



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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CERTIFIED MAIL

7008 2810 0001 3939 5361

March 4, 2009

Mr. Donald Lundquist
PO Box 3190
Sun Valley, ID 83383

Re: No Further Action at the following Site:

- **Site Name:** Precision Pattern Inc
- **Site Address:** 2620 East G Street, Tacoma
- **Facility/Site No.:** 85239825
- **VCP Project No.:** SW0973

Dear Mr. Lundquist:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Precision Pattern Inc 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 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.



A total of nine confirmatory soil samples were collected from the tank excavation. Seven samples were collected from the sidewalls at about 5 to 6 feet bgs where groundwater was observed seeping into the excavation. The two floor samples were collected beneath the former tank at about 7.5 feet bgs. TPH-D was detected in a couple of the sidewall samples at 150 milligrams per kilogram (mg/kg) and 270 mg/kg; however, none of the sampling results exceeded the MTCA Method A cleanup level of 2,000 mg/kg.

Subsequent analyses of groundwater collected from the three monitoring wells installed through the floor of the facility resulting in four consecutive quarters of groundwater data below MTCA cleanup levels.

Listing of the Site

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

Limitations of the Opinion

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.

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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

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW0973).

For more information about the VCP and the cleanup process, please visit our web site: 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 at (360) 407-6347 or via email at sros461@ecy.wa.gov.

Sincerely,



Scott Rose, L.G.
Acting Unit Manager
SWRO Toxics Cleanup Program

SIR/ksc:Precision Pattern Site NFA

Enclosures (1): A – Description and Diagram of the Site
Figure 1 – Property Location Map
Figure 2 – Groundwater Contour Map
Table 1 – Groundwater Analytical Data

cc: Ryan Bixby, Sound Environmental Strategies
Tony Ohrazda, Tacoma/Pierce County Health Dept.
Dolores Mitchell, Department of Ecology

Enclosure A

Description and Diagram of the Site

The Precision Pattern, Inc. (PPI) site is located at 2620 East G Street in Tacoma, Pierce County, Washington. The site comprises two tax parcels (2076260030 & 2077250070) covering a total of about 0.75 acres. The majority of the site contains a single-story, masonry built structure. The site lies in a mixed used area primarily consisting of commercial and industrial zoned properties. To the north across East 26th Street is Kessler Manufacturing and vacant land. Western Beer Distributors lies across East G Street to the east. Vacant land separates the site from the Tacoma Dome to the south, and the site shares its western property line with Tacoma Propeller.

PPI specializes in custom design and fabrication of composite tooling and provides precision machining, and steel and aluminum tooling and modeling. They have been located at the site address for the last 39 years. The release and resulting contamination at the site was the result of a 1,325-gallon leaking underground storage tank (UST) located beneath the structure that contained heating oil.

PPI is located approximately 1,800 feet southeast of the Thea Foss waterway of Commencement Bay. The site rests approximately 30 feet above sea level and is on artificial fill with a mixed Alderwood-Everett soil classification. The Alderwood series consists of moderately deep to a cemented pan, moderately well drained soils formed in glacial till. Alderwood soils are on glacially modified foothills and valleys. The Everett series consists of very deep, somewhat excessively drained soils formed in glacial outwash or alluvium with an admixture of volcanic ash on terraces, moraines, and terrace escarpments. Subsurface investigations performed by Zipper Zemen Associates, Inc. (ZZA) describes the subsurface soils as "saturated to wet" silty sandy gravel to a depth of approximately 4 feet. Groundwater was noted to be seeping into the UST excavation at about 6.5 feet below ground surface (bgs). Based on the surrounding topography, which slopes up steeply to the west of the site, the direction of groundwater flow beneath the site is presumed to locally flow east.

In late October 2004, PPI staff observed water coming up through cracks and panel joints in the shop floor. A plumber was hired to evaluate the cause of the flooding, and through the use of a video camera, was able to determine that leaks in the sanitary sewer existed to the east and west of the shop. The City of Tacoma was contacted and it was then discovered that city work crews were currently in the process of repairing the sewer, upslope to the west. On

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October 31, 2004, a substance visually consistent with heating oil mixed with water began to seep from the cracks and panel joints in the shop floor.

