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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

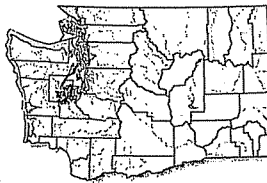
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

CERTIFIED MAIL

7006 2760 0000 0402 5643

October 2, 2007

Ms. Sandi Thompson
Mason County Transportation Cooperative
700 South First Street
Shelton, WA 98584



Your address
is in the
**Kennedy-
Goldsborough**
watershed

Dear Ms. Thompson:

Re: Further Action Determination under WAC 173-340-515(5) for the following Hazardous Waste Site:

- Name: Mason County Transportation Cooperative
- Address: 3740 Shelton Springs Road, Shelton
- Facility/Site No.: 23634752
- VCP No.: SW0579

Thank you for submitting your independent remedial action report for the Mason County Transportation Cooperative facility (Site) for review by the State of Washington Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding whether further remedial action is necessary at the Site to meet the substantive requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC. Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding the Site:

1. Remedial Investigation Report, Mason County Transportation Cooperative, Shelton, Washington, dated September 11, 2007 by PBS Engineering and Environmental.
2. Revised Focused Site Investigation Work Plan, Mason County Transportation Cooperative, 3740 Shelton Springs Road, Shelton, Washington, dated December 20, 2006 by PBS Engineering and Environmental.



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3. Letter to Ms. Sandi Thompson (Mason County Transportation Cooperative) from Mr. Marcel Szyszkowski (Ecology), RE: Further Action Determination. Dated September 7, 2006.
4. Tank Removal and Independent Remedial Action Report, Shelton School District Bus Maintenance/Repair Facility, 3740 North Shelton Springs Road, Shelton Washington, dated December 21, 1998 by Stemen Environmental, Inc.
5. Analytical results from Soil Stockpile Samples Collected on May 12, 1998, Mason County Transportation Coop, dated August 28, 1998 by PBS Engineering and Environmental.
6. Analytical results from Soil Stockpile Samples Collected on November 14, 1995, Mason County Transportation Coop, dated November 21, 1995 by PBS Engineering and Environmental.

The documents listed above will be kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Appointments can be made by calling the SWRO resource contact at (360) 407-6365.

The Site is defined by the extent of contamination caused by the following release(s):

- Petroleum hydrocarbons and related constituents in soil.
- Petroleum hydrocarbons and related constituents in groundwater.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of the independent remedial action report and supporting documentation listed above, **Ecology has determined that the independent remedial action(s) performed at the Site are not sufficient to meet the substantive requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing any of the contamination at the Site.** Therefore, pursuant to WAC 173-340-515(5), Ecology is issuing this opinion that **further remedial action is necessary** at the Site under MTCA.

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

1. Available information regarding the removal of the underground storage tanks (USTs) from the site in 1994 indicated that impacted soil was left in place beneath the pump island and to the north of the excavation. Soil samples collected from the site in 1994 from the UST excavation and pump island area identified concentrations of diesel-range petroleum hydrocarbons (TPH-D) at concentrations above the current MTCA Method A cleanup level of 2,000 milligrams per kilogram (mg/kg). Concentrations of TPH-D above the cleanup level ranged from 5,000 mg/kg to 21,000 mg/kg. Since 1994, soil sampling does not appear to have been conducted in this area until soil borings were advanced on site by PBS Engineering and Environmental (PBS) in June 2007. The soil borings were advanced in areas surrounding the USTs, pump island, and the previously detected elevated concentrations of TPH-D. The lack of petroleum contamination in soil samples collected from these borings documented the areal extent of contamination in the former excavation area; however, the vertical extent of contamination beneath the USTs and

pump island has not been documented. In addition, it is unknown whether the concentrations of TPH-D detected in 1994 still exist in soil as these specific areas were not re-sampled as part of the June 2007 investigation. As a result, the available data indicates that petroleum-contaminated soil (PCS) likely still exists beneath the USTs and pump island.

Additional investigations should be conducted to confirm whether PCS still exists in areas identified in 1994. However, if it is determined to not be feasible to access these areas due to the presence of the existing USTs and pump island, then a deed restriction may be appropriate for the site, which would require a long-term groundwater monitoring plan. However, before Ecology could consider approving a deed restriction for the site, a Feasibility Study [refer to WAC 173-340-350(8)] and Disproportionate Cost Analysis [refer to WAC 173-340-360(3)(e) and (f)] should be generated to identify all of the potential cleanup alternatives for the site, including in-situ treatment and/or containment of the contamination, and the estimated costs of those alternatives.

