NWTPH-HCID. Gasoline was detected in both groundwater samples and heavy oil range hydrocarbons were detected in the sample from B-1. Additional testing included NWTPH-Gx on samples from B-1, B-4, B-5, B-9, and B-11. NWTPH-Dx was analyzed on samples from B-1 and B-4. Gasoline exceeded the MTCA Method A value of 800 micrograms per liter ( $\mu\text{g/L}$ ) in B-4 (3,470  $\mu\text{g/L}$ ) and B-9 (4,540  $\mu\text{g/L}$ ). Diesel concentrations exceeded the MTCA Method A value of 500  $\mu\text{g/L}$  in B-1 (1,460  $\mu\text{g/L}$ ) and in B-4 (2,360  $\mu\text{g/L}$ ). Heavy oil concentrations exceeded the MTCA Method A value of 500  $\mu\text{g/L}$  in the groundwater sample from B-1 (4,620  $\mu\text{g/L}$ ). While several VOCs were detected, only benzene exceeded the MTCA Method A value of 5.0  $\mu\text{g/L}$  with a concentration of 6.31  $\mu\text{g/L}$  in B-1. (Fig. 6)

Based on a review of the above-listed documents, Ecology has the following comments:

1. Upon receipt of the PBS report, Ecology updated the Leaking Underground Storage Tank (LUST) status to "Awaiting Cleanup" on July 9, 2007. An Early Notice Letter was not generated at that time as the consultant had determined that the contamination was most likely due to the prior release.
2. The Site is currently considered to be in an Independent Cleanup category. A copy of the regulations WAC 173-340-450 Releases from Underground Storage Tanks is attached as Figure 6. It lists all the requirements that must be followed during the cleanup process. WAC 173-340-900 Table 830-1 Required Testing for Petroleum Releases (Table 830-1) provides a table of the analyses that are required and is attached as Figure 7.
3. The extent of groundwater contamination needs to be fully characterized. A minimum of three groundwater monitoring wells will need to be installed to determine the groundwater flow direction and gradient. More wells may be needed to fully define the extent of contamination.
4. The extent of soil contamination should be fully characterized around boring B-1.

5. It is recommended that a soil sample be collected from the area of the former UST excavation since all of the stockpiled soil was returned to this area. Analysis should include the parameters required from Table 830-1.
6. If you are interested in having Ecology provide technical assistance with the cleanup process, Ecology recommends re-enrolling the Site into the Voluntary Cleanup Program (VCP). Information on the VCP can be found on Ecology's website at [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm).

**2. Establishment of cleanup standards.**

Ecology has determined the cleanup levels and points of compliance you established for the Site do not meet the substantive requirements of MTCA.

MTCA Method A cleanup levels for soil and groundwater shall be used at the Site. The point of compliance for protection of groundwater shall be 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 shall be established in the soils throughout the Site from the ground surface to 15 feet bgs. In addition, the point of compliance for the groundwater shall be 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 does not meet the substantive requirements of MTCA.

Cleanup actions conducted at the Site to date included source removal and partial excavation of PCS. Residual contaminated soils are still present beneath the Site that may warrant further cleanup. A minimum of three permanent monitoring wells need to be installed to determine the groundwater flow direction and gradient. From this information, further characterization of the extent of groundwater contamination will be necessary prior to developing a cleanup action plan.

**4. Cleanup.**

Ecology has determined the cleanup you performed does not meet any cleanup standards at the Site.

Three USTs were decommissioned and removed in 1997. Approximately 600 cubic yards of PCS was removed and stockpiled. Nine samples were collected from the stockpile. It appears that the stockpile samples were only analyzed for TPH-G and one of the samples, Stock Pile #3, had a result of 250 mg/Kg, which was above the MTCA Method A cleanup level for soil of 100 mg/Kg. No map showing locations or depths of the samples collected from the stockpile was provided. It is stated in the January 15, 1999 ACGH report that all of the stockpiled soil was returned to the excavation.

### **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. Don Cramer  
April 30, 2013  
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### Contact Information

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Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

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, please contact me by phone at (360) 407-6347 or via email at [ptur461@ecy.wa.gov](mailto:ptur461@ecy.wa.gov).

Sincerely,



Paul Turner, L.HG  
SWRO Toxics Cleanup Program

PT/ksc:ACGH rescind VCP SW0271

Enclosures:      A – Description and Diagrams of the Site  
                      Figure 1: Site Location Map and Aerial Photo  
                      Figure 2: Sample Location Maps and Analytical Results from the Soil and  
                                  UST Removal Report by 3 Kings Environmental, October 1997  
                      Figure 3: Stockpile Sample Results Submitted August 5, 1998  
                      Figure 4: Determination of No Further Action, July 11, 2000  
                      Figure 5: Soil and Groundwater Sample Locations from PBS 2007  
                                  Environmental Study  
                      Figure 6: Soil and Groundwater Sample Results from PBS 2007  
                                  Environmental Study  
                      Figure 7: WAC 173-340-450 Releases from Underground Storage Tanks  
                      Figure 8: WAC 173-340-900 Table 830-1 Required Testing for Petroleum  
                                  Releases

By certified mail: (7012 1010 0003 0195 2747)

cc:      Mr. Jay Stammer, First Independent Bank,  
            ACGH Joint Ventures  
            Bryan DeDoncker, Environmental Health Specialist, Clark Co. Public Health  
            Dolores Mitchell, Ecology  
            Scott Rose (Ecology)





## **Enclosure A**

### **Description and Diagrams of the Site**



## **Site Description**

The Site is located at 8017 NE Highway 99 in Vancouver, Clark County, Washington. The Site is currently a vacant lot bordered by NE Highway 99 to the west and NE 13<sup>th</sup> Avenue to the east. A restaurant with a paved parking lot lies to the south and an apartment complex lies directly north. The history of the Site has shown a gasoline station, radiator shop, battery repair shop, and 11 homes all existed at one time. The homes built during the 1940s and 1950s were demolished in the 1990s.