The release was reported to Ecology by PPI staff on November 1, 2004. The Tacoma Pierce County Health Department (TPCHD) responded and observed water and oil rising from the shop floor. The TPCHD advised PPI to investigate the possibility of a UST beneath the shop.

On November 4, 2004, PPI hired Environmental Tank Service (ETS) to pump and dispose the water oil mixture that had collected in the shop. During this work, a vent pipe was discovered outside the northwest corner of the shop building. Further investigation revealed a fill pipe located in the shop, flush with the floor. ETS removed about 1,200 gallons of oil and water from the site.

On November 5, 2004, ZZA investigated conditions outside the west wall of the shop and interviewed City of Tacoma Public Works staff. It was learned that an 8-inch diameter concrete and terra cotta sewer line, located approximately 6 inches bgs, extended from the west, traveling under the shop to East G Street. This sewer line is located approximately 50 feet south of the shop where water-oil intrusion was occurring.

On November 15, 2004, one hand auger boring was advanced to a depth of 3.7 feet bgs. One soil sample (AS-2) was collected and analyzed for fluoride and chloride via EPA Test Method 300. AS-2 was also sampled for diesel- and oil-range petroleum hydrocarbons (TPH-D and TPH-O) via test method NWTPH-Dx. Analytical results did not indicate the presence of TPH-D or TPH-O above laboratory detection limits or Model Toxics Control Act (MTCA) cleanup levels for soil.

On November 19, 2004, two water samples were collected. W1 was collected from the east side of the building from a discharge hose that routed from below the shop floor. W2 was collected from the west side of the shop near the base of the slope and where groundwater seepage had been observed. Both water samples were analyzed for TPH-D and TPH-O as well as fecal coliform and fluoride. Fluoride and TPH were not detected above laboratory detection limits or MTCA cleanup levels for groundwater. The documented sampling and analysis that was conducted was for the purposes of identifying the cause(s) of the oil and water intrusion, rather than to define the extent of the contamination.

In March 2005, Sound Environmental Strategies (SES) visited the site to oversee the attempted removal of the UST and assess the extent of contamination. The concrete slab above the tank was cut open and soil was removed from the sides of the tank to facilitate removal. Groundwater instantly seeped into the excavation. Attempts to dewater the

excavation with a pump truck could not keep up with the recharge, and loose soil continuously sloughed into the excavation. Four soil samples were collected from the excavated soil and analyzed for TPH-D and TPH-O. Concentrations of TPH-D ranged from 490 milligrams per kilogram (mg/kg) to 18,000 mg/kg. The excavated soil was placed back in the excavation and the UST was left in place until shoring could be used at a later date.

