



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

May 8, 2013

Mr. Joe Rounds  
Antea Group  
4006 148<sup>th</sup> Avenue NE  
Redmond, WA 98052

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

- **Site Name:** BP Service Station 03158/Conoco Phillips
- **Site Address:** 501 Troser Road SW, Tumwater, WA 98512
- **Facility/Site No.:** 69587682
- **Cleanup Site ID No.:** 7115
- **VCP Project No.:** SW1142

Dear Mr. Rounds:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the BP Service Station 03158/Conoco Phillips 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?

**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 Constituents in the Soil and Groundwater.

Enclosure A includes a detailed description 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. Subsurface Investigation and Remedial Excavation Report, Former Pacific Convenience and Fuels Service Station # 2705577, dated January 30, 2013 by Antea Group USA, Inc.

This document is 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 sufficient to establish cleanup standards and select a cleanup action. The Site is described below and in **Enclosure A**.

The Site is a former Circle-K convenience store and retail fueling station located at the southeast corner of the intersection of Tyee Drive and Trooper Road in Tumwater, Washington.

Delta Environmental (Delta) performed subsurface investigations in October 1991 and again in January 1992. Twelve borings were advanced across the Site (SB-1, SB-2, and monitoring wells MW-1 through MW-10). Soil and groundwater samples were collected and tested for benzene, toluene, ethylbenzene, xylenes (BTEX), gasoline-range total petroleum hydrocarbons (TPH-Gx), diesel-range TPH (TPH-Dx), and total lead. In addition, select samples were analyzed for polycyclic aromatic hydrocarbons (PAHs), methyl tertiary-butyl ether (MTBE), and halogenated volatile organic compounds (VOCs). Soil in the area of the former underground storage tank (UST) nest exceeded the MTCA Method A Cleanup Levels. In addition, groundwater near the former UST nest and

downgradient of the current UST nest exceeded the MTCA Method A Cleanup Levels. Free phase product was also found in MW-2 and MW-8 near the former UST nest.

Delta conducted additional subsurface investigations in 1995, including installation of MW-11 in the northeast corner of the property, and nested air sparging (AS)/soil vapor extraction (SVE) wells AS-1/SVE1 and AS-2/SVE-2. Following feasibility testing of the AS/SVE system, additional AS/SVE wells were installed (AS-3/SVE-3 through AS-6/SVE-6). The AS/SVE system ran from 1995 through 1998 when it was shut down due to recovery rates reaching asymptotic conditions. It was estimated that approximately 1,091 pounds of hydrocarbons in the vapor phase were recovered.

AGRA Earth and Environmental (AGRA) oversaw the removal of a waste oil UST, a heating oil UST, three hoists, two dispenser islands, and an oil/water separator from the property in April 1995. All confirmation soil samples collected were reported to be below the laboratory method detection limits, with the exception of samples collected from the oil/water separator. This area was not able to be excavated completely due to the possible effects on the station building.

In October 1996, Delta advanced three borings at the Site to investigate cleanup progress. Borings B-1 (former UST nest), B-2 (southwest of the current USTs), and B-3 (northwest of the current USTs) were advanced and soil and groundwater samples were collected. In addition, one monitoring well (MW-12) was installed in the eastern portion of the property to assess downgradient groundwater conditions.

In February 2003, a leak beneath the northeast product dispenser was reported. SECOR International, Inc. (SECOR) investigated this leak in April 2004. SECOR removed an unspecified volume of pea gravel from the leak area, and collected confirmation soil samples from the area. SECOR also advanced three borings (SB-1 through SB-3) immediately surrounding the leak area (including one angle boring to collect soil samples from directly below the release area). Analytical results from the samples did not indicate either BTEX or TPH-Gx above the MTCA Method A Cleanup Levels in any sample.

In September 2010, Delta advanced borings B-7 through B-10 and installed an additional monitoring well (MW-13). Borings B-7 and B-8 were installed to investigate the soil conditions surrounding the former waste oil and heating oil USTs. Soil samples were collected and tested for TPH-Gx, TPH-Dx, oil-range TPH (TPH-O), BTEX, MTBE, ethylene dibromide (EDB), 1,2-dichloroethane (EDC), and total lead. None of the tested constituents were detected above method detection limits. Soil borings B-9 and B-10 were advanced in the area of the former oil/water separator. None of the tested constituents were detected above method detection limits in any sample.

Ecology issued an opinion letter on April 19, 2011 outlining the need for additional soil and groundwater investigation in specific areas across the Site, including near the former

oil/water separator and near wells MW-2 and MW-8. A detailed discussion of the proposed remedial strategy of natural attenuation was also requested.

Antea Group, Inc. (Antea) directed the drilling of 18 borings at the Site in May and June 2012 in response to Ecology's comments. Borings B-1 through B-11 were advanced in May and borings B-1R through B6R and B-12 were advanced in June. None of the soil samples collected during the boring program exceeded their respective MTCA Method A Cleanup Levels for the tested constituents. Analytical results are presented in Figure 3 included in the Attachments.

The station building and gasoline dispensing operations were shut down and removed in November 2012. Following the demolition and removal of the facility structures, Antea directed excavation activities in areas where potential subsurface soil impacts were remaining. Two areas were excavated, one near MW-6 where groundwater exceeds the applicable MTCA Method A Cleanup Levels and one near the former oil/water separator where impacted soil was left in place due to the presence of the building. Soil samples were collected from the base and sidewalls of each excavation and from the stockpiled soils. The samples were submitted for analysis of TPH-Gx, TPH-Dx, TPH-O, BTEX, and total lead. None of the soil samples collected exceeded their respective MTCA Method A Cleanup Levels for the tested constituents. The stockpiled soils were returned to the excavations. Analytical results from the excavation activities are presented in Figure 5 included in the Attachments. An oxygen release compound was added to the excavation near MW-6 to promote degradation of the petroleum hydrocarbons noted in groundwater in that area.

The consultant currently plans to reinstall select monitoring wells on the Site, following the completion of the proposed new gasoline service station, and continue the groundwater monitoring program.

Soils underlying the Site are comprised of tan sandy silt grading to a fine to medium sand with silt to the total depth explored of approximately 42 feet below ground surface (bgs). Groundwater was encountered at approximately 25 feet bgs. The direction of groundwater flow beneath the Site is east to northeast with a gradient ranging from 0.006 to 0.011. Groundwater monitoring has been conducted at the Site since 1992.

**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 are being used to characterize the Site.

**b. Points of compliance.**

Standard points of compliance are being used for the Site. The point of compliance for protection of groundwater will 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.

Based on a review of the information provided, Ecology has the following comments:

1. It appears that the enhanced natural attenuation has been selected as the remedial technology for the Site. Please prepare a detailed discussion on the fate and transport of the contaminants noted at the Site. Details of Ecology's requirements can be found in "Guidance on Remediation of Petroleum-Contaminated Groundwater by Natural Attenuation" available here: <http://www.ecy.wa.gov/biblio/0509091.html>.
2. Ecology requires that at least four rounds of consecutive quarterly groundwater sampling, for the constituents listed in Table 830-1, be conducted showing concentrations of the contaminants below the applicable cleanup levels to meet the substantive requirements of MTCA. The reason for this is to determine any seasonal variations in the contaminant concentrations.
3. Please prepare a work plan outlining the proposed monitoring well re-installation program and submit the work plan to Ecology for comment.
4. 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.** Be advised that Ecology requires up to two weeks to process the data once it is received. Cleanup actions conducted at the Site to date have included installation and

operation of an AS/SVE system and limited soil excavation and disposal of impacted soils. Enhanced monitored natural attenuation has been implemented at the Site; however, groundwater monitoring wells need to be re-installed to monitor the performance of the selected remedy.

**4. Cleanup.**

Ecology has determined the cleanup you performed does not meet the cleanup standards established for the Site.

An indeterminate quantity of soil was removed from underneath a leaking fuel dispenser and an AS/SVE system was operated between 1995 and 1998. Additional soil excavation and sampling has been conducted in two areas in November 2012 and confirmed that there are no remaining impacts greater than MTCA Method A Cleanup Levels in these areas (MW-6 and near the oil/water separator). Confirmation soil samples collected from borings advanced near MW-2 and MW-8 did not exceed the MTCA Method A Cleanup Levels for the tested constituents.

Replacement of the groundwater monitoring network is required prior to the continuation of quarterly groundwater monitoring.

**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.

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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).

**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 at (360) 407-7263 or via email at [tmid461@ecy.wa.gov](mailto:tmid461@ecy.wa.gov).