## **Figure 1**

### **Site Location Map and Aerial Photo**

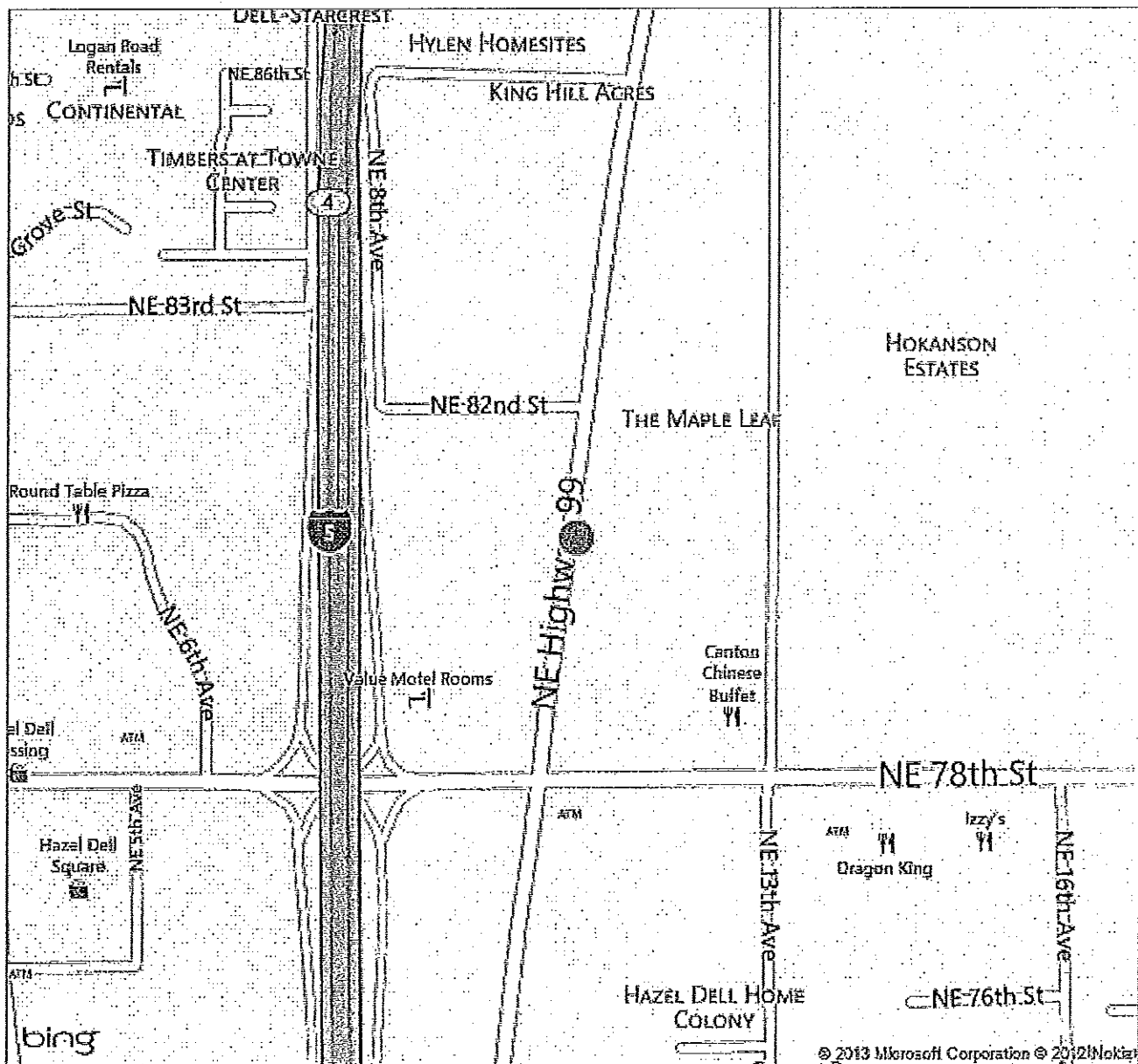
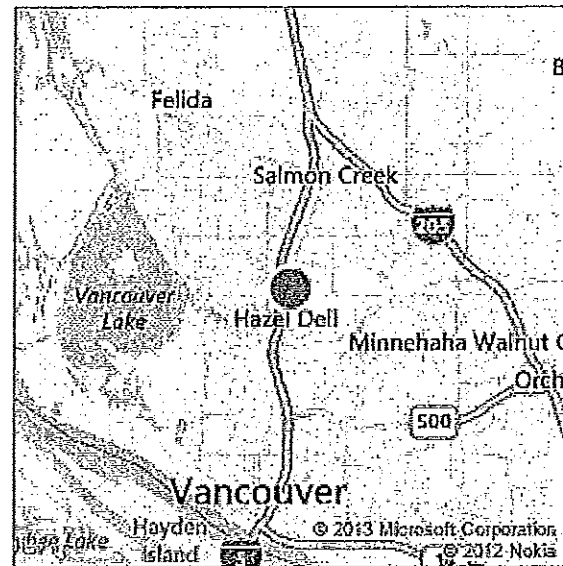
bing Maps

8111 NE Highway 99, Vancouver, WA 98665

My Notes



On the go? Use [m.bing.com](http://m.bing.com) to find maps, directions, businesses, and more



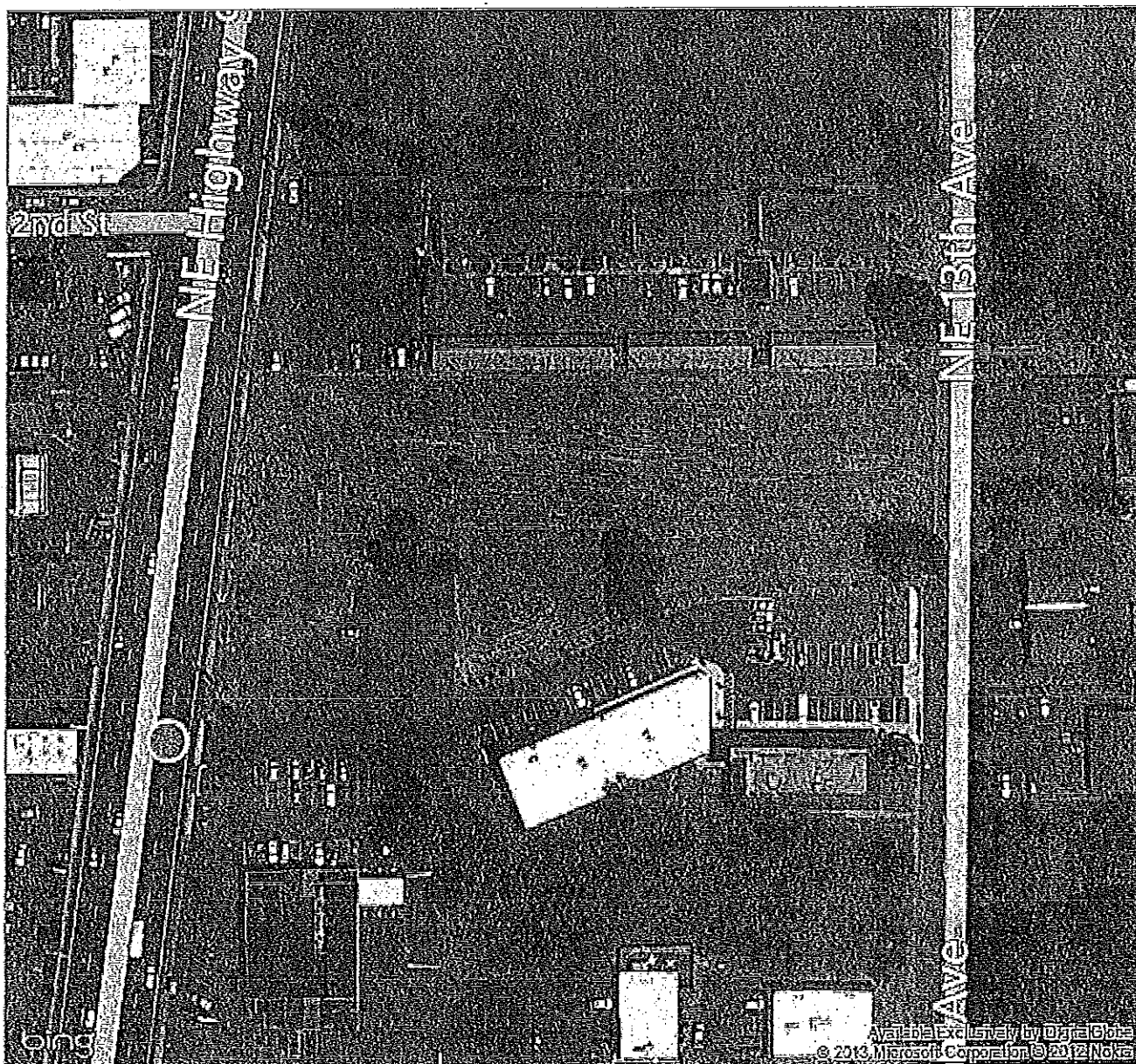
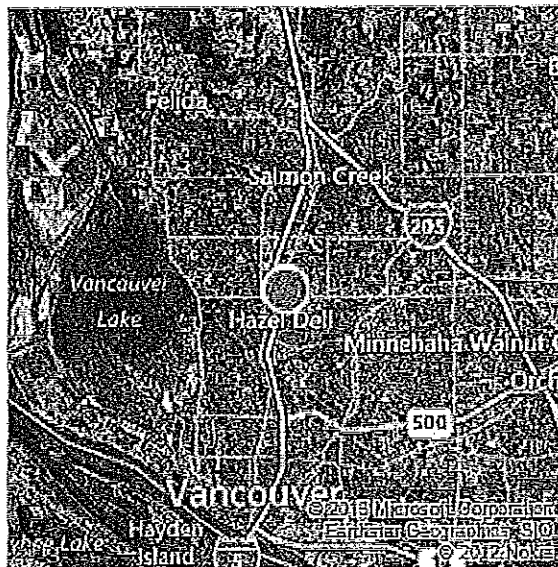
bing Maps