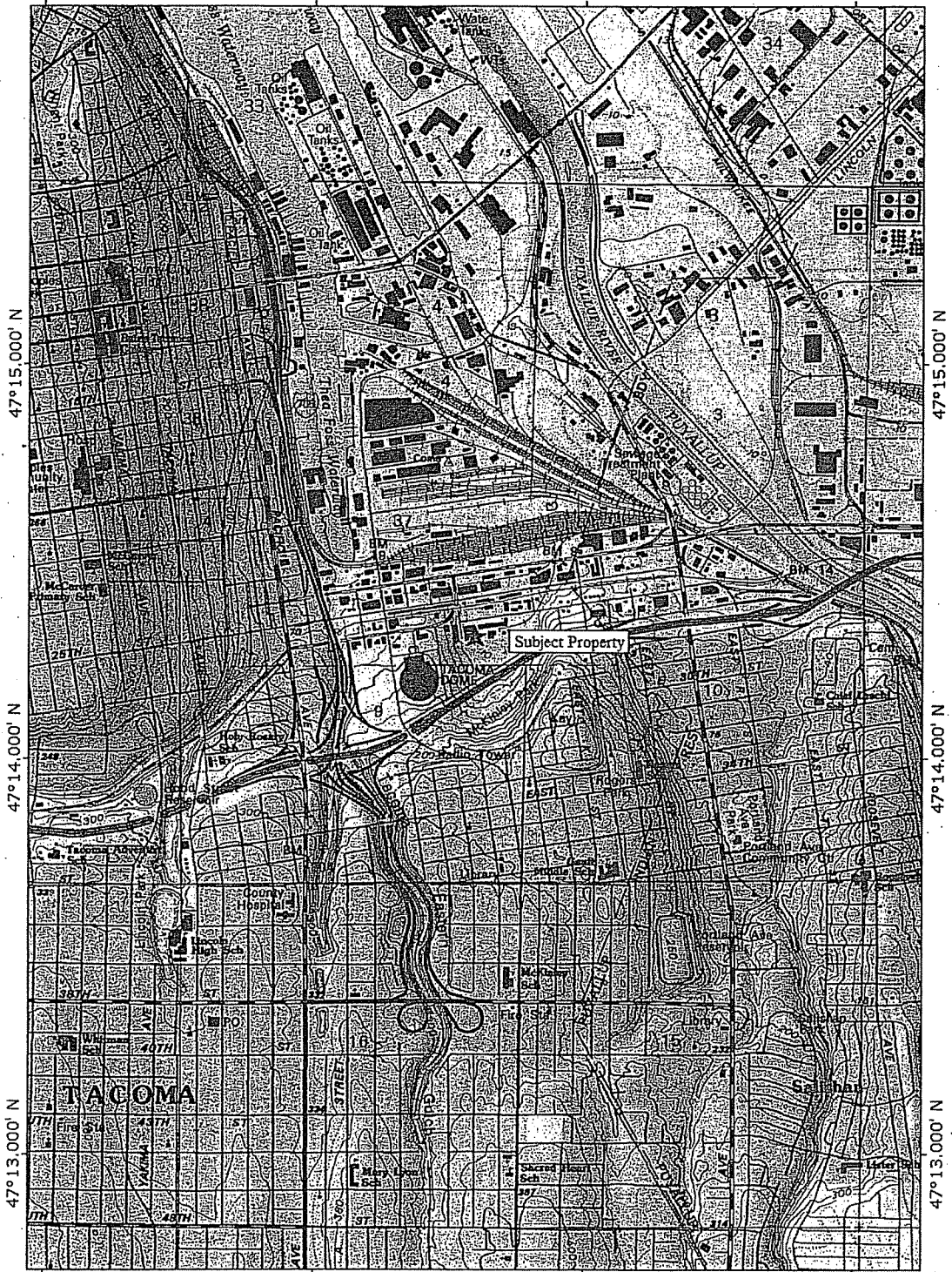
The UST removal project was conducted on November 29 and 30, 2005. TPCHD staff was on site during the removal project and noted that the tank was located approximately 1 foot bgs and extended to a depth of 7 feet bgs. Groundwater was observed to be entering from the west basin wall, and visual confirmation of impact to soil and groundwater was also noted. A total of 30 tons of petroleum-contaminated soil and 300 gallons of diesel from the UST were transported off site for disposal at PRS Group, Inc. in Tacoma.

A total of nine confirmatory soil samples were collected from the excavation. Seven samples were collected from the sidewalls at about 5 to 6 feet bgs where groundwater was observed seeping into the excavation. The two floor samples were collected beneath the former tank at about 7.5 feet bgs. TPH-D was detected in a couple of the sidewall samples at 150 mg/kg and 270 mg/kg; however, none of the sampling results exceeded the MTCA Method A cleanup level of 2,000 mg/kg.

In December 2007, three monitoring wells (MW-01 through MW-03) were installed through the concrete floor of the building. MW-01 (screened from 2 to 10 feet bgs) was installed adjacent to the former UST excavation, and MW-02 (screened from 2 to 10 feet bgs) and MW-03 (screened from 2 to 7 feet bgs) were installed in the presumed downgradient direction of the excavation. Groundwater was encountered between 5 and 7 feet bgs in the borings; however, the depth to groundwater rose to 0.23 feet below the top of the casing in MW-02 and 0.5 feet below the top of the casing in MW-03, indicative of artesian conditions.