Permanent solutions should be implemented to the maximum extent practicable. Permanent solutions (cleanup actions) are actions in which cleanup standards can be met without further action being required, such as monitoring or institutional controls. To select the most practicable permanent solution from among those cleanup action alternatives that are protective of human health and the environment requires conducting a disproportionate cost analysis. This analysis compares costs and benefits of alternatives and selecting the alternative whose incremental costs are not disproportionate to the incremental benefits. The comparison is quantitative, but is often qualitative and requires best professional judgment. Should it be determined that a permanent cleanup action cannot be implemented, a disproportionate cost analysis shall be applied. The analysis shall compare costs and benefits of the cleanup action alternatives evaluated in the feasibility study.

2. In June 1994, prior to removal of the former USTs, PBS collected a grab groundwater sample from a soil boring on the north side of the UST system. Analytical results of the groundwater sample indicated the presence of gasoline-range petroleum hydrocarbons (TPH-G) at 17,000 micrograms per liter ($\mu\text{g/L}$) and TPH-D at 820,000 $\mu\text{g/L}$. The MTCA Method A cleanup levels for TPH-G and TPH-D in groundwater are 1,000 $\mu\text{g/L}$ (800 $\mu\text{g/L}$ when benzene is present) and 500 $\mu\text{g/L}$, respectively. The only other groundwater data collected from the site since was in June 2007 by PBS. PBS installed two monitoring wells (MW-3 and MW-4) to supplement two existing monitoring wells (MW-1 and MW-2) that were installed at an unknown time. No information was available whether MW-1 and MW-2 were ever previously sampled. The groundwater samples collected from MW-1 through MW-4 were only analyzed for petroleum constituents, including total lead, polycyclic aromatic hydrocarbons (PAHs), and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds and other gasoline additives. None of these contaminants that were analyzed for were detected above MTCA Method A cleanup levels. TPH-G, TPH-D, and oil-range petroleum hydrocarbons (TPH-O) were not specifically analyzed for as required under MTCA Table 830-1, Required Testing for Petroleum Releases. The Revised Focused Site Investigation Work Plan generated by PBS was not specific regarding the analyses to be completed. The work plan indicated that "...groundwater samples will be analyzed for applicable methods listed in [WAC] 173-340-450(3)(iv) Appendix B by the testing methods specified in WAC 173-340-830 (Table 830-1) for releases from USTs." This reference includes TPH-G, TPH-D, and TPH-O. The wells will need to be analyzed for these contaminants.

3. As of the recent June 2007 PBS investigation, four monitoring wells now exist on site. Based on groundwater level elevation measurements, the direction of groundwater flow was determined to be to the south, although Figure 4 of the Remedial Investigation Report illustrates flow to the southeast. No monitoring wells exist south (downgradient) of the UST system and pump island. One monitoring well (MW-4) exists to the east-southeast of the pump island; however, this location is not adequate to determine whether downgradient migration of a potential groundwater plume has occurred. An additional monitoring well should be installed south of the UST system and pump island to properly assess the extent of groundwater contamination. If contamination is identified in this well above MTCA Method A cleanup levels, the installation of additional wells or well points to identify the extent of groundwater contamination would be required.
4. According to PBS, the soil stockpile from the 1994 excavation is still located on site. As required under WAC 173-340-400(9), the excavated soil should be transported off site to an approved disposal facility. The documentation of that disposal must be submitted to Ecology. If the soil is to remain on site, then the soil needs to be characterized and sampled for the constituents listed in MTCA Table 830-1 for Gasoline and Diesel Range Organics. Samples collected from the stockpile by PBS in 1995 and 1998 were only analyzed for TPH-D.
5. Please provide Ecology with a work plan for the remedial activities identified above for review and approval to ensure that the proposed activities will likely meet the substantive requirements of MTCA.
6. Ecology requires that at least four rounds of consecutive quarterly groundwater sampling be conducted showing concentrations of contaminants below MTCA Method A cleanup levels to meet the substantive requirements of MTCA. The reason for this is to determine any seasonal variations in the contaminant concentrations, so that Ecology can determine whether the implemented remedy is permanent.
7. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website <http://www.ecy.wa.gov/eim>. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination.** Please be sure to submit the June 2007 soil and groundwater data, as well as any future data, in this format. Be advised that Ecology requires up to two weeks to process the data once it is received.