8111 NE Highway 99, Vancouver, WA 98665

My Notes



On the go? Use [m.bing.com](http://m.bing.com) to find maps, directions, businesses, and more



**Figure 2**

**Sample Location Maps and  
Analytical Results from the  
Soil and UST Removal Report by  
3 Kings Environmental October 1997**



On September 19, 1997 the final round of closure samples were obtained. Analytical results of soil samples taken indicated all accessible contamination above DOE clean-up levels had been removed.

On September 25, 1997, demolition of the radiator shop commenced. One vehicle hoist was removed and returned to the owner. Analytical results of soil samples taken below the hoist indicated heavy oils above DOE clean-up levels. On September 29 approximately three cubic yards of soil was removed and stockpiled on plastic (to be disposed of by others). Final soil sample results indicated contamination levels below DOE clean-up limits.

#### 4.0 SOIL CLEANUP LEVELS

Guidance for information required for an independent cleanup was followed using (WAC 173-340) This site was cleaned up using method A cleanup standards. One pocket of approximately 20 cubic yards remain on site, due to its location.( UNDER HIGHWAY 99).

#### 5.0 SAMPLING / ANALYSIS

Sampling was accomplished by Dave Franklin using clean 9 oz glass jars with Teflon lined lids. The samples were taken using the focused approach (WAC 173-340-820), due to olfactory indicators, and visible signs of soil staining. Also taken into consideration was the lack of groundwater. All samples were ran for HCID with follow-up, if needed. Samples positive for HCID were also analyzed for applicable follow-up analysis (TPH-G, 418.1M and BTEX).

##### 5.1 Soil Analytical Results

8/13/97

Sample ID #	Matrix	Analytical Results/HCID
FBR-01	soil	34 PPM / TPH GAS
FBR-02	soil	ND
FBR-03	soil	ND

8/19/97

Sample ID#	Matrix	Location	Analytical Results/TPH-G
FBR-S.P.-SOUTH- 01	soil	STOCK PILE	ND
FBR-S.P.-NORTH-02	soil	STOCK PILE	1100 PPM /TPH GAS

9/17/97

Sample ID#	Matrix	Location	Analytical Results/TPH-G
SOUTH SIDE BOTTOM-01	soil		13 PPM TPH GAS
NORTH SIDE BOTTOM-02	soil		21 ppm TPH GAS
NWSW-03-5' 5"	soil	NORTH WEST SIDE WALL	ND
SWSW-04-6'	soil	SOUTH WEST SIDE WALL	1,200ppmTPH GAS
SWSW-05-12'-IN	soil	SOUTH WEST SIDE WALL	ND
NWSW-06-12'-IN	soil	NORTH WEST SIDE WALL	17ppm TPH GAS
SSW-07-4'	soil	SOUTH SIDE WALL 4' B.G.S.	14ppm TPH GAS

9/18/97

Sample ID#	Matrix	Location	Analytical Results/TPH-G
NORTH SIDE BOTTOM-08	soil		ND
NORTHWEST SIDE WALL-09	soil		N/D

09/19/97

Sample ID#	Matrix	Location	Analytical Results/TPH-G
E.S.W.-12	soil	EAST SIDE WALL	ND
E.S.W.-13	soil	EAST SIDE WALL	90ppm TPH GAS
N.E. BOTTOM-15	soil	NORTH EAST BOTTOM	ND
EAST BOTTOM-16	soil	EAST BOTTOM	ND
S.W. BOTTOM-17	soil	SOUTH WEST BOTTOM	13ppm TPH GAS
SOUTHEAST BOTTOM-18	soil	SOUTH EAST BOTTOM	ND
N.E.S.W.-11	soil	NORTH EAST SIDE WALL	ND

09/22/97

Sample ID#	Matrix	Location	Analytical Results/TPH-G
S.E.S.W.-14	soil	SOUTH EAST SIDE WALL	ND
N.S.W.-10	soil	NORTH SIDE WALL	N/D

09/26/97

Sample ID#	Matrix	Location	Analytical Results/418,1M
HOIST-01	soil	UNDER HOIST	13,800ppm OIL
HOIST-02	soil	3' BELOW HOIST	2,000ppm OIL

Hwy 99 (5 LANES)

N

Side walk 4'

4' from hole edge to sidewalk

3 TANKS

Island 30' wide

Station location

26'

81'

28'

50'

40'

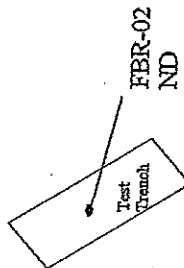
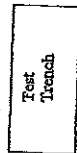
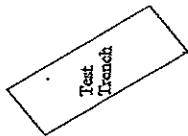
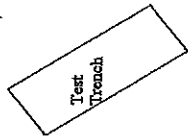
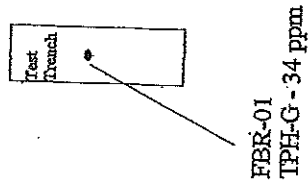
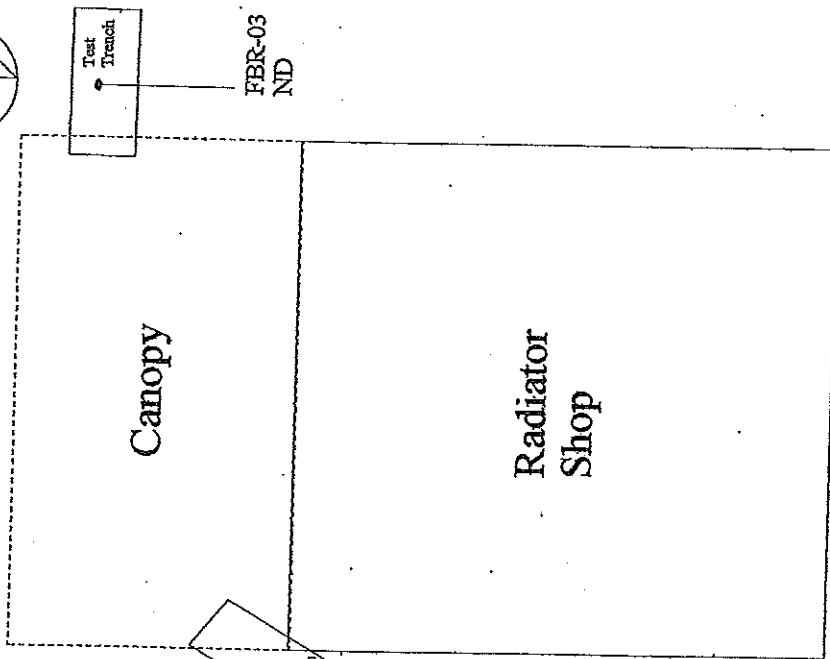
70'