Groundwater samples were collected in January 2008 and analyzed for TPH-D, TPH-O, gasoline-range petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes. Except for toluene at 5 micrograms per liter ($\mu\text{g/L}$) in MW-01 (well below the cleanup level of 1,000 $\mu\text{g/L}$), none of the contaminants were detected above laboratory detection limits. Subsequent quarterly events resulted in four consecutive quarters of groundwater data below MTCA cleanup levels.

TOPO! map printed on 12/20/07 from "Washington.tpo" and "Untitled.tpg"
 122°27.000' W 122°26.000' W 122°25.000' W WGS84 122°24.000' W



122°27.000' W 122°26.000' W 122°25.000' W WGS84 122°24.000' W
 IN 17 1/2' 0 1000 FEET 0 500 1000 METERS 0 5 1 MILE
 Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)



Date: July 9, 2008
 Drawn By: N. Hoeft
 Chk By: C. League
 SES Project No.: 0459-001-04
 File ID: 0459_fig1_property location map

Precision Pattern, Inc.
 2620 East G Street
 Tacoma, Washington

FIGURE 1
 Property Location Map

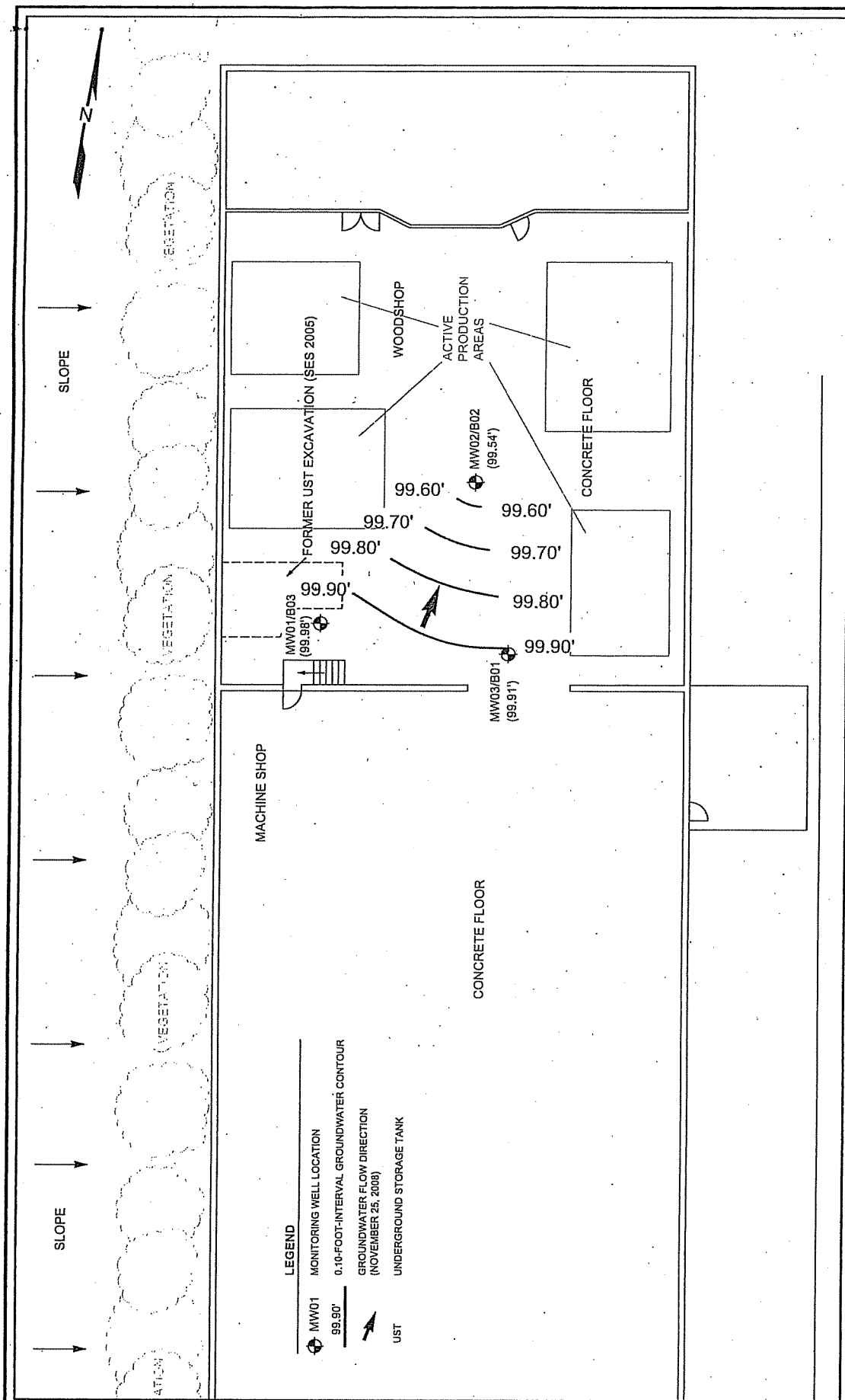
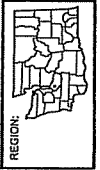
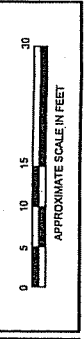