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

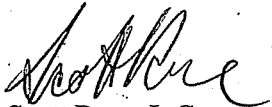
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The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or performed at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (360) 407-6347.

Sincerely,



Scott Rose, L.G.
Site Manager
SWRO Toxics Cleanup Program

SR:lmc

Enclosures: Site Summary
 Figure 1 – Site Location Map
 Figure 2 – Map of Historic Sample Locations & Current Boring Locations
 Figure 4 – Contour Map of Groundwater Potentiometric Surface – June 28, 2007

cc: Barbara Lary, PBS Engineering and Environmental
 Deborah Riley, Mason County Health Department
 Carol Johnston, Southwest Regional Office, Ecology
 Nnamdi Madakor, Southwest Regional Office, Ecology

Enclosure A

Site Summary

The Mason County Transportation Coop site is located at 3740 Shelton Springs Road in Shelton, Mason County, Washington. The site is located within Mason County Parcel #420124160000, which comprises 42.53 acres and is owned by School District #309. The site is bounded to the southeast by Shelton Springs Road and to the north by single-family residences. Shelton High School and associated athletic fields are located to the west and south of the site, and vacant, undeveloped land is located east of the site. The site currently consists of a school bus maintenance and fueling facility. The on-site building includes bus maintenance bays, wash bays, and personnel offices. Water inside the maintenance and wash bays is directed to two oil/water separators before going into the sanitary sewer. The fueling area is located south of the building and includes a pump island and USTs. The current USTs at the site include one 12,000-gallon diesel UST and one 8,000-gallon unleaded gasoline UST.

The property was purchased as a vacant lot by the school district in 1984. Shortly thereafter, the school bus maintenance building and fueling facility were constructed. In 1994, two 3,000-gallon gasoline underground storage tanks (USTs) and one 12,000-gallon diesel UST were excavated and removed from the site. Soil and groundwater impacts were noted, and impacted soil was reportedly left in place beneath the pump island and to the north of the excavation. In 1998, a 2,000-gallon waste oil UST was also excavated and removed from the site north of the building.

The site area is covered with Vashon recessional outwash deposits, which consist of permeable sand and gravel deposits with some clay and silt. These deposits were encountered in borings advanced on site up to 20 feet below ground surface (bgs). The outwash deposits are underlain by Vashon till, which is a low-permeability unit composed of a dense and poorly sorted mixture of silt, sand, gravel, cobbles, and boulders. Groundwater was encountered beneath the site at 12 feet bgs within sandy gravels. The direction of groundwater flow is to the south-southeast.

In June 1994, PBS Engineering and Environmental (PBS) collected a grab groundwater sample from a soil boring advanced on the north side of the UST system. Analytical results of the groundwater sample collected from the boring indicated the presence of gasoline-range petroleum hydrocarbons (TPH-G) at 17,000 microgram per liter ($\mu\text{g/L}$) and diesel-range petroleum hydrocarbons (TPH-D) at 820,000 $\mu\text{g/L}$. The Model Toxics Control Act (MTCA) Method A cleanup levels for TPH-G and TPH-D are 1,000 $\mu\text{g/L}$ (800 $\mu\text{g/L}$ when benzene is present) and 500 $\mu\text{g/L}$, respectively.