15'

Site General location

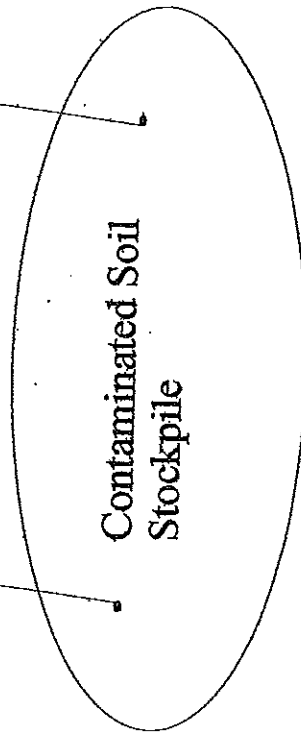
NOT TO SCALE

Northside  
race WALL  
T. 5A



FBR-SP-South-01  
ND

FBR-SP-North-02  
TPH-G - 1100 ppm



## Test Trench Sample Map

Date 11/3/97

Project: FBR

Address: 8111 Hwy 99  
Vancouver, WA

Drawn By: David Franklin

Map not to Scale

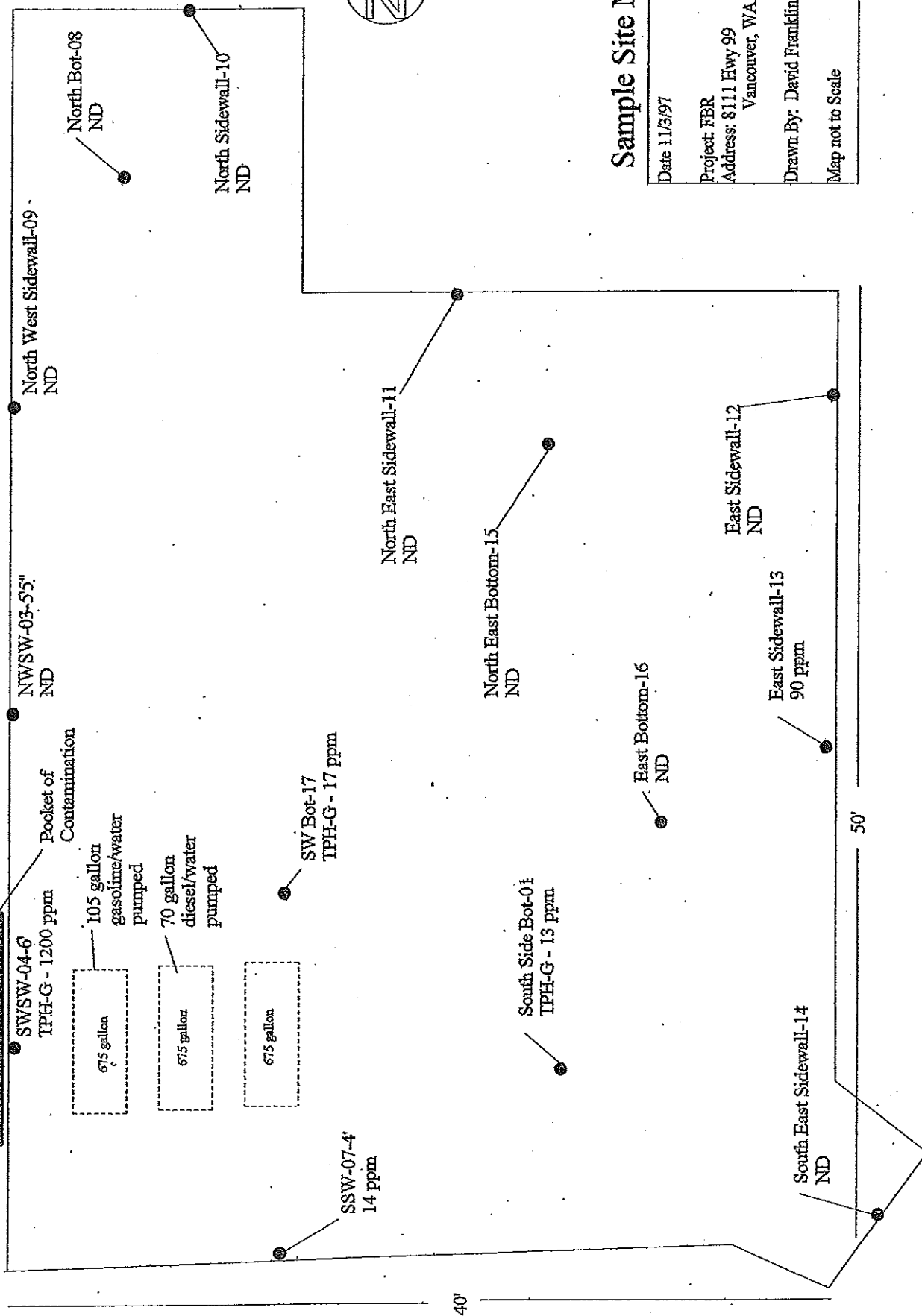
# Highway 99

NWSW-06-12' In  
TPH-G - 17ppm

SWSW-05-12' IN  
ND

Sidewalk

Sidewalk



## Sample Site Map

Date 11/3/97

Project: FBR

Address: 8111 Hwy 99  
Vancouver, WA

Drawn By: David Franklin

Map not to Scale

# **Figure 3**

**Stockpile Sample Results**

**Submitted August 5, 1998**



# CERTIFICATE OF ANALYSIS

CLIENT: ACGH JOINT VENTURE  
8115 HIGHWAY 99  
VANCOUVER WA 98665

PHONE: (360) 696-4571  
FAX: (360) 696-5842

DATE SUBMITTED: 08/05/98  
PROJECT NAME: CLEAN UP STOCKPILE

CI SAMPLE #	CLIENTS ID#	DATE	TIME	DESCRIPTION
981069-001	SP#1	08/04/98	1900	STOCKPILE #1
981100-001	SP#2	08/12/98	0730	STOCKPILE #2
981128-001	SP#3	08/17/98	0715	STOCKPILE #3
981140-001	SP#4	08/19/98	0725	STOCKPILE #4
981140-002	SP#5	08/19/98	0725	STOCKPILE #5
981193-001	SP#6	09/01/98	0740	Stockpile #6
981251-001	SP#7	09/08/98	1730	STOCKPILE #7
981448-001	SP#8	10/13/98	1730	STOCKPILE #8
981448-002	SP#9	10/13/98	1730	STOCKPILE #9

REPORT DATE: 12/16/98

REPORT NUMBER: 981069-981448

PAGE: 1 OF 1

SAMPLE	ANALYSIS	PARAMETER	RESULT	UNIT	DETECTION LIMIT/SURROGATE	ANALYST
STOCKPILE #1						
981069-001	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 102%	Abigail K.
STOCK PILE #2						
981100-001	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 78%	Abigail K.
STOCK PILE #3						
981128-001	WTPH-G	TPH AS GASOLINE SURROGATE	250	PPM	13 OBSCURED	Abigail K.
STOCKPILE #4						
981140-001	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 69%	Abigail K.
STOCKPILE #5						
981140-002	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 60%	Abigail K.
Stockpile #6						
981193-001	WTPH-G	TPH AS GASOLINE SURROGATE	28	PPM	13 62%	Abigail K.
STOCKPILE #7						
981251-001	WTPH-G	TPH AS GASOLINE SURROGATE	54	PPM	13 142%	Jacob F.
STOCK PILE #8						
981448-001	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 81%	Abigail K.
STOCK PILE #9						
981448-002	WTPH-G	TPH AS GASOLINE SURROGATE	ND	PPM	13 123%	Abigail K.