Sincerely,



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

TMM/ksc:BP Service Station 03158 Conoco Phillips FA

Enclosures:

- A – Description of Site
- Figure 1 – Property Location Map
- Figure 2 – Property Layout
- Figure 3 – Soil Analytical Results Map
- Figure 4 – Soil Excavation Map
- Figure 5 – Excavation Soil Analytical Results
- Table 1 – Summary of Soil Analytical Data

By certified mail: (7012 1010 0003 0195 2624)

cc: Hamilton Tran, Pacific Convenience and Fuels  
Gerald Tousley - Thurston Co Health Dept  
Scott Rose – Ecology  
Carol Johnston - Ecology  
Dolores Mitchell – Ecology (w/o enclosures)

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## **Enclosure A**

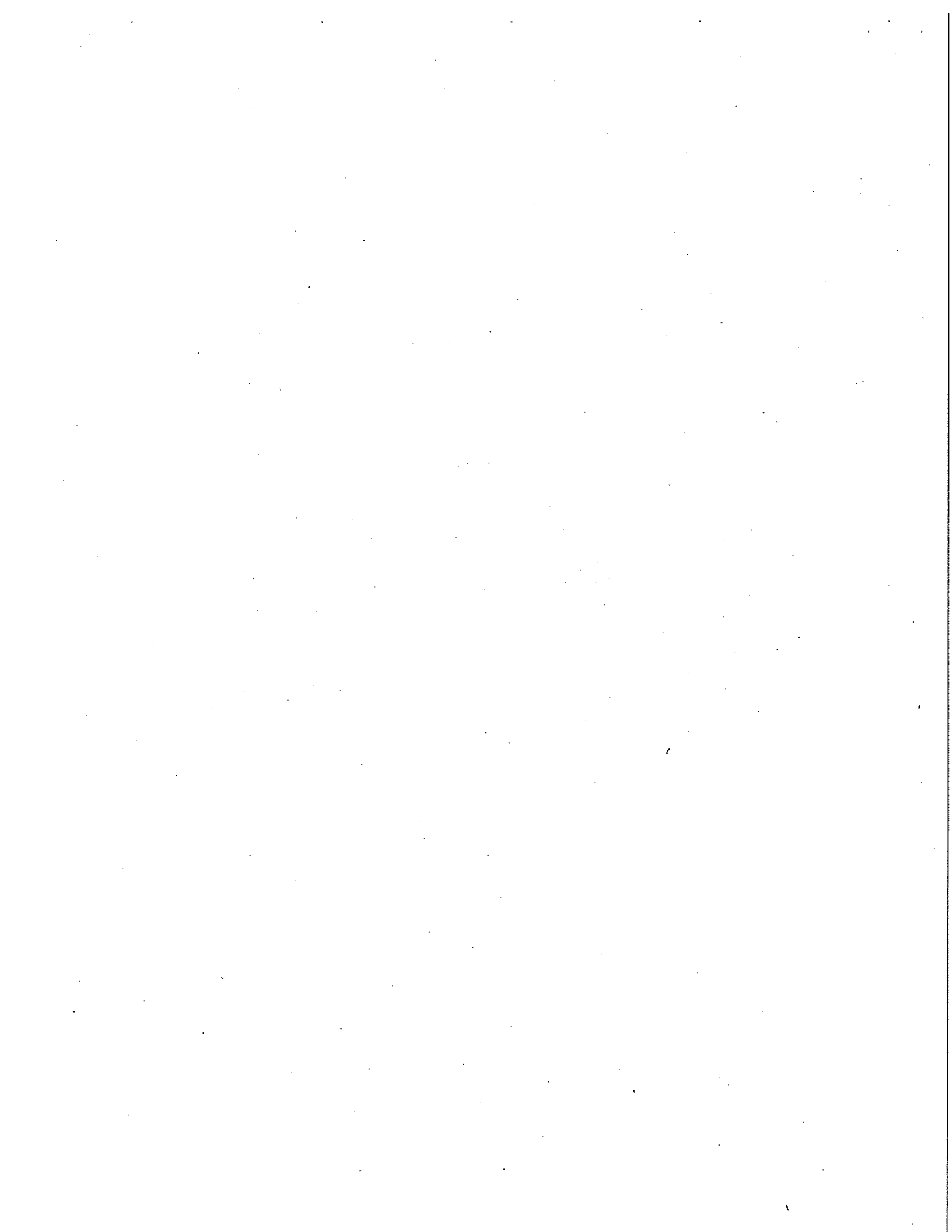
### **Description of the Site**

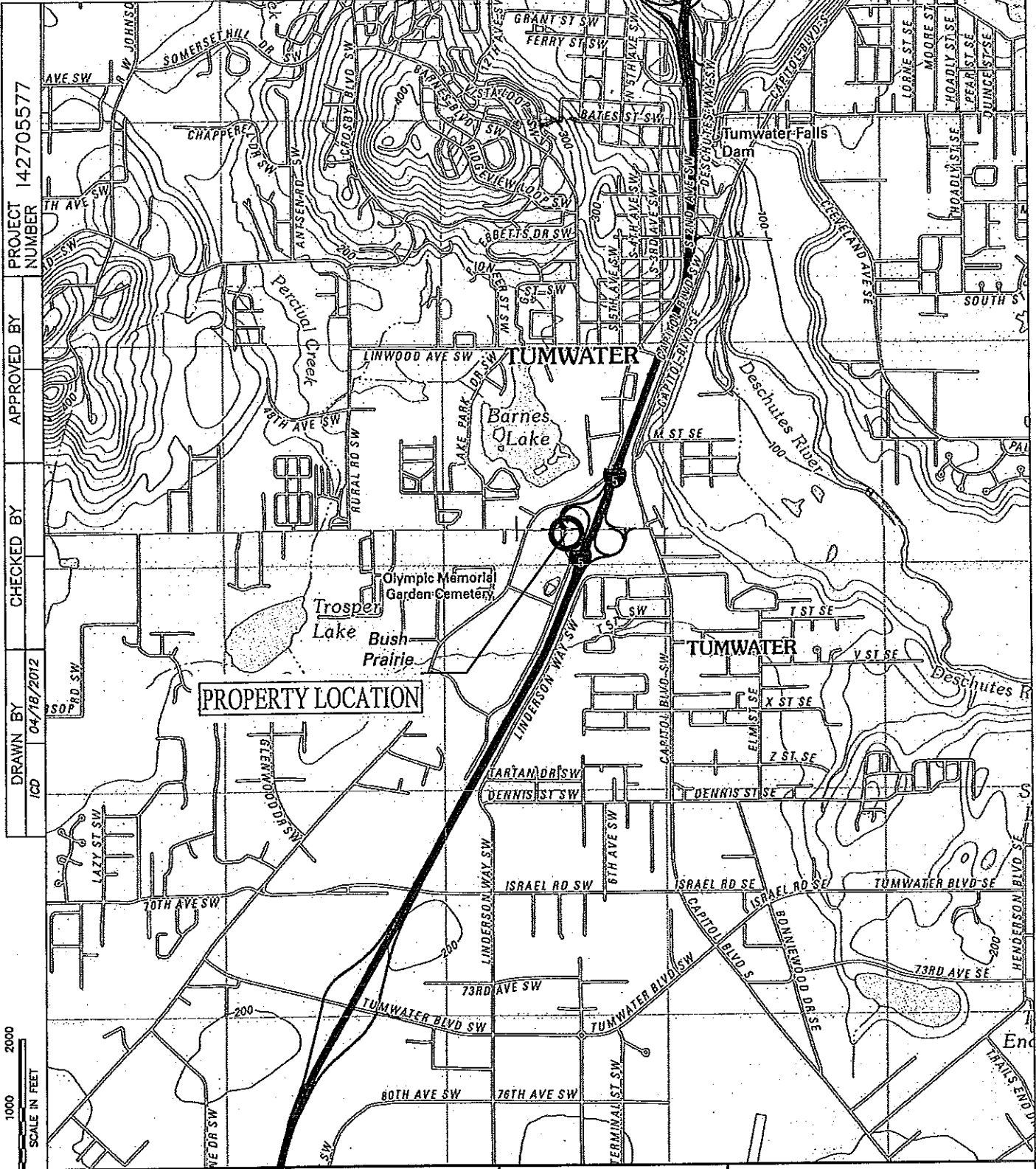


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### **Site Summary**

The Site is a former Circle-K convenience store and retail fueling station located at 501 Troster Road SW, Olympia, Thurston County, Washington. The station has operated under various retail gasoline company brands including Exxon, British Petroleum, Tosco, Conoco Phillips, and most recently Pacific Convenience and Fuels. The station and associated equipment were removed from the Site in November 2012 and the property is currently undeveloped and vacant of structures. The property is at an approximate elevation of 160 feet above mean sea level and slopes slightly to the northwest. Topography in the vicinity slopes northwest towards Barnes Lake and east towards the Deschutes River. Barnes Lake is approximately 1,000 feet northwest of the property and the Deschutes River is approximately 1 mile east of the property. Interstate 5 borders the Site to the east. Surrounding land use is primarily designated commercial.