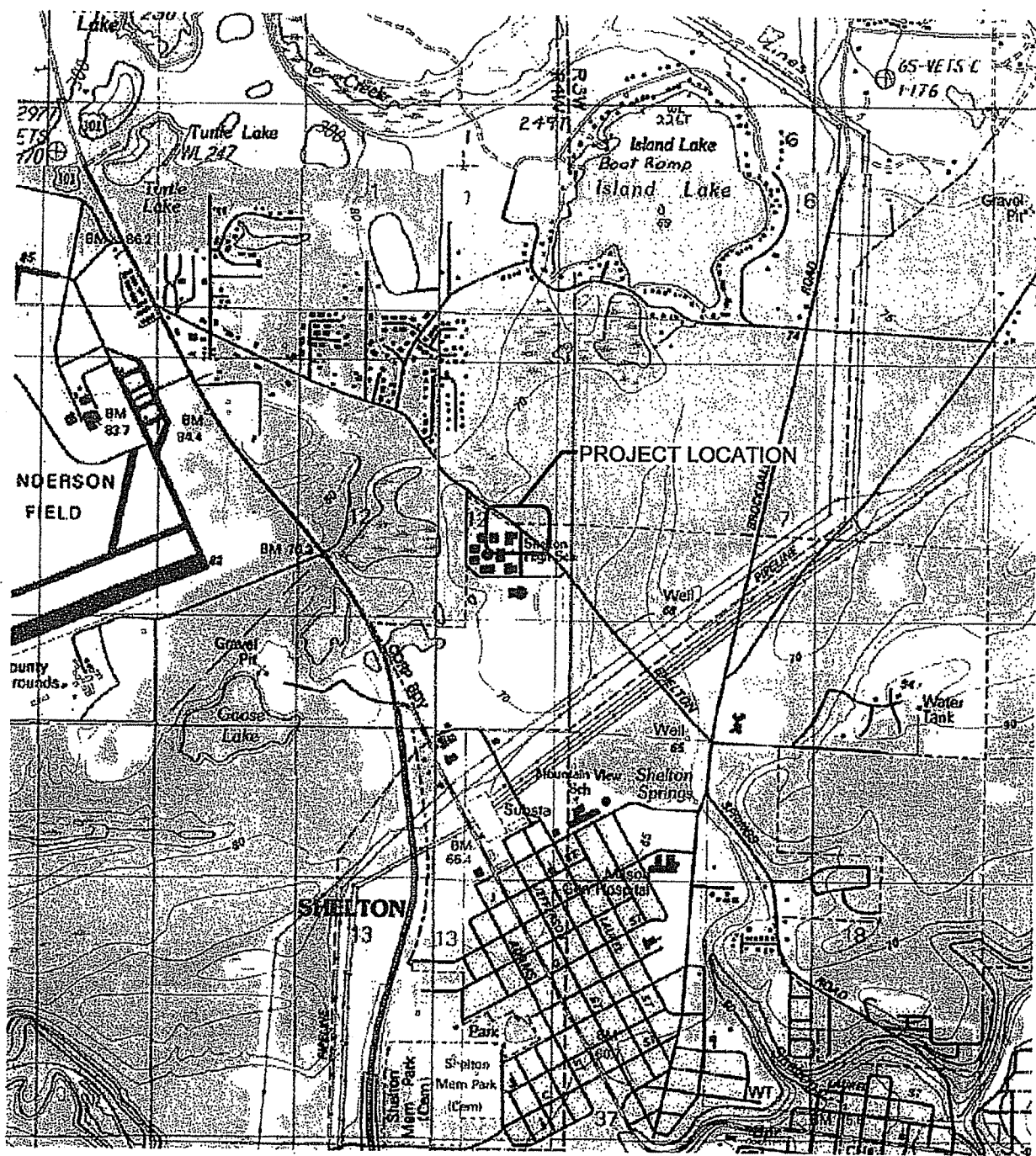
In September 1994, two 3,000-gallon gasoline USTs and one 12,000-gallon diesel UST were excavated and removed from the site. Numerous (exact number unknown) confirmation soil samples were collected from the excavation. Concentrations of TPH-D above the MTCA Method A cleanup level of 2,000 milligrams per kilogram (mg/kg) were present in five of the samples as deep as 15 feet bgs. These concentrations ranged from 5,000 mg/kg to 12,400 mg/kg . In addition, a soil sample collected from a boring advanced adjacent to the pump island contained TPH-D at 21,000 mg/kg at 2 feet bgs. Reportedly, no evidence of gasoline contamination in the soil was identified (*see attached Figure 2 – Map of Historic Sample Locations and Current Boring Locations*).

Between 600 and 1,000 cubic yards of soil were excavated and stockpiled on site to be aerated. Reportedly, the excavated soil stockpile currently still exists on site. The soil stockpile was sampled by PBS in November 1995 and again in May 1998, and analyzed for TPH-D. In 1995, concentrations of TPH-D ranged from 89 mg/kg to 900 mg/kg, and in 1998 from 36 mg/kg to 83 mg/kg. The MTCA Method A cleanup level for TPH-D in soil at the time was 200 mg/kg. The current MTCA Method A cleanup level for TPH-D is 2,000 mg/kg. No other sampling of the soil stockpile is known to have occurred to date.