REVIEWED BY:

*Richard D. Reid*  
Richard D. Reid - Laboratory Director

## **Figure 4**

**Determination of No Further Action**

**July 11, 2000**





*John*

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 11, 2000

Mr. Don Cramer  
4610 NE 125<sup>th</sup>  
Vancouver, WA 98686

Dear Mr. Cramer:

Thank you for submitting the results of your independent remedial action for review by the Washington State Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information regarding the soils remediation activities at the former Campbell's Radiator Shop (A.C.G.H. Joint Venture), located at 8111 NE Highway 99, Vancouver, Washington 98665:

- 3 Kings Environmental, Soil Removal Report/UST Removal Report, Site Location, ACGH Joint Venture, 8111 Highway 99, Vancouver, WA 98665, October 1997.
- A.C.G.H. Joint Venture, Final Report, Cleanup and Disposal of Petroleum Contaminated Soil at 8111 N.E. Hwy 99, Vancouver, WA (Site No. 404424), Cleanup Started - September 1997, Cleanup Completed - October 28, 1998, January 15, 1999.

Your reports will be kept in the Central Files of the Southwest Regional Office (SWRO) of Ecology for review by appointment only. Appointments can be made by calling the SWRO resource person, at (360) 407-6365.

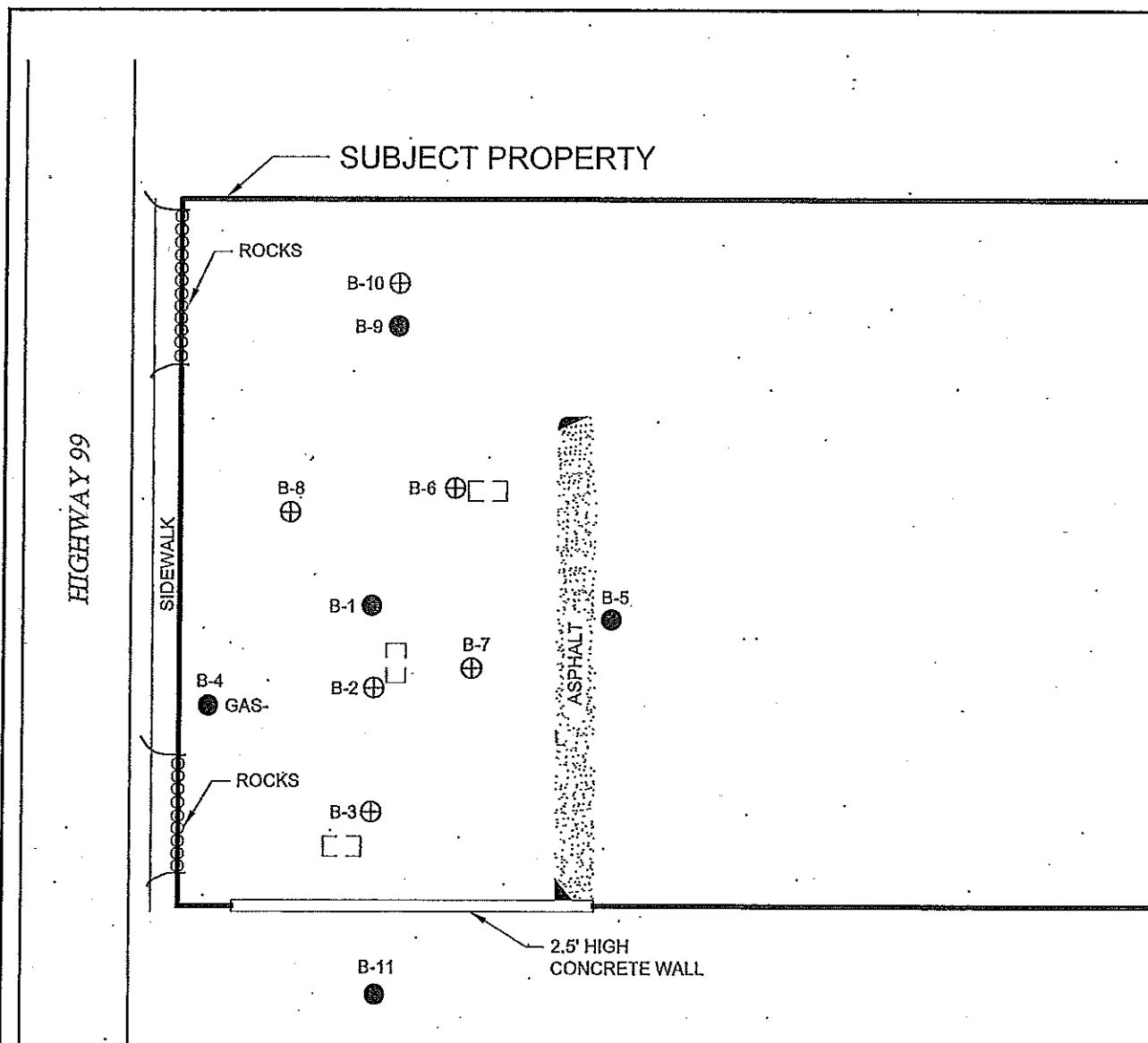
Based upon the above listed information, Ecology has determined that, at this time, the release of total petroleum hydrocarbons (TPH) into the soil no longer poses a threat to human health or the environment. Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, Chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

However, all TPH could not be removed from the soils. Approximately, 20 cubic yards of contaminated materials still remain in the southwest corner wall of the excavated portion of the site below the sidewalk and NE Highway 99 right-of-way. This amount is not considered to pose a threat to human health or the environment, but should be addressed whenever the sidewalk or Highway 99 is disturbed in this area at some future date.