PROJECT NUMBER  
142705577

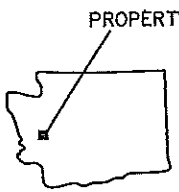
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04/18/2012

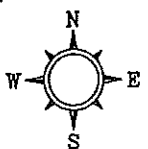
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SCALE IN FEET

PROPERTY LOCATION



PROPERTY

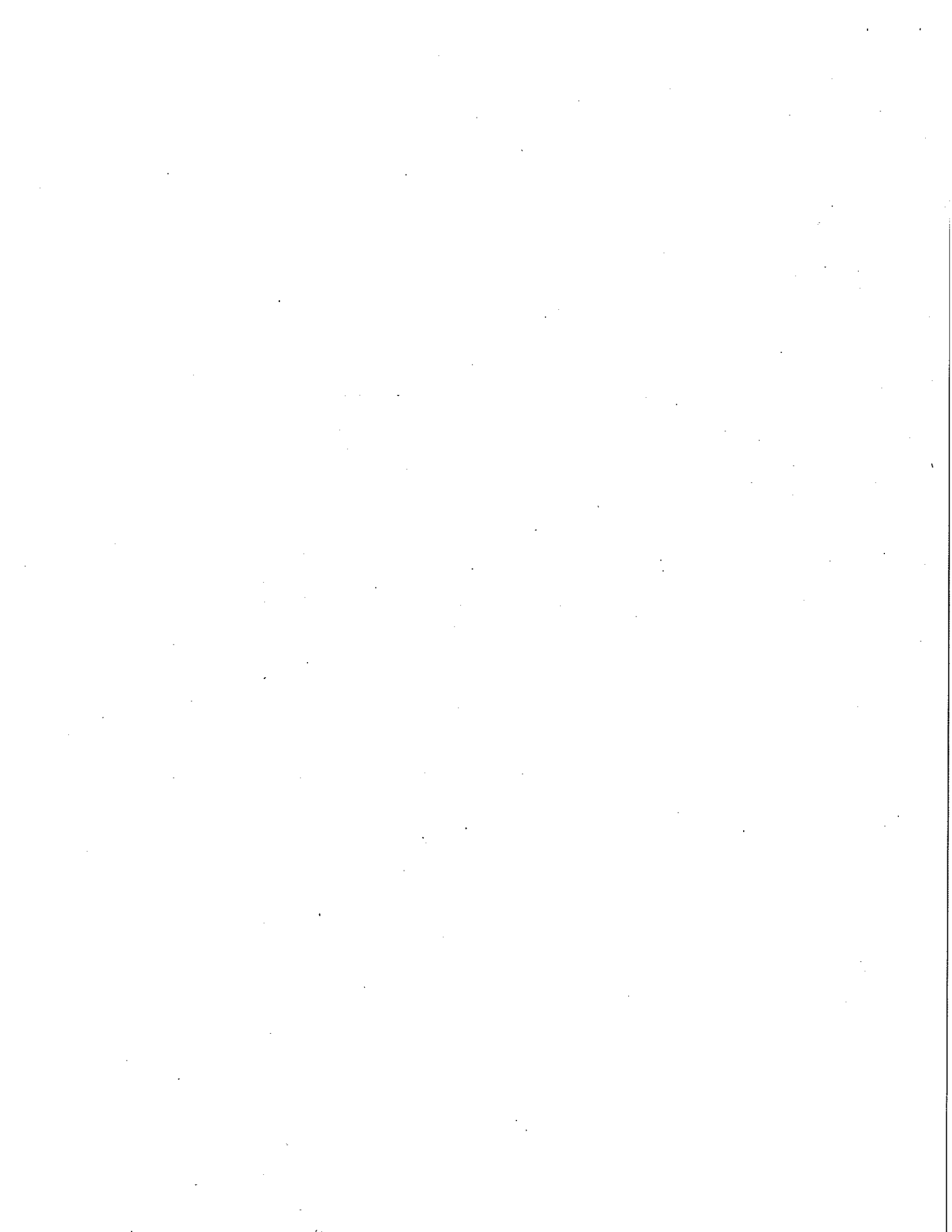
LATITUDE 46D 59M 59S NORTH  
LONGITUDE 122D 54M 49S WEST  
U.S. GEOLOGICAL SURVEY - 2011  
7.5 MINUTE QUADRANGLE MAP  
TUMWATER, WASHINGTON