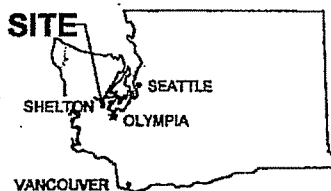
In 1998, a 2,000-gallon waste oil UST was excavated and removed from the site north of the building. Upon removal of the UST, the tank appeared to be structurally sound and no evidence of contamination was noted. Three confirmation soil samples were collected from the floor, and the east and south sidewalls of the excavation. The samples were analyzed for TPH-D and TPH-O by Ecology Method NWTPH-Dx/Extended. TPH-D and TPH-O were not detected in any of the samples above the laboratory method detection limits.

In June 2007, in an effort to characterize the areal and vertical extent of contamination in soil and groundwater, PBS advanced five soil borings (TB-1 through TB-5) to depths of 16 to 20 feet bgs in the vicinity of the current UST system. Borings TB-4 and TB-5 were completed as monitoring wells MW-3 and MW-4, respectively (monitoring wells MW-1 and MW-2 were installed on site at an unknown time; however, their depths are known to be 14.7 feet bgs and 15 feet bgs, respectively) (*see attached Figure 2 – Map of Historic Sample Locations and Current Boring Locations*). A total of six soil samples were collected from the borings and analyzed for TPH-G by Ecology Method NWTPH-Gx, TPH-D and oil-range petroleum hydrocarbons (TPH-O) by Ecology Method NWTPH-Dx, benzene, toluene, ethylbenzene, and xylene (BTEX) compounds and other gasoline additives by EPA Method 8260B, and polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM. Total lead was proposed to be analyzed for but since gasoline was not detected in any of the samples, the analysis was not conducted. No contaminants were detected in the soil samples above MTCA Method A cleanup levels.

PBS collected groundwater samples from MW-1 through MW-4. A slight petroleum odor and sheen was noted in the sample collected from MW-2. The samples were analyzed for BTEX compounds and other gasoline additives by EPA Method 8260B, PAHs by EPA Method 8270C SIM, and total lead by EPA Method 6020. TPH-G, TPH-D, and TPH-O were not analyzed for. None of the contaminants analyzed for were detected in the samples above laboratory method reporting limits.



SOURCE: USGS SHELTON VALLEY QUADRANGLE, OR 1975,
PHOTO REVISED 1981



SCALE: 1" = 2,000'

Prepared for: MASON COUNTY TRANSPORTATION COMPANY



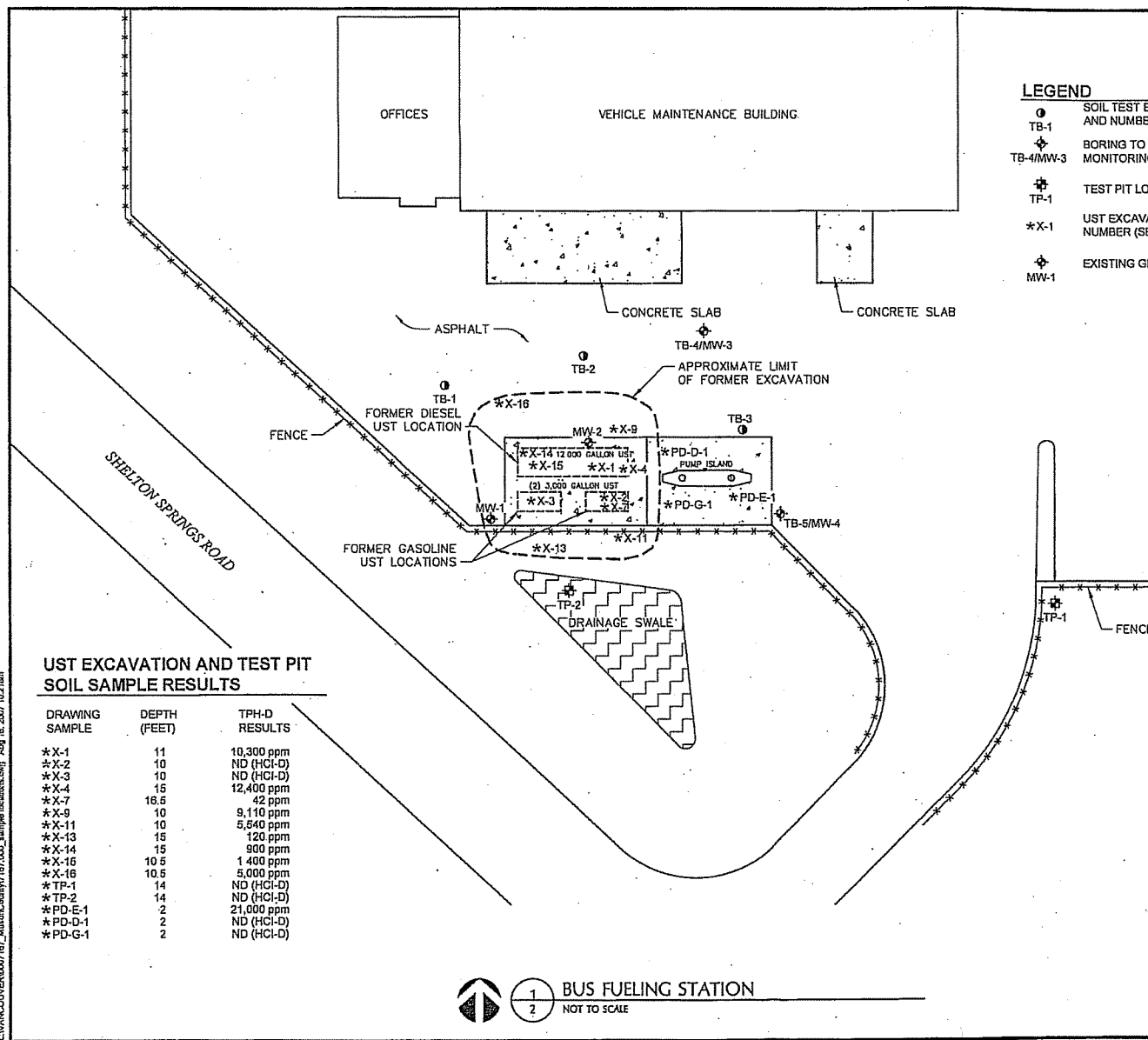
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7167 000
DATE
AUG 2007