## **Figure 5**

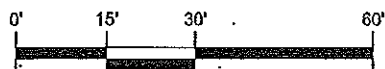
### **Soil and Groundwater Sample Locations from PBS 2007 Environmental Study**

L:\VANCOUVER\2000\72512\_FirstIndependentBank\Task 003 - Subsurface Investigation\DWG\72512.003\_FIG 2.dwg Jun 28, 2007 02:32pm



# LEGEND

- B-1 ● SOIL AND WATER
- B-6 ⊕ SOIL
- METALLIC ANOMALIES



SCALE: 1" = 30'

PREPARED FOR: FIRST INDEPENDENT BANK



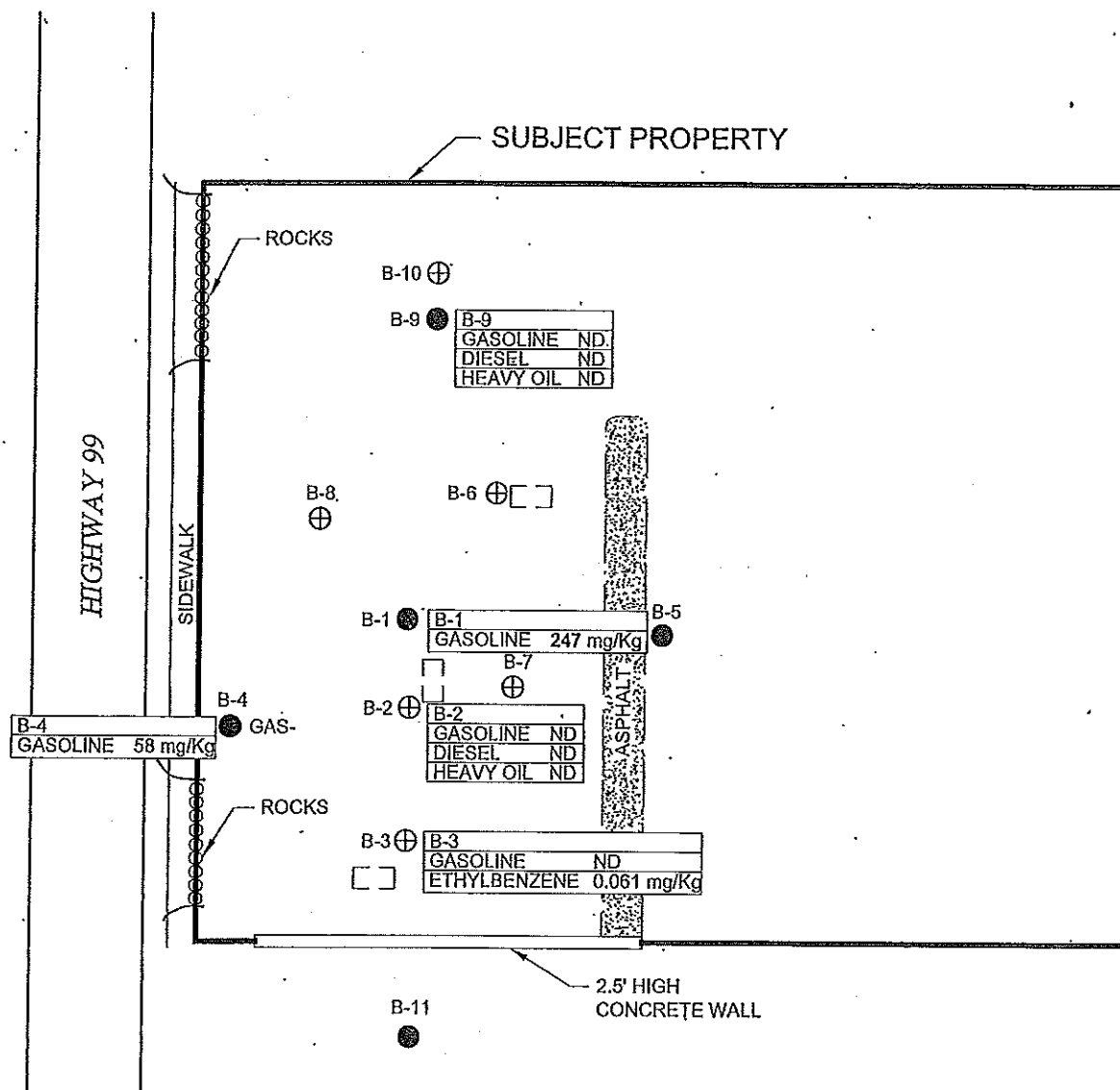
PROJECT #:  
72512.000  
DATE:  
JUN 2007

SITE PLAN WITH SAMPLE LOCATIONS  
8015 NE HIGHWAY 99  
VANCOUVER, WASHINGTON

FIGURE

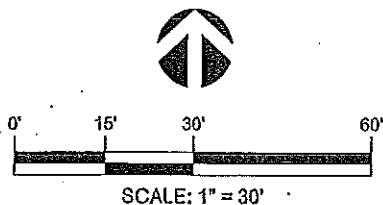
2

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### LEGEND

- B-1 ● SOIL AND WATER
- B-6 ⊕ SOIL
- mg/Kg MILLIGRAMS PER KILOGRAM
- METALLIC ANOMALIES
- 247 CONCENTRATION ABOVE MTCA METHOD A CRITERIA
- ND CONCENTRATIONS BELOW LABORATORY METHOD REPORTING LIMITS