FORMER CONOCOPHILLIPS  
FACILITY No. 2705577

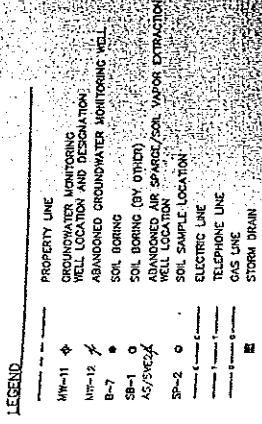
FIGURE 1  
PROPERTY LOCATION MAP

501 TROSPER ROAD SW  
TUMWATER, WASHINGTON



TROSPER ROAD

TYEE DRIVE

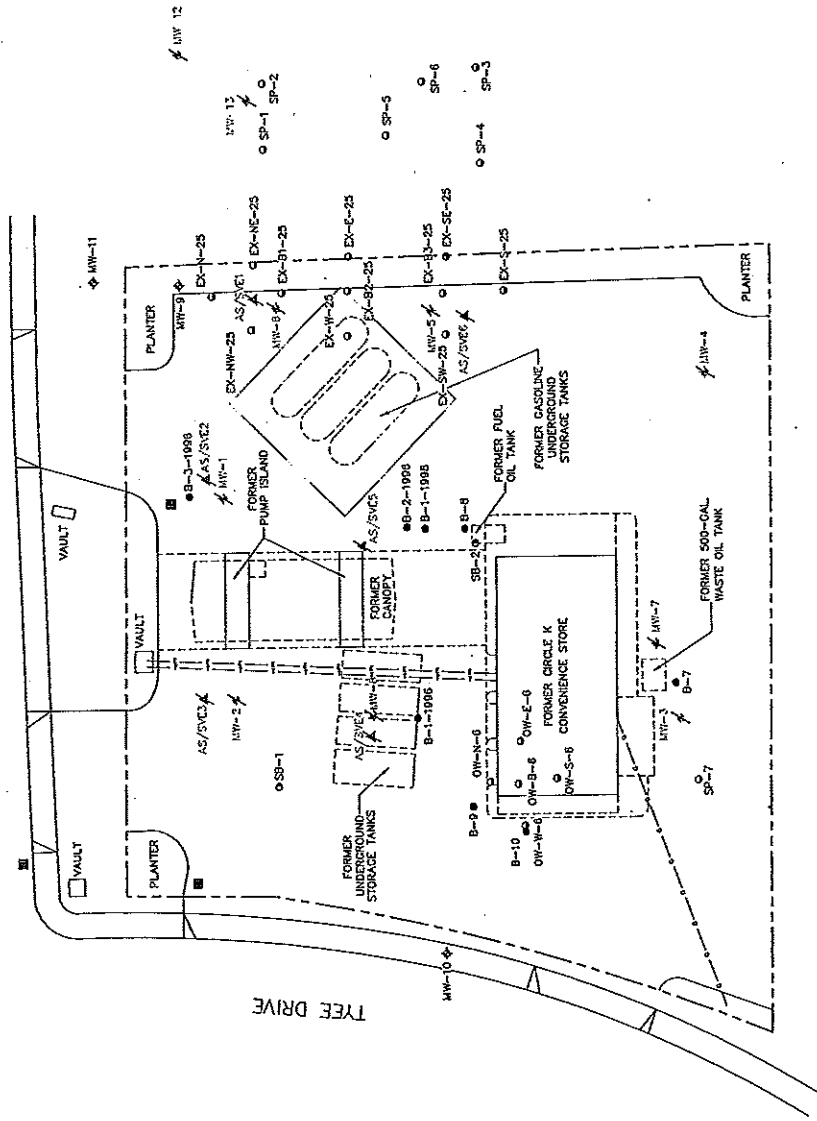


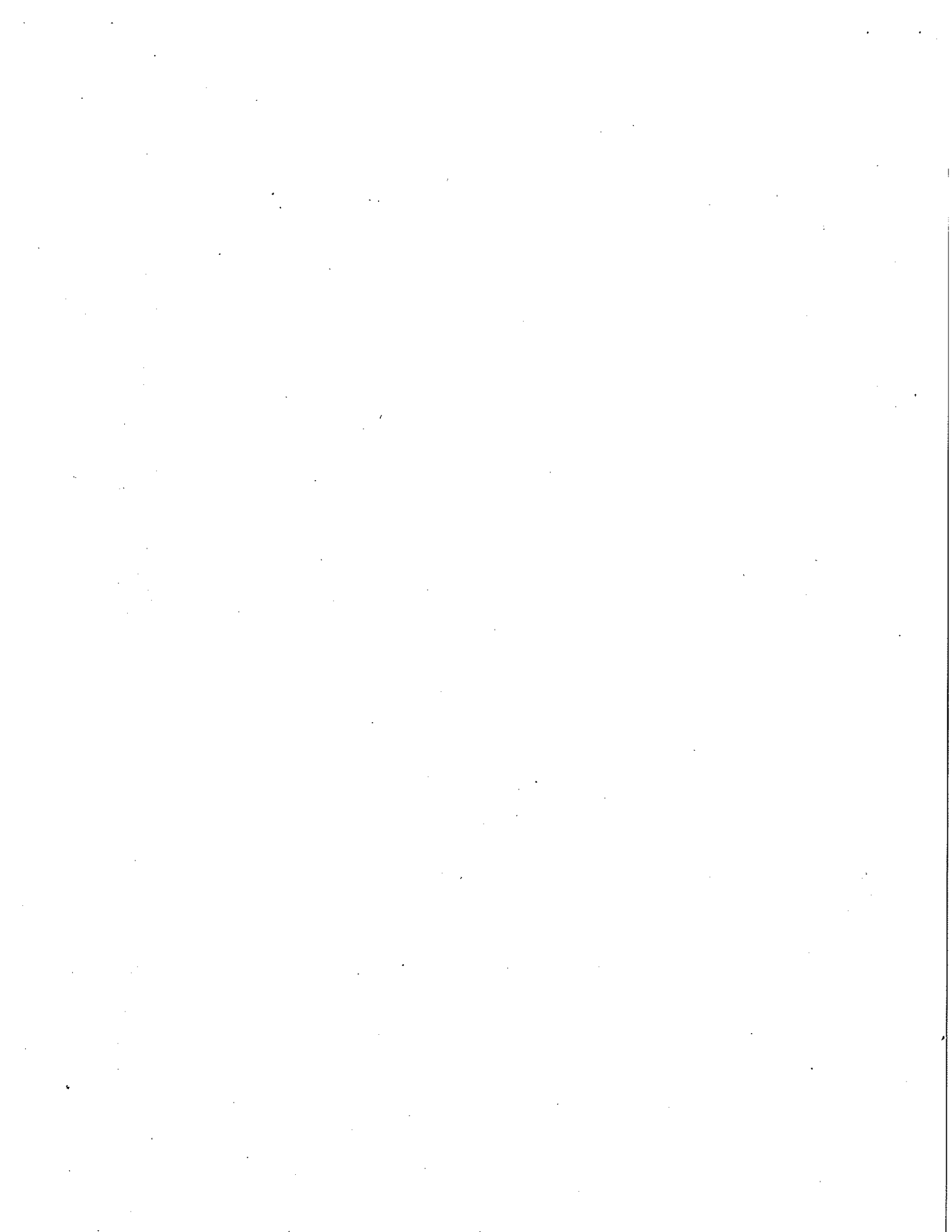
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FIGURE 1

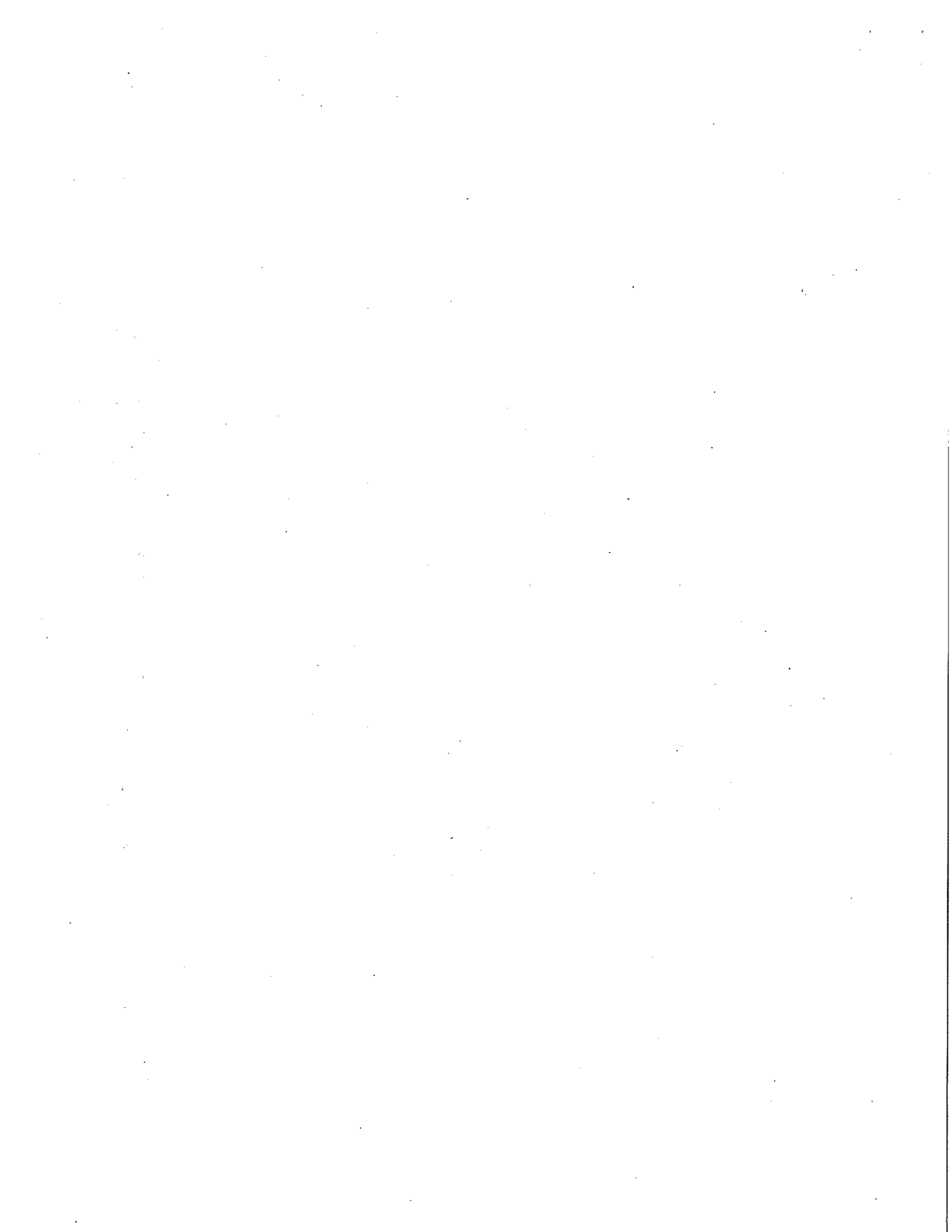
SITE MAP WITH FORMER STATION FEATURES

FORMER CONVENIENCE STORE AND FORMER GASOLINE UNDERGROUND STORAGE TANKS













LEGEND

- MW-11 ◆ PROPERTY LINE
- MW-12 ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- B-7 ● ABANDONED GROUNDWATER MONITORING WELL
- SP-1 ○ SOIL BORING
- AS/SVEZ/A ○ ABANDONED AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION
- SP-2 ○ SOIL SAMPLE LOCATION
- ELECTRIC LINE
- TELEPHONE LINE
- GAS LINE
- STORM DRAIN
- DEEP EXCAVATION (>25' deep)
- SHALLOW EXCAVATION (<25' deep) BELOW GROUND SURFACE