SITE LOCATION MAP
3740 SHELTON SPRINGS ROAD
SHELTON, WASHINGTON

FIGURE
1

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- LEGEND**
- TB-1 SOIL TEST BORING (ONLY) LOCATION AND NUMBER
 - ⊕ TB-4/MW-3 BORING TO BE COMPLETED AS GROUNDWATER MONITORING WELL LOCATION AND NUMBER
 - ⊕ TP-1 TEST PIT LOCATION AND NUMBER
 - *X-1 UST EXCAVATION SOIL SAMPLE LOCATION AND NUMBER (SEPTEMBER 1994)
 - ⊕ MW-1 EXISTING GROUNDWATER MONITORING WELL

**UST EXCAVATION AND TEST PIT
SOIL SAMPLE RESULTS**

DRAWING SAMPLE	DEPTH (FEET)	TPH-D RESULTS
*X-1	11	10,300 ppm
*X-2	10	ND (HCl-D)
*X-3	10	ND (HCl-D)
*X-4	15	12,400 ppm
*X-7	16.5	42 ppm
*X-9	10	9,110 ppm
*X-11	10	5,540 ppm
*X-13	15	120 ppm
*X-14	15	900 ppm
*X-16	10.5	1,400 ppm
*X-16	10.5	5,000 ppm
*TP-1	14	ND (HCl-D)
*TP-2	14	ND (HCl-D)
*PD-E-1	2	21,000 ppm
*PD-O-1	2	ND (HCl-D)
*PD-G-1	2	ND (HCl-D)



1
2

BUS FUELING STATION
NOT TO SCALE

PBS
ENGINEERING AND ENVIRONMENTAL
1310 MAIN STREET
VANCOUVER WASHINGTON 08660
PHONE: 360.690.4331
FAX: 360.696.9064
www.pbsenv.com

**MAP OF HISTORIC SAMPLE LOCATIONS
& CURRENT BORING LOCATIONS**
MASON COUNTY TRANSPORTATION COOPERATIVE
SHELTON, WASHINGTON

SAMPLE LOCATION

PLAN

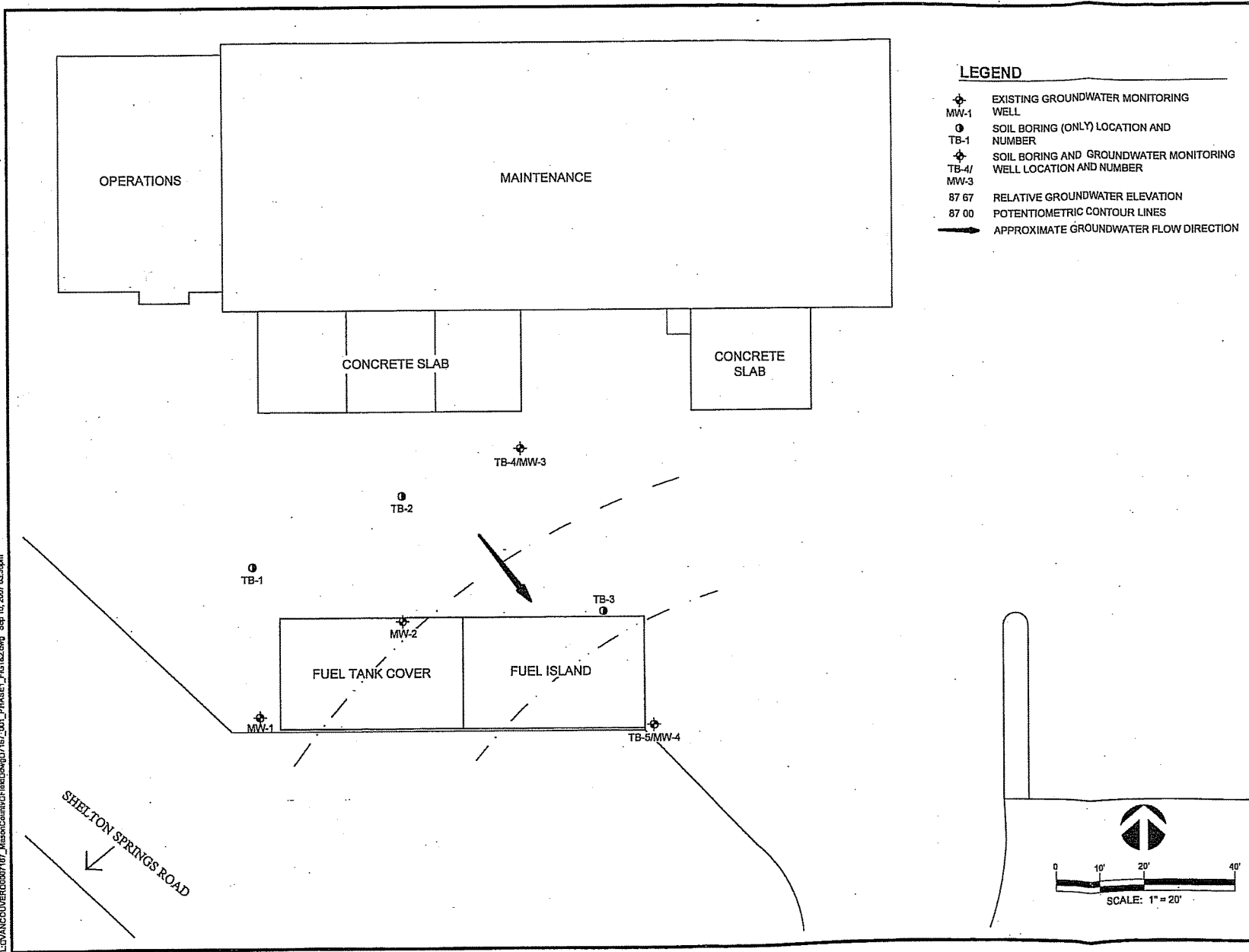
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DATE: AUGUST 2007

FIGURE:

2

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LEGEND

- ⊕ EXISTING GROUNDWATER MONITORING WELL
- MW-1 SOIL BORING (ONLY) LOCATION AND NUMBER
- TB-1
- ⊕ TB-4/ SOIL BORING AND GROUNDWATER MONITORING
- MW-3 WELL LOCATION AND NUMBER
- 87.67 RELATIVE GROUNDWATER ELEVATION
- 87.00 POTENTIOMETRIC CONTOUR LINES
- APPROXIMATE GROUNDWATER FLOW DIRECTION



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CONTOUR MAP OF GROUNDWATER
POTENTIOMETRIC SURFACE - JUNE 28, 2007
MASON COUNTY TRANSPORTATION COOPERATIVE
SHELTON, WASHINGTON

SAMPLE LOCATION

PLAN

PROJECT: 7167.000
DATE: SEPTEMBER 2007
FIGURE:

4