PREPARED FOR: FIRST INDEPENDENT BANK



PROJECT #:  
72512.000

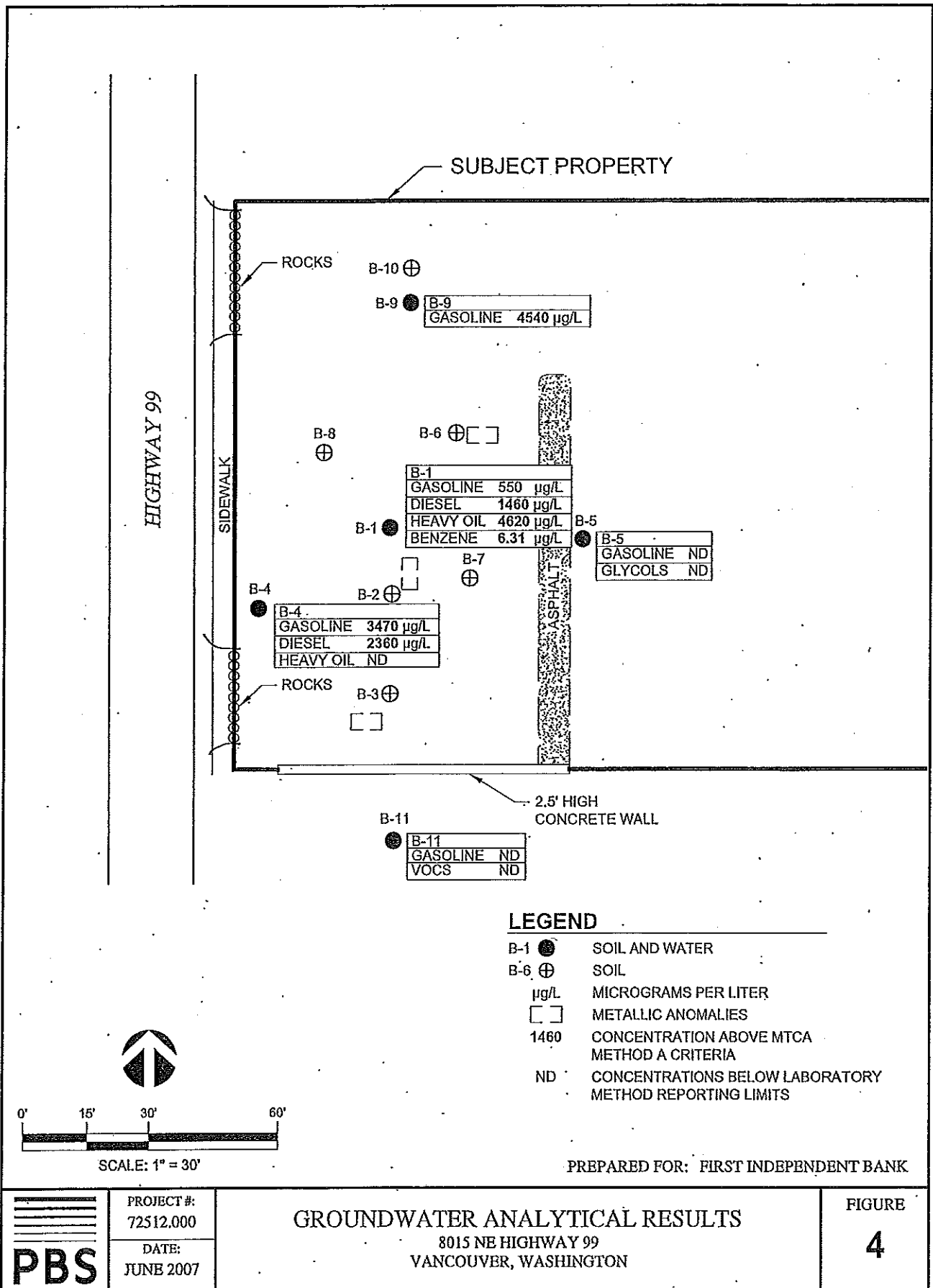
DATE:  
JUNE 2007

**SOIL ANALYTICAL RESULTS**

8015 NB HIGHWAY 99  
VANCOUVER, WASHINGTON

FIGURE  
**3**

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## **Figure 6**

### **Soil and Groundwater Sample Results from PBS 2007 Environmental Study**

**Table 1**  
**Summary of Soil Analytical Results**  
 First Independent Bank  
 Highway 99  
 Vancouver, Oregon

Sample Number		B-1/9-10	B-2/9-10	B-3/8-10	B-4/8-10	B-9/9-10	Washington MTCA Cleanup Standards
Date Collected		5/23/2007					Method A Table Value for Unrestricted Land Use
Sample Interval (feet bgs)		9-10	9-10	8-10	8-10	9-10	
NWTPH	Gasoline Range Hydrocarbons (mg/kg)	247	ND	ND	58.0	ND	100*
	Diesel Range Hydrocarbons (mg/kg)	-	ND	-	-	ND	2,000
	Heavy Oil Range Hydrocarbons (mg/kg)	-	ND	-	-	ND	2,000
Selected Volatile Organic Compounds (VOCs) (mg/Kg)	Benzene	-	-	ND	-	-	
	Toluene	-	-	ND	-	-	
	Ethylbenzene	-	-	0.061	-	-	6
	Xylenes (total)	-	-	ND	-	-	
	Naphthalene	-	-	ND	-	-	
	1,2,4-Trimethylbenzene	-	-	ND	-	-	
	Isopropylbenzene	-	-	ND	-	-	
	n-Propylbenzene	-	-	ND	-	-	
	Remaining VOCs	-	-	ND	-	-	

Notes:

-: Not Analyzed

ne: action levels for this constituent are not established

Bold text indicates the levels are at or above MTCA Method A Cleanup Standards  
 for soil for unrestricted land use

ND: Not detected

MTCA: Model Toxics Control Act

mg/Kg: milligrams/Kilograms

bgs: below ground surface

See Lab Report for full list of constituents analyzed.

**Table 2**  
**Summary of Groundwater Analytical Results**  
 First Independent Bank  
 Highway 99  
 Vancouver, Washington

Sample Number		B-1/GW 14	B-4/GW 15	B-5/GW 15	B-9/ GW 20	B-11/GW 15	Washington MTCA Cleanup Standards
Date Collected		5/23/2007					Method A Table Value for Groundwater
Sample Interval (feet bgs)		14	15	15	20	15	
NWTPH	Gasoline Range Hydrocarbons (ug/L)	550	3,470	ND	4,540	ND	800
	Diesel Range Hydrocarbons (ug/L)	1,460	2,360	-	-	-	500
	Heavy Oil Range Hydrocarbons (ug/L)	4,620	ND	-	-	-	500
Glycols (mg/l)	Diethylene glycol Ethylene glycol Propylene glycol	-	-	ND	-	-	*****
Selected Volatile Organic Compounds (VOCs)	Benzene (ug/L)	6.31	-	-	-	-	5.0
	Toluene (ug/L)	0.81	-	-	-	-	1,000
	Ethylbenzene (ug/L)	27.3	-	-	-	-	700
	Xylenes (total) (ug/L)	4.75	-	-	-	-	1000
	Naphthalene (ug/L)	8.74	-	-	-	-	160
	1,2,4-Trimethylbenzene (ug/L)	5.47	-	-	-	-	*****
	Isopropylbenzene (ug/L)	13	-	-	-	-	*****
	n-Propylbenzene (ug/L)	17.7	-	-	-	-	*****
	Remaining VOCs (ug/L)	ND	-	-	-	-	*****
Volatile Organic Compounds (VOCs)		-	-	-	-	ND	*****

Notes:

\*\*\*\*\*: Not Applicable

-: Not Analyzed

Bold text indicates the levels are at or above MTCA Method A Cleanup Standards for soil for unrestricted land use

ND: Not detected

MTCA: Model Toxics Control Act

bgs: below ground surface

ug/L: micrograms/Liter

See Lab Report for full list of constituents analyzed.



**Figure 7**

**WAC 173-340-450**

**Releases from Underground Storage Tanks**

**WAC 173-340-450 Releases from underground storage tanks.**

**(1) Purpose.** The purpose of this section is to set forth the requirements for addressing releases that may pose a threat to human health or the environment from an underground storage tank (UST) regulated under chapter 90.76 RCW.

**(a)** Releases from USTs exempted under chapter 90.76 RCW and rules adopted therein are still subject to all other requirements of this chapter.

**(b)** Unless the department requires otherwise, UST owners and UST operators regulated under chapter 90.76 RCW shall comply with the requirements in this section after confirmation of an UST release that may pose a threat to human health or the environment.

**(2) Initial response.** Within twenty-four hours of confirmation of an UST release, the UST owner or the UST operator shall perform the following actions:

**(a)** Report the UST release to the department and other authorities with jurisdiction, in accordance with rules adopted under chapter 90.76 RCW and any other applicable law;

**(b)** Remove as much of the hazardous substance from the UST as is possible and necessary to prevent further release to the environment;

**(c)** Eliminate or reduce any fire, explosion or vapor hazards in such a way as to minimize any release of hazardous substances to surface water and ground water; and

**(d)** Visually inspect any aboveground releases or exposed belowground releases and prevent the hazardous substance from spreading into surrounding soils, ground water and surface water.

**(3) Interim actions.**

**(a)** As soon as possible but no later than twenty days following confirmation of an UST release, the UST owner or the UST operator shall perform the following interim actions:

**(i)** Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that may have migrated from the UST into structures in the vicinity of the site, such as sewers or basements;

**(ii)** Reduce the threat to human health and the environment posed by contaminated soils that are excavated or discovered as a result of investiga-

tion or cleanup activities. Treatment, storage and disposal of soils must be carried out in compliance with all applicable federal, state and local requirements;

**(iii)** Test for hazardous substances in the environment where they are most likely to be present. Such testing shall be done in accordance with a sampling and analysis plan prepared under WAC 173-340-820. The sample types, sample locations, and measurement methods shall be based on the nature of the stored substance, type of subsurface soils, depth to ground water and other factors as appropriate for identifying the presence and source of the release. If contaminated soil is found in contact with the ground water or soil contamination appears to extend below the lowest soil sampling depth, then testing shall include the installation of ground water monitoring wells to test for the presence of possible ground water contamination. Information gathered for the site check or closure site assessment conducted under rules adopted under chapter 90.76 RCW, which sufficiently characterizes the releases at the site, may be substituted for the testing required under this paragraph;

**(iv)** The testing performed under (a)(iii) of this subsection shall use the analytical methods specified in WAC 173-340-830 and include, at a minimum, the following:

**(A)** For petroleum product releases, the concentration(s) of hazardous substances potentially present at the site, as appropriate for the type of petroleum product(s) released. The minimum testing requirements are specified in Table 830-1.

**(B)** The hazardous substance stored and any likely decomposition by-products where a hazardous substance other than petroleum may be present; and

**(C)** Any other tests required by the department; and

**(v)** Investigate for the presence of free product.

**(4) Free product removal.** At sites where investigations indicate free product is present, the UST owner or the UST operator shall conduct, as soon as possible after discovery, an interim action to remove the free product while continuing, as necessary, any other actions required under this

section. To accomplish this the UST owner or UST operator shall:

(a) Conduct free product removal to the maximum extent practicable and in a manner that minimizes the spread of hazardous substances, by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site. The objective of free product removal system must be, at a minimum, to stop the free product migration;

(b) Properly treat, discharge, or dispose of any hazardous substance, water, sludge or any other materials collected in the free product removal process in compliance with all applicable local, state, and federal regulations and permits; and

(c) Handle all flammable products safely to prevent fires and explosions.

**(5) Reporting requirements.** The following reports are required to be submitted to the department:

(a) **Status report.** Within twenty days after an UST release, the UST owner or UST operator shall submit a status report to the department. The status report shall identify if known, the types, amounts, and locations of hazardous substances released, how the release occurred, evidence confirming the release, actions taken under subsections (2) and (3) of this section, any planned remedial actions, and any results of work done up to the time of the report. This report may be provided verbally to the department.

(b) **Site characterization reports.** Within ninety days after release confirmation, unless directed to do otherwise by the department, the UST owner or UST operator shall submit a report to the department about the site and nature of the release. This report shall be submitted to the department in writing and may be combined with the twenty-day status report, if the information required is available at that time. The site characterization report shall include, at a minimum, the following information:

(i) The information required for the status report under (a) of this subsection;

(ii) A site conditions map indicating approximate boundaries of the property, all areas where hazardous substances are known or suspected to be located, and sampling locations. This map may

consist of a sketch of the site at a scale sufficient to illustrate this information;

(iii) Available data regarding surrounding populations, surface and ground water quality, use and approximate location of wells potentially affected by the release, subsurface soil conditions, depth to ground water, direction of ground water flow, proximity to and potential for affecting surface water, locations of sewers and other potential conduits for vapor or free product migration, surrounding land use, and proximity to sensitive environments;

(iv) Results of tests for hazardous substances performed under subsection (3)(a)(iii) and (iv) of this section;

(v) Results of the free product investigation required under subsection (3)(a)(v) of this section;

(vi) Results of all completed site investigations, interim actions and cleanup actions and a description of any remaining investigations, cleanup actions and compliance monitoring that are planned or underway; and

(vii) Information on the free product removal efforts at sites where investigations indicate free product is present. This shall include, at a minimum, the following information:

(A) Name of the person responsible for implementing the free product removal measures;

(B) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes and excavations;

(C) The type of free product recovery system used;

(D) The location of any on-site or off-site discharge during the recovery operation;

(E) The type of treatment applied to, and the effluent quality expected from, any discharge;

(F) The steps taken, and planned to obtain necessary permits for any discharge;

(G) Disposition of recovered free product; and

(viii) Any other information required by the department.

**(6) Remedial investigation and feasibility study:**

(a) If the initial cleanup actions taken at an UST site do not achieve cleanup levels throughout the site, a remedial investigation and feasibility study may need to be conducted in accordance

with WAC 173-340-350. The scope of a remedial investigation and feasibility study will depend on the informational needs at the site. UST owners and operators shall conduct a remedial investigation and feasibility study for sites where the following conditions exist:

(i) There is evidence that the release has caused hazardous substances to be present in the ground water in excess of the ground water standards adopted under chapter 90.48 RCW or cleanup levels in WAC 173-340-720 (Table 720-1);

(ii) Free product is found; or

(iii) Where otherwise required by the department.

(b) UST owners and UST operators shall submit the information collected for the remedial investigation/feasibility study to the department as soon as practicable. The information may be included with other reports submitted under this section.

(c) If the department determines, based on the results of the remedial investigation/feasibility study or other information, that additional remedial action is required, the department may require the UST owner or the UST operator to submit engineering documents as described in WAC 173-340-400.

(7) **Cleanup actions.** Unless directed to do otherwise by the department, cleanup actions performed by UST owners or UST operators shall comply with the cleanup standards described in WAC 173-340-700 through 173-340-760 and the requirements for the selection of cleanup actions in WAC 173-340-350 through 173-340-390.

(8) **Independent cleanup actions.** In addition to work performed under subsections (2) through (5), and (7) of this section, UST owners or UST operators performing independent cleanup actions shall:

(a) Notify the department of their intention to begin cleanup. This can be included with other reports under this section;

(b) Comply with any conditions imposed by the department to assure adequate protection of human health and the environment; and

(c) Within ninety days of completion of the cleanup action, submit the results of all investigations, interim and cleanup actions and compli-

ance monitoring not previously submitted to the department.

[Statutory Authority: Chapter 70.105D RCW, 01-05-024 (Order 97-09A), § 173-340-450, filed 2/12/01, effective 8/15/01; 91-04-019, § 173-340-450, filed 1/28/91, effective 2/28/91.]

## **Figure 8**

**WAC 173-340-900 Table 830-1**

**Required Testing for Petroleum Releases**

**Table 830-1**  
**Required Testing for Petroleum Releases.**

	<b>Gasoline Range Organics (GRO) (1)</b>	<b>Diesel Range Organics (DRO) (2)</b>	<b>Heavy Oils (DRO) (3)</b>	<b>Mineral Oils (4)</b>	<b>Waste Oils and Unknown Oil (5)</b>
<b>Volatile Petroleum Compounds</b>					
Benzene	X (6)	X (7)			X (8)
Toluene	X (6)	X (7)			X (8)
Ethyl benzene	X (6)	X (7)			X (8)
Xylenes	X (6)	X (7)			X (8)
n-Hexane	X (9)				
<b>Fuel Additives and Blending Compounds</b>					
Dibromoethane, 1-2 (EDB); and Dichloroethane, 1-2 (EDC)	X (10)				X (8)
Methyl tertiary-butyl ether (MTBE)	X (11)				X (8)
Total Lead and Other Additives	X (12)				X (8)
<b>Other Petroleum Components</b>					
Carcinogenic PAHs		X (13)	X (13)		X (8)
Naphthalenes	X (14)	X (14)	X (14)		X (14)
<b>Other Compounds</b>					
Polychlorinated Biphenyls (PCBs)			X (15)	X (15)	X (8)
Halogenated Volatile Organic Compounds (VOCs)					X (8)
Other	X (16)	X (16)	X (16)	X (16)	X (16)
<b>Total Petroleum Hydrocarbons Methods</b>					
TPH Analytical Method for Total TPH (Method A Cleanup Levels) (17)	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx	NWTPH-Dx	NWTPH-Gx & NWTPH-Dx
TPH Analytical Methods for TPH fractions (Methods B or C) (17)	VPH	EPH	EPH	EPH	VPH and EPH

[Editor's Note: See next page for the footnotes associated with Table 830-1.]