0 15 30  
SCALE IN FEET



anteagroup

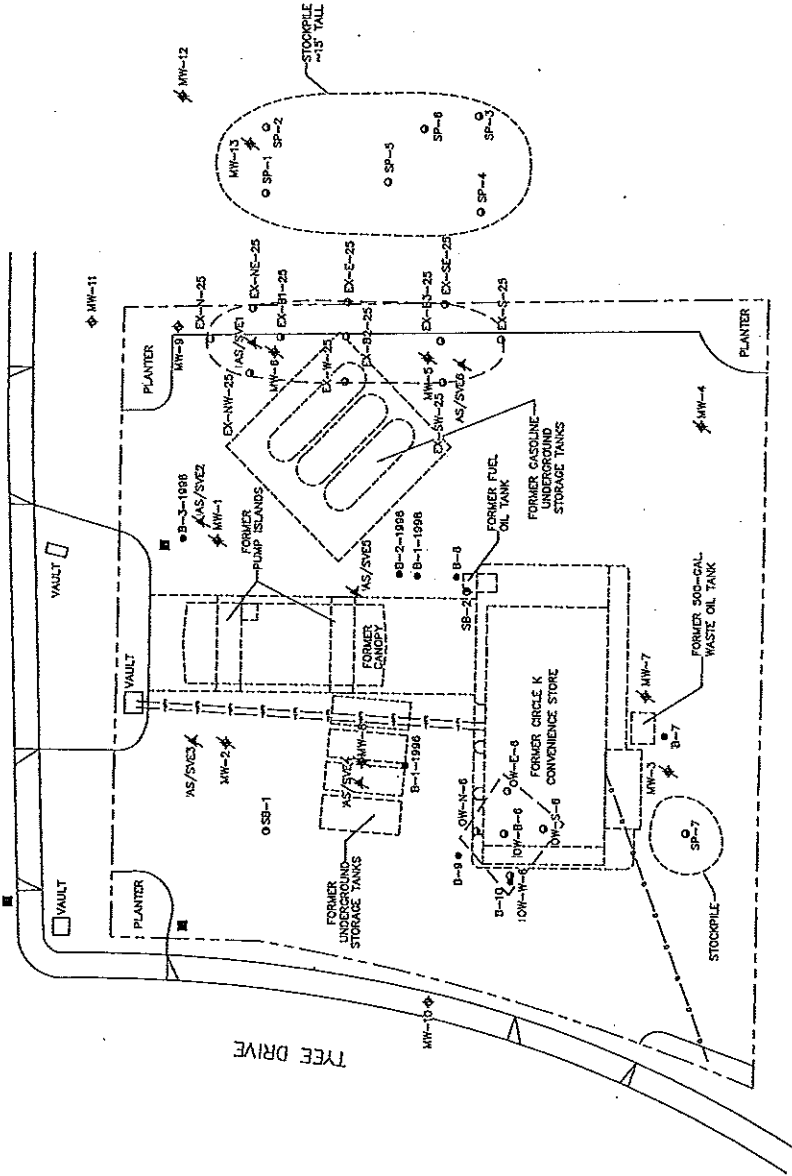
FIGURE 4

AREAS OF EXCAVATION

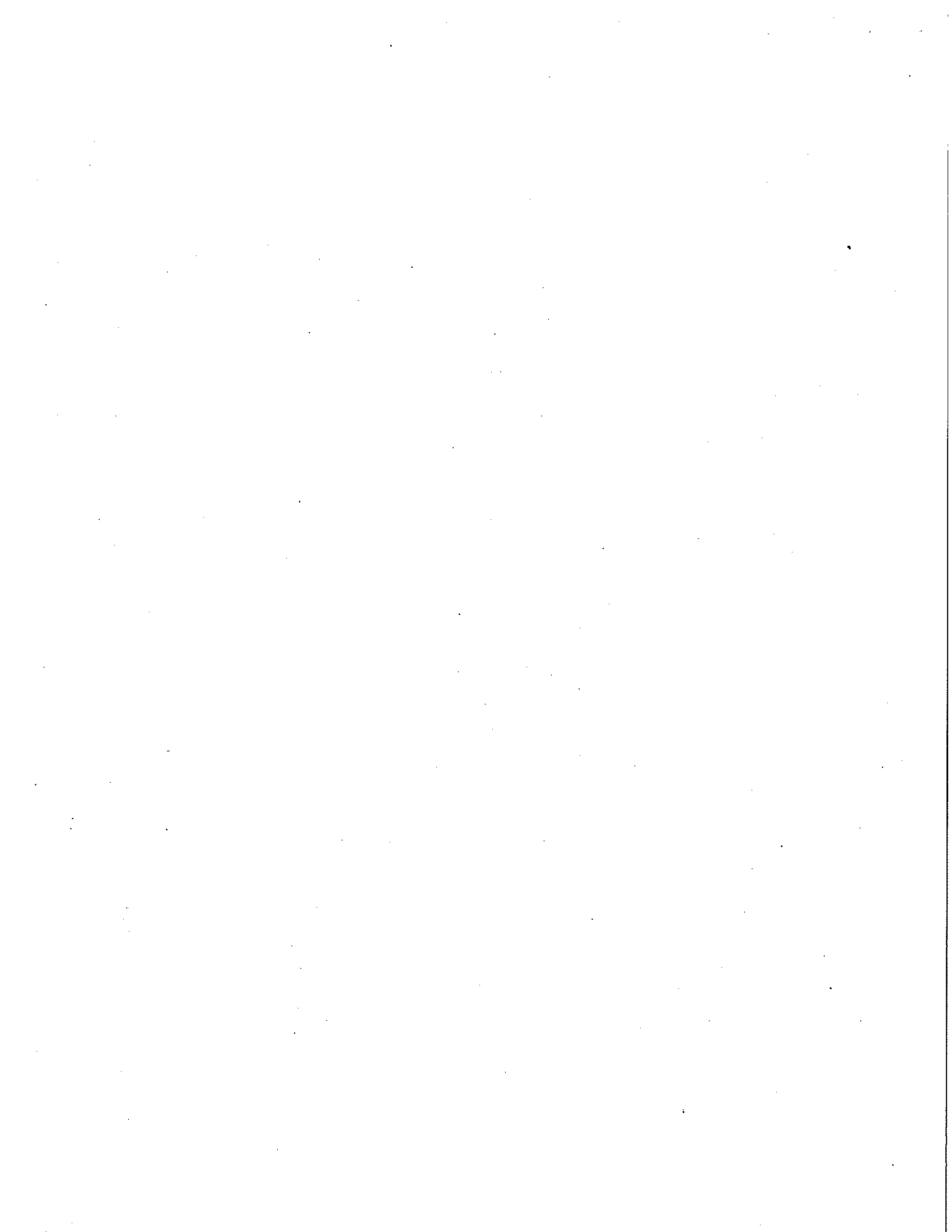
FORMER CONOCOPHILLIPS FACILITY No. 2705577  
501 TROSPER ROAD SW  
TUMWATER, WASHINGTON

TROSPER ROAD

TREE DRIVE



|                |                     |
|----------------|---------------------|
| FILENAME       | M\2705577_1204.LDWG |
| DRAWN BY       | KCD                 |
| CHECKED BY     | 1/30/2013           |
| APPROVED BY    |                     |
| PROJECT NUMBER | 142705577           |





**LEGEND**

- PROPERTY LINE
- GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- ABANDONED GROUNDWATER MONITORING WELL
- SOIL BORING (BY OTHER)
- ABANDONED AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION
- SOIL SAMPLE LOCATION
- ELECTRIC LINE
- TELEPHONE LINE
- GAS LINE
- STORM DRAIN
- DEEP EXCAVATION (-20' to -30')
- SHALLOW EXCAVATION (-5' to 5')
- BELOW GROUND SURFACE
- TPH-g - TOTAL PETROLEUM HYDROCARBONS
- AS GASOLINE (mg/kg)
- AS DIESEL (mg/kg)
- TPH-g - TOTAL PETROLEUM HYDROCARBONS
- AS HEAVY OIL (mg/kg)
- BENZENE (mg/kg)
- ETHYLBENZENE (mg/kg)
- TOLUENE (mg/kg)
- TOTAL XYLENES (mg/kg)
- TOTAL LEAD (mg/kg)
- MILLIGRAMS PER KILOGRAM
- NOT DETECTED ABOVE LIMIT
- NOTED

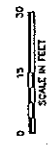
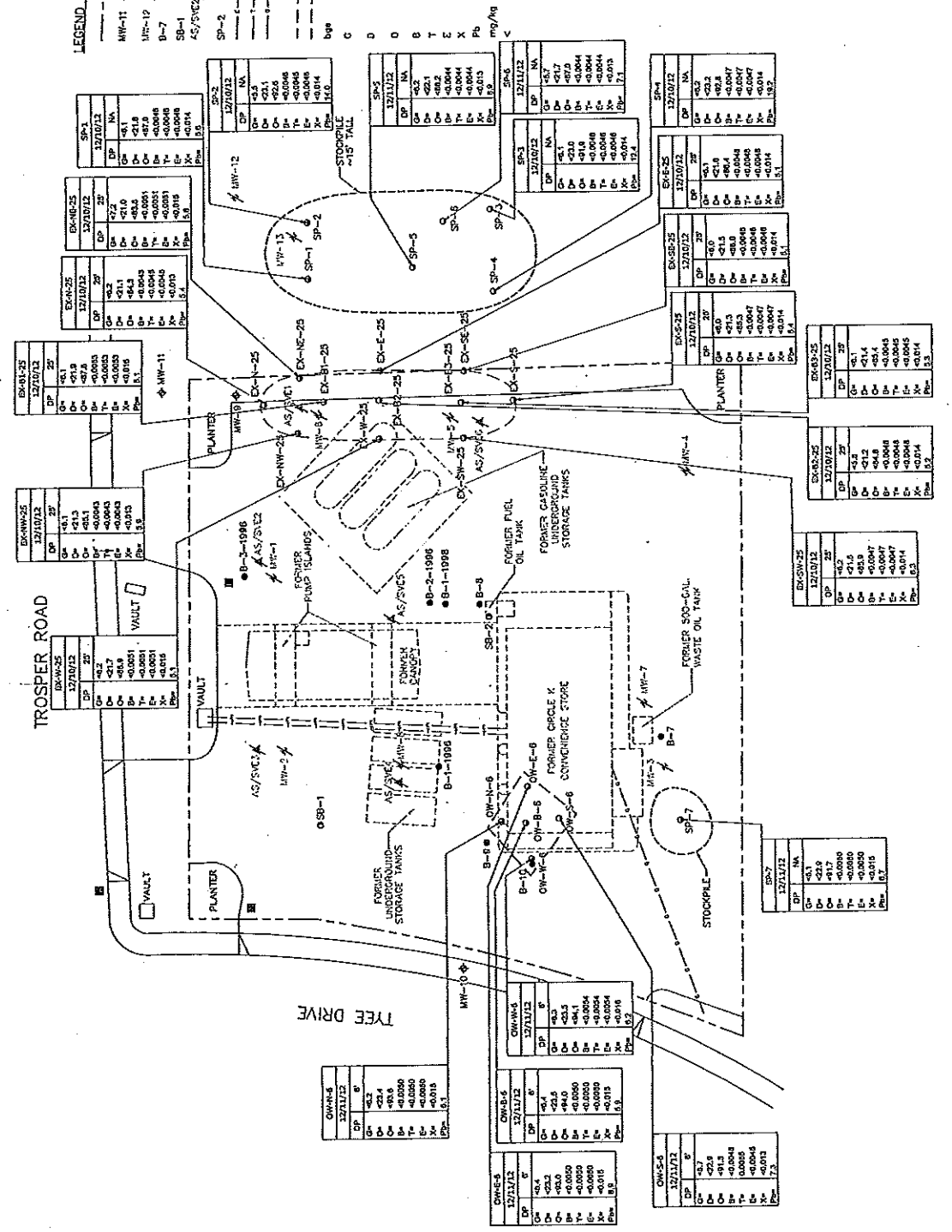
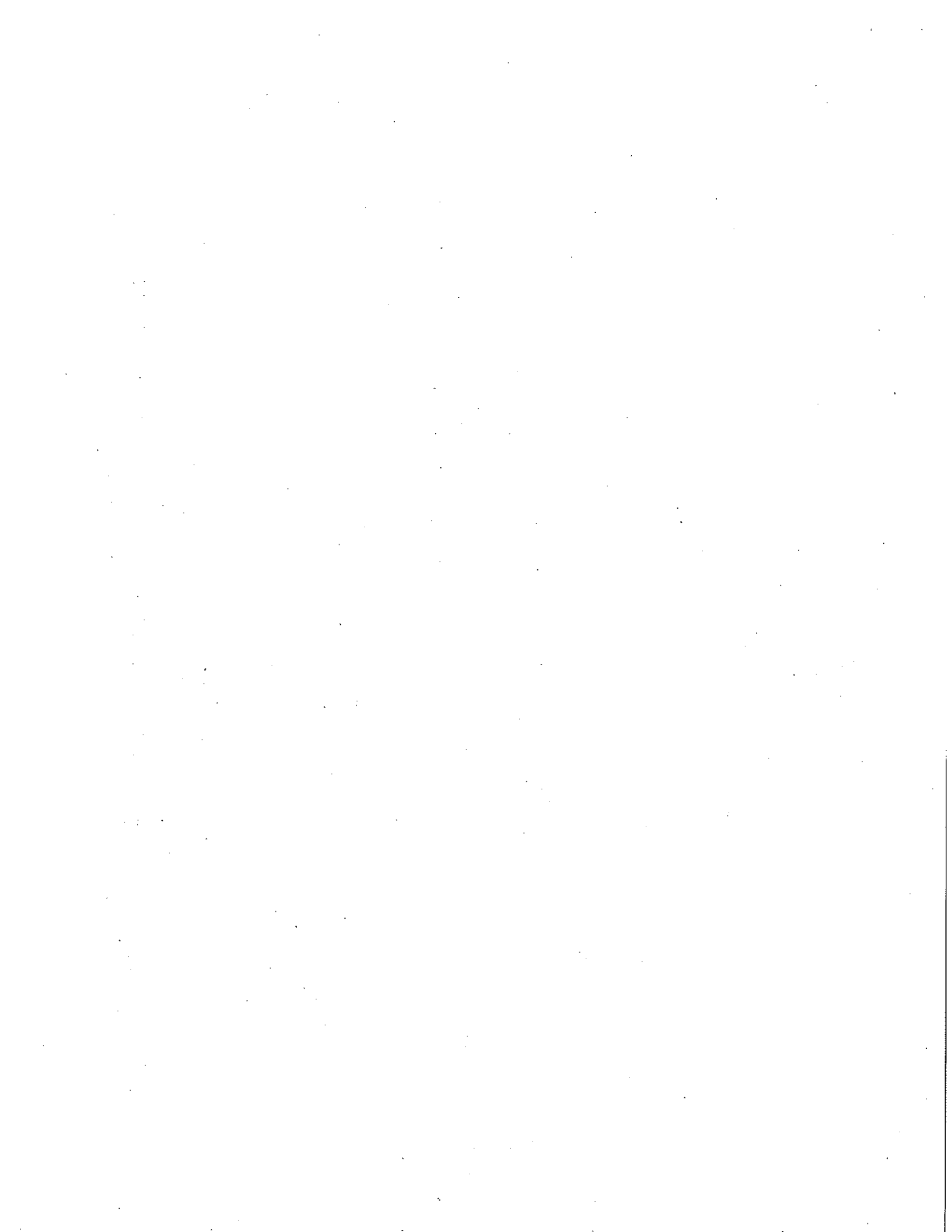


FIGURE 5

EXCAVATION SOIL ANALYTICAL RESULTS  
12/10/2012 AND 12/11/2012

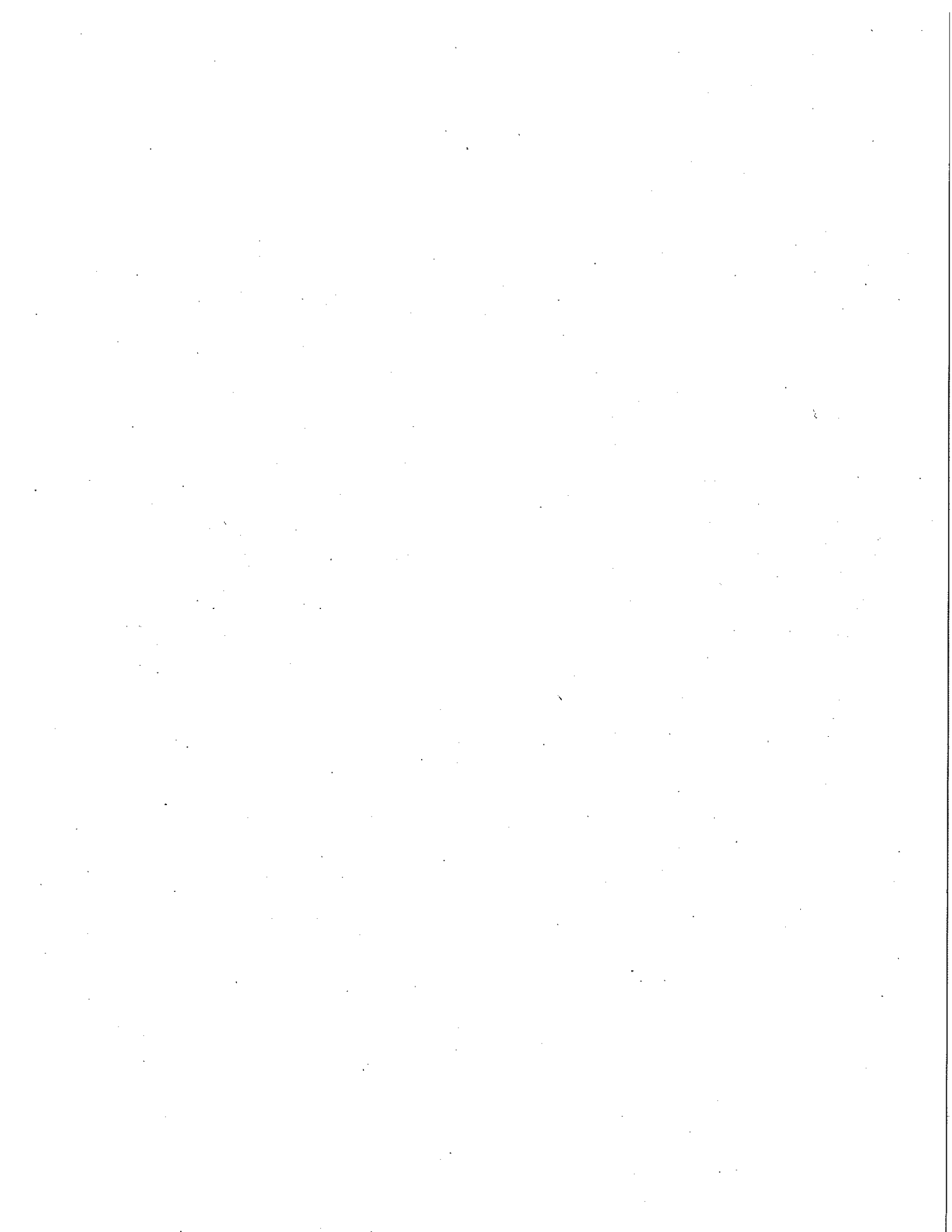
FORMER CONOCOPHILLIPS FACILITY No. 2705577  
501 TROSPER ROAD SW  
TUMWATER, WASHINGTON





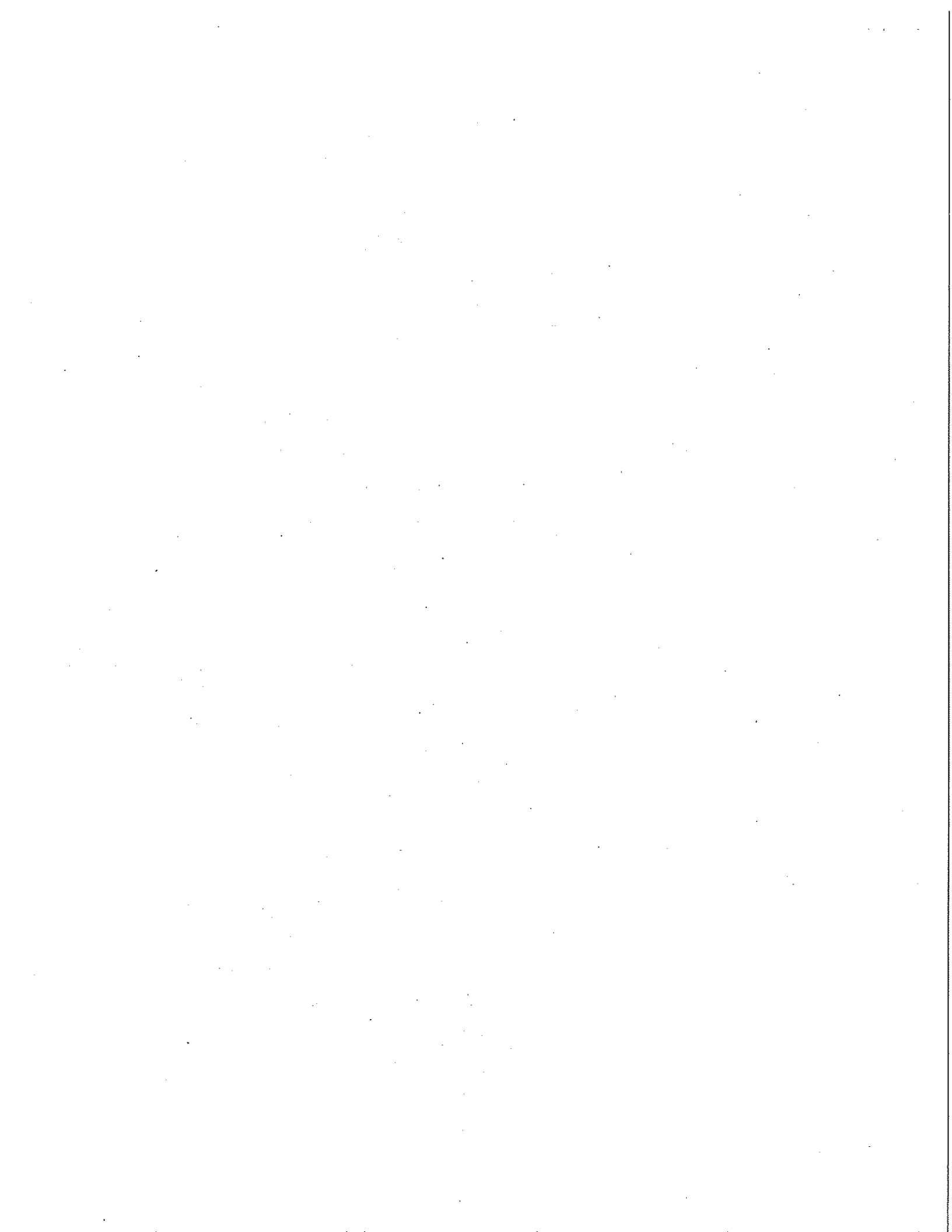
**TABLE 1**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS**  
 Former Pacific Convenience and Fuels Facility No. 2705577  
 501 Trooper Road SW  
 Tumwater, Washington

| Sample ID | Sample Date | Depth BGS (feet) | Analysis               |                      |                     |                 |                 |                       |                       |              |
|-----------|-------------|------------------|------------------------|----------------------|---------------------|-----------------|-----------------|-----------------------|-----------------------|--------------|
|           |             |                  | Gasoline Range (mg/kg) | Diesel Range (mg/kg) | Heavy Range (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Lead (mg/kg) |
| B-1R-6    | 07/06/12    | 6                | <6.5                   | <17.9                | <71.5               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 7.9          |
| B-1R-10   | 07/06/12    | 10               | <6.4                   | <17.2                | <68.7               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 2.7          |
| B-1R-15   | 07/06/12    | 15               | <6.2                   | <16.8                | <67.4               | <0.0035         | <0.0035         | <0.0035               | <0.0105               | 2.0          |
| B-1R-20   | 07/06/12    | 20               | <5.9                   | <16.6                | <66.3               | <0.0031         | <0.0031         | <0.0031               | <0.0094               | 2.1          |
| B-1R-25   | 07/06/12    | 25               | <5.7                   | <17.4                | <69.6               | <0.0030         | <0.0030         | <0.0030               | <0.0091               | 2.3          |
| B-2R-6    | 07/06/12    | 6                | <6.8                   | <18.1                | <72.4               | <0.0036         | 0.0077          | <0.0036               | 0.0255                | 3.5          |
| B-2R-10   | 07/06/12    | 10               | <6.4                   | <17.0                | <67.9               | <0.0034         | 0.0041          | <0.0034               | 0.0124                | 3.3          |
| B-2R-15   | 07/06/12    | 15               | <6.1                   | <16.8                | <67.3               | <0.0035         | <0.0035         | <0.0035               | <0.0106               | 2.8          |
| B-2R-20   | 07/06/12    | 20               | <5.7                   | <16.9                | <67.8               | <0.0030         | <0.0030         | <0.0030               | <0.0091               | 4.8          |
| B-2R-25   | 07/06/12    | 25               | <6.6                   | <18.8                | <75.2               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 2.7          |
| B-3R-6    | 07/06/12    | 6                | <6.3                   | <18.3                | <73.2               | <0.0035         | 0.0124          | 0.0042                | 0.0443                | 4.2          |
| B-3R-10   | 07/06/12    | 10               | <6.8                   | <18.3                | <73.1               | <0.0034         | 0.0071          | <0.0034               | 0.0292                | 3.6          |
| B-3R-15   | 07/06/12    | 15               | <6.2                   | <16.9                | <67.4               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 2.8          |
| B-3R-20   | 07/06/12    | 20               | <5.8                   | <17.1                | <68.4               | <0.0031         | <0.0031         | <0.0031               | <0.0094               | 4.0          |
| B-3R-25   | 07/06/12    | 25               | <5.3                   | <16.7                | <66.7               | <0.0029         | <0.0029         | <0.0029               | <0.0086               | 3.2          |
| B-4R-6    | 07/06/12    | 6                | <6.0                   | <17.3                | <69.1               | <0.0029         | <0.0029         | <0.0029               | <0.0087               | 4.2          |
| B-4R-10   | 07/06/12    | 10               | <7.7                   | <18.9                | <75.8               | <0.0039         | <0.0039         | <0.0039               | <0.0116               | 5.2          |
| B-4R-15   | 07/06/12    | 15               | <5.9                   | <16.7                | <66.7               | <0.0032         | <0.0032         | <0.0032               | <0.0097               | 2.4          |
| B-4R-20   | 07/06/12    | 20               | <6.4                   | <16.7                | <66.9               | <0.0034         | <0.0034         | <0.0034               | <0.0101               | 2.3          |
| B-4R-25   | 07/06/12    | 25               | <6.7                   | <17.7                | <70.8               | <0.0034         | <0.0034         | <0.0034               | <0.0101               | 3.2          |
| B-5R-6    | 07/06/12    | 6                | <6.0                   | 22.2                 | 162                 | <0.0032         | <0.0032         | <0.0032               | <0.0095               | 23.3         |
| B-5R-10   | 07/06/12    | 10               | <6.3                   | 18.1                 | 238                 | <0.0034         | <0.0034         | <0.0034               | 0.0157                | 10.5         |
| B-5R-15   | 07/06/12    | 15               | <6.2                   | <16.7                | <66.9               | <0.0031         | <0.0031         | <0.0031               | <0.0092               | 2.4          |



**TABLE 1**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS**  
Former Pacific Convenience and Fuels Facility No. 2705577  
501 Trosper Road SW  
Tumwater, Washington

| Sample ID | Sample Date | Depth BGS (feet) | Analysis               |                      |                     |                 |                 |                       |                       |              |
|-----------|-------------|------------------|------------------------|----------------------|---------------------|-----------------|-----------------|-----------------------|-----------------------|--------------|
|           |             |                  | Gasoline Range (mg/kg) | Diesel Range (mg/kg) | Heavy Range (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Lead (mg/kg) |
| B-5R-20   | 07/06/12    | 20               | <5.9                   | <16.7                | <66.9               | <0.0032         | <0.0032         | <0.0032               | <0.0097               | 1.9          |
| B-5R-25   | 07/06/12    | 25               | <5.8                   | <17.7                | <70.9               | <0.0030         | <0.0030         | <0.0030               | <0.0091               | 2.2          |
| B-6R-10   | 07/06/12    | 10               | <5.5                   | 81.5                 | 810                 | <0.0031         | 0.0038          | <0.0031               | 0.0127                | 15.7         |
| B-6R-15   | 07/06/12    | 15               | <6.3                   | <17.4                | <69.5               | <0.0034         | <0.0034         | <0.0034               | <0.0103               | 3.0          |
| B-6R-20   | 07/06/12    | 20               | <5.8                   | <16.7                | <66.9               | <0.0033         | <0.0033         | <0.0033               | <0.0099               | 2.2          |
| B-6R-25   | 07/06/12    | 25               | <7.3                   | <16.5                | <65.9               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 2.2          |
| B-7-6     | 05/24/12    | 6                | <6.9                   | <18.2                | <72.7               | <0.0029         | <0.0029         | <0.0029               | <0.0087               | 4.2          |
| B-7-20    | 05/24/12    | 20               | <7.1                   | <16.5                | <66.0               | <0.0033         | <0.0033         | <0.0033               | <0.0098               | 2.1          |
| B-7-25    | 05/24/12    | 25               | <6.6                   | <16.9                | <67.7               | <0.0030         | <0.0030         | <0.0030               | <0.0089               | 2.3          |
| B-8-6     | 05/24/12    | 6                | <7.1                   | <18.5                | <74.1               | <0.0033         | <0.0033         | <0.0033               | <0.010                | 3.4          |
| B-8-20    | 05/24/12    | 20               | <6.2                   | <17.1                | <68.2               | <0.0031         | <0.0031         | <0.0031               | <0.0093               | 2.2          |
| B-8-25    | 05/24/12    | 25               | <6.0                   | <17.2                | <68.8               | <0.0025         | <0.0025         | <0.0025               | <0.0076               | 2.2          |
| B-9-6     | 05/24/12    | 6                | <7.1                   | <18.1                | <72.6               | <0.0034         | <0.0034         | <0.0034               | <0.0101               | 2.6          |
| B-9-20    | 05/24/12    | 20               | <6.0                   | <16.7                | <66.9               | <0.0031         | <0.0031         | <0.0031               | <0.0092               | 2.0          |
| B-9-25    | 05/24/12    | 25               | <5.4                   | <17.0                | <68.1               | <0.0027         | <0.0027         | <0.0027               | <0.0082               | 1.8          |
| B-10-6    | 05/24/12    | 6                | <6.9                   | <17.9                | <71.7               | <0.0033         | <0.0033         | <0.0033               | <0.0098               | 3.5          |
| B-11-6    | 05/24/12    | 6                | <6.8                   | <17.7                | <70.9               | <0.0032         | <0.0032         | <0.0032               | <0.0096               | 2.9          |
| B-11-20   | 05/24/12    | 20               | 7.1                    | <17.7                | <70.8               | <0.0026         | <0.0026         | <0.0026               | <0.0077               | 3.1          |
| B-11-25   | 05/24/12    | 25               | <5.7                   | <16.5                | <66.1               | <0.0031         | <0.0031         | <0.0031               | <0.0092               | 1.9          |
| B-12-6    | 07/06/12    | 6                | <6.4                   | <17.4                | <69.7               | <0.0032         | <0.0032         | <0.0032               | <0.0096               | 4.9          |
| B-12-10   | 07/06/12    | 10               | <6.9                   | <17.5                | <70.0               | <0.0036         | <0.0036         | <0.0036               | <0.0109               | 3.2          |
| B-12-15   | 07/06/12    | 15               | <7.3                   | <19.9                | <79.5               | <0.0033         | <0.0033         | <0.0033               | <0.0098               | 4.5          |
| B-12-20   | 07/06/12    | 20               | <5.8                   | <16.7                | <66.8               | <0.0033         | <0.0033         | <0.0033               | <0.0099               | 2.2          |
| B-12-25   | 07/06/12    | 25               | <7.0                   | <18.5                | <74.2               | <0.0034         | <0.0034         | <0.0034               | <0.0102               | 2.0          |





**TABLE 1**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS**  
Former Pacific Convenience and Fuels Facility No. 2705577  
501 Trosper Road SW  
Tumwater, Washington

| Sample ID                            | Sample Date | Depth BGS (feet) | Analysis                  |                      |                     |                 |                 |                       |                       |              |
|--------------------------------------|-------------|------------------|---------------------------|----------------------|---------------------|-----------------|-----------------|-----------------------|-----------------------|--------------|
|                                      |             |                  | Gasoline Range (mg/kg)    | Diesel Range (mg/kg) | Heavy Range (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Lead (mg/kg) |
| <b>EXCAVATION SOIL SAMPLES</b>       |             |                  |                           |                      |                     |                 |                 |                       |                       |              |
| EX-N-25                              | 12/10/12    | 25               | <6.2                      | <21.1                | <84.5               | <0.0045         | <0.0045         | <0.0045               | <0.013                | 5.4          |
| EX-NE-25                             | 12/10/12    | 25               | <7.2                      | <21.0                | <83.8               | <0.0051         | <0.0051         | <0.0051               | <0.015                | 5.6          |
| EX-NW-25                             | 12/10/12    | 25               | <6.1                      | <21.3                | <85.1               | <0.0043         | <0.0043         | <0.0043               | <0.013                | 5.9          |
| EX-E-25                              | 12/10/12    | 25               | <6.1                      | <21.6                | <86.4               | <0.0048         | <0.0048         | <0.0048               | <0.014                | 5.1          |
| EX-W-25                              | 12/10/12    | 25               | <6.2                      | <21.7                | <86.9               | <0.0051         | <0.0051         | <0.0051               | <0.015                | 5.1          |
| EX-SE-25                             | 12/10/12    | 25               | <6.0                      | <21.5                | <86.0               | <0.0046         | <0.0046         | <0.0046               | <0.014                | 5.1          |
| EX-SW-25                             | 12/10/12    | 25               | <6.2                      | <21.5                | <85.9               | <0.0047         | <0.0047         | <0.0047               | <0.014                | 6.3          |
| EX-S-25                              | 12/10/12    | 25               | <6.0                      | <21.3                | <85.3               | <0.0047         | <0.0047         | <0.0047               | <0.014                | 5.4          |
| EX-B1-25                             | 12/10/12    | 25               | <6.1                      | <21.9                | <87.6               | <0.0053         | <0.0053         | <0.0053               | <0.016                | 5.1          |
| EX-B2-25                             | 12/10/12    | 25               | <5.8                      | <21.2                | <84.8               | <0.0048         | <0.0048         | <0.0048               | <0.014                | 5.2          |
| EX-B3-25                             | 12/10/12    | 25               | <6.1                      | <21.4                | <85.4               | <0.0045         | <0.0045         | <0.0045               | <0.014                | 5.3          |
| OW-N-6                               | 12/11/12    | 6                | <6.2                      | <23.4                | <93.6               | <0.0050         | <0.0050         | <0.0050               | <0.015                | 6.1          |
| OW-E-6                               | 12/11/12    | 6                | <6.4                      | <23.2                | <93.0               | <0.0050         | <0.0050         | <0.0050               | <0.015                | 6.9          |
| OW-W-6                               | 12/11/12    | 6                | <6.3                      | <23.5                | <94.1               | <0.0054         | <0.0054         | <0.0054               | <0.016                | 6.2          |
| OW-S-6                               | 12/11/12    | 6                | <5.7                      | <22.9                | <91.5               | <0.0045         | 0.0055          | <0.0045               | <0.013                | 7.3          |
| OW-B-6                               | 12/11/12    | 6                | <6.4                      | <23.5                | <94.0               | <0.0050         | <0.0050         | <0.0050               | <0.015                | 5.9          |
| <b>STOCKPILE SOIL SAMPLES</b>        |             |                  |                           |                      |                     |                 |                 |                       |                       |              |
| SP-1                                 | 12/10/12    | NA               | <6.1                      | <21.8                | <87.0               | <0.0046         | <0.0046         | <0.0046               | <0.014                | 5.6          |
| SP-2                                 | 12/10/12    | NA               | <5.5                      | <23.1                | <92.6               | <0.0046         | <0.0046         | <0.0046               | <0.014                | 14.0         |
| SP-3                                 | 12/10/12    | NA               | <6.1                      | <23.0                | <91.9               | <0.0046         | <0.0046         | <0.0046               | <0.014                | 12.4         |
| SP-4                                 | 12/10/12    | NA               | <6.2                      | <23.2                | <92.8               | <0.0047         | <0.0047         | <0.0047               | <0.014                | 19.2         |
| SP-5                                 | 12/11/12    | NA               | <6.2                      | <22.1                | <88.2               | <0.0044         | <0.0044         | <0.0044               | <0.013                | 8.9          |
| SP-6                                 | 12/11/12    | NA               | <5.7                      | <21.7                | <87.0               | <0.0044         | <0.0044         | <0.0044               | <0.013                | 7.1          |
| SP-7                                 | 12/11/12    | NA               | <6.1                      | <22.9                | <91.7               | <0.0050         | <0.0050         | <0.0050               | <0.015                | 6.7          |
| <b>MTCA Method A Cleanup Levels:</b> |             |                  | <b>100/30<sup>a</sup></b> | <b>2,000</b>         | <b>2,000</b>        | <b>0.03</b>     | <b>7</b>        | <b>6</b>              | <b>9</b>              | <b>250</b>   |