FIGURE 2
GROUNDWATER CONTOUR MAP
(NOVEMBER 25, 2008)



PROJECT NAME:PRECISION PATTERN, INC.
 SES PROJECT NUMBER:0459-001-04
 STREET ADDRESS:2620 EAST G STREET
 CITY, STATE:TACOMA, WASHINGTON

DATE:12/04/08
 DRAWN BY:NAC/JQC
 CHECKED BY:HCL
 CAD FILE:0459-001-03_200804_CM

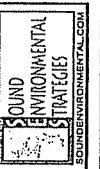




Table 1
Groundwater Analytical Data
Precision Pattern, Inc.
2620 East G Street
Tacoma, Washington

Location	Date Sampled	Depth to Groundwater (feet)	Groundwater Elevation ² (feet)	Analytical Results (µg/L)				Total Xylenes ⁴	
				ORPH ¹	DRPH ³	Benzene	Toluene		Ethylbenzene
MW01	01/03/08	0.06	99.94	<250	86 ^a	<1	5	<1	<3
	05/29/08	0.08	99.92	<250	<50	<1	<1	<1	<3
	08/29/08	0.15	99.85	<250	<50	<1	<1	<1	<3
	11/25/08	0.02	99.98	<250	<50	<1	<1	<1	<3
MW02	01/03/08	0.23	99.78	<250	<50	<1	<1	<1	<3
	05/29/08	0.43	99.58	<250	<50	<1	<1	<1	<3
	08/29/08	0.45	99.56	<250	<50	<1	<1	<1	<3
	11/25/08	0.47	99.54	<250	<50	<1	<1	<1	<3
MW03	01/03/08	0.50 ^b	—	<250	<50	<1	<1	<1	<3
	05/29/08	0.05	99.93	<250	<50	<1	<1	<1	<3
	08/29/08	-0.08 ^c	100.06	<250	<50	<1	<1	<1	<3
	11/25/08	0.07	99.91	<250	<50	<1	<1	<1	<3
MTCA Method A Cleanup Level for Groundwater⁵				500	500	5	1,000	700	1,000

NOTES:

Chemical analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

¹Measured below a fixed spot on the well casing rim.

²Measured relative to temporary benchmark with an assumed elevation of 100.00 feet.

³Analyzed by NWTPH Method NWTPH-DX.

⁴Analyzed by EPA Method 8021B.

⁵MTCA Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

⁶Sample extracts passed through a silica gel column prior to analysis.

⁷The depth-to-groundwater was misinterpreted. Actual depth-to-groundwater is above the well casing rim.

⁸The static depth-to-groundwater is above the well casing rim.

-- = elevation not measured.

< = not detected at a concentration exceeding the laboratory reporting limit

µg/L = micrograms per liter

DRPH = diesel-range petroleum hydrocarbons

EPA = United States Environmental Protection Agency

MTCA = Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons