



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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**Electronic Copy**

May 9, 2017

Dan Durr  
D & B Retail Development LLC  
6402 Tacoma Mall Blvd  
Tacoma WA 98409

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

- **Site Name:** Service Station 3733 S G St (Wells Fargo Property)
- **Site Address:** 3733 South G St, Tacoma, Washington
- **Facility/Site No.:** 92132181
- **Cleanup Site ID No:** 6858
- **VCP Project No.:** SW1564

Dear Mr. Durr:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Service Station 3733 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

**Issue Presented and Opinion**

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

**NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.**

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

**Description of the Site**

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This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Petroleum and constituents into the soil.

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Please note the parcels of real property associated with this Site is also located within the projected boundaries of the Tacoma Smelter Plume (TSP) site (Facility/Site #62855481). At this time, we have no information that this parcel is actually affected. This opinion does not apply to any contamination associated with the TSP facility.

### **Basis for the Opinion**

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

1. *Underground Storage Tank Site Assessment Activities*, ALS Consulting, LLC, August 19, 1996.
2. *Independent Site Remediation Work Plan*, Nowicki & Associates, April 10, 1998.
3. *Site Remediation Status & Request for Change Order*, Nowicki & Associates, April 15, 1998.
4. *Gasoline Impacted Soils-Final Site Remediation*, Nowicki & Associates, May 3, 2001.

These documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You may 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 **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

#### **1. Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action.

The Site, at 3737 South G Street, Tacoma, Pierce County, Washington, is located on the northeast corner of the intersection of South G Street and South 38<sup>th</sup> Street (Figure 1). Currently, the 0.36 acre Site has no structures and the western part is unpaved (Figure 2). The two parts are informally divided by an advertising sign and a grass strip. The western portion is the area addressed in this letter. The area surrounding the Site is light retail/commercial and residential.

A complete history of the Site was not available for review, however, reports indicate that it was a former gasoline service station and most recently a restaurant. During operation as a service station, the facility was comprised of a building and an underground storage tank (UST) system. The UST system consisted of two 1,000-gallon tanks, two 2,000-gallon tanks, piping, and a dispenser island. It appears that only gasoline was dispensed at the service station. It is unknown when the USTs were taken out of service. During remedial work at the Site, four additional abandoned tanks were discovered. Aerial photos confirmed the location of the former pump island that serviced the abandoned tanks (Figure 3, central pump island).

Native soils at the Site consist of silty sand to depths of approximately 5 feet below ground surface (bgs). Below this layer is the Vashon Till that is composed of interbedded clay and dense silt. The regional depth to groundwater beneath the Site is assumed to be generally 125 feet bgs as determined from well logs. Regionally, perched water in the till is sporadic, unconnected, and probably seasonally influenced.

The above ground structures associated with the restaurant were demolished in 1996. The USTs and piping were then removed. During this work, contamination was found in the UST nest and beneath the most recent pump island located on the west side of the Site (Figure 3, Table 1). A water sample collected from the UST excavation at approximately 7 feet bgs found Total Petroleum Hydrocarbons-Gasoline (TPH-G), benzene, and xylenes above the Method A cleanup levels in use at that time. The water did not appear to be representative of regional groundwater based on depth to regional groundwater in the area.

Paint thinner was rumored to have been stored in Tank 2. Analyses for compounds associated with paint thinner were run on sample B2-10.5 (Figure 3), collected from beneath Tank 2, but none were found thus eliminating these compounds from subsequent consideration as contaminants of concern. The approximately 27 cubic yards of removed soil was stockpiled on-Site. Regional groundwater was not encountered.

A waste oil tank was rumored to be present at the Site. A ground penetrating radar survey was conducted which located an anomaly that could possibly have been an UST. When excavated, the anomaly turned out to be a large boulder. No waste oil USTs have been identified to date.

Cleanup work was conducted at the Site in 1998. The contamination was found to be more extensive than anticipated and excavation was only conducted at the western pump island (Figure 4). At this time, due to contractual and financial constraints, not all of the contamination was able to be removed.

A total of 302.04 tons of contaminated soil was taken to TPS Technologies in Tacoma, Washington for treatment and disposal. It is unknown if the excavation was backfilled. No groundwater was encountered.

Additional remedial work was done in 1999. During this work, four additional tanks, with sizes ranging from 300 to 500 gallons, were found in the southwest corner of the Site. They were empty and some were torn apart and/or partially crushed. They were left in the excavation. A dispute arose between the estate executor and the contractor, resulting in the work being left incomplete and no documentation of the activities produced. Two stockpiles of soil were left on the northern portion of the Site. From the amount of soil in the stockpiles, it appears that some stockpiled soil was removed from the Site, although no documentation was ever recovered.

The final cleanup was completed in late 2000. The 1999 excavation was found fenced and still open with the abandoned tanks inside when the final cleanup was initiated.

The first activity was collection of a water sample from the large excavation for analysis of TPH-G, benzene, toluene, ethylbenzene, total xylenes (BTEX), Total Petroleum Hydrocarbons-Diesel (TPH-D), and Total Petroleum Hydrocarbons-Oil (TPH-O). The results were all non-detect. This water appeared to be rain/surface water that had collected in the excavation during the over one year it was left open. Since regional groundwater is expected to be at least 100 feet bgs, the water accumulation within the excavation was not representative of true groundwater conditions. During the subsequent excavation activities, no groundwater was found, which also indicated that the excavation water was not representative of regional groundwater.

Under the terms of a special permit from City of Tacoma Public Works, the water was pumped from the excavation and discharged to a nearby catch basin. During the pumping, every half hour a sample was collected from the discharge point to assess visually for turbidity and oil sheen. The process took approximately 5.5 hours, during which no visibly detectable particulates, color changes, or sheens were observed. Approximately 64,400 gallons of water were pumped from the excavation into the catch basin. Toward the end of the discharge period, a sample was collected and submitted for laboratory analysis of TPH-G, BTEX, TPH-D, and TPH-O. All results were non-detect.

The next activity at the Site dealt with the two stockpiles left from the 1999 work. Soils were segregated into 4 stockpiles and sampled. Approximately 450 cubic yards of clean soil was stockpiled for reuse.

The excavation from the 1996 UST removal was found to be filled with sandy fill to around 3 to 4 feet bgs. This material was removed and samples collected from the areas above the known remaining contamination. Re-excavation was continued to approximately 11 feet bgs, but no contamination was found at either the north end or the west sidewall (Figure 5, Table 2). Two confirmation samples were collected, one from the north base at 11 feet bgs and the other from the west wall at 9 feet bgs. Both of these locations were found to be contaminated in 1996. The results were non-detect for TPH-G and BTEX. The excavation was then backfilled with clean excavated fill.

The large excavation area, consisting of the abandoned tanks and portions of both pump island areas, was sampled to identify remaining contamination. An area of contamination near the center was found at approximately 10 feet bgs. The concentrations were, in milligrams per kilogram (mg/kg), TPH-G at 8,200, benzene at 8.5, toluene at 22.6, ethylbenzene at 32.7, and total xylenes at 156. All of these concentrations are above the current Method A cleanup levels. Although the location of this sample was not shown on the figure, additional excavation was then undertaken to remove this area of contamination. Subsequent confirmation sample results indicated that this portion of the pit was below cleanup levels.

The former west side dispenser island was then excavated to a maximum depth of 14 feet bgs. The two confirmation samples collected were non-detect for TPH-G and BTEX. The walls around it were also excavated and confirmation samples collected. Two samples, DISP-BOT3 at 8 feet bgs, and DISP-EW-3 at 5' both had constituents above the current Method A cleanup levels.

The south wall of the 1999 excavation extended to the edge of the sidewalk. Samples were collected along this wall and analyzed for TPH-G and BTEX. Two samples, SW-2 at 8 feet bgs, and SW-5 at 8 to 8.5 feet bgs, had several constituents above the current Method A cleanup level (Figure 5, Table 2; note north is to the left in Figure 5). The results, in mg/kg, for SW-5 were TPH-G at 1,200, benzene at 1.2, and xylenes at 13. Sample SW-2 results, in mg/kg, were TPH-G at 139 and benzene at 0.08. Sample SW-4, collected at 6-6.5 feet bgs, above SW-5, was non-detect for TPH-G and BTEX. The contamination appeared to follow a dense gravelly sand seam at the 8 to 8.5 foot bgs level which appeared to limit downward migration. Sample SW-3, collected in this seam around 20 feet east of SW-5, was non-detect. Sample SW-1, 8 feet bgs, collected west of SW-2 at the corner of the excavation, was also non-detect. Further soil removal in the SW-2 and SW-5 areas was not feasible due to stability concerns regarding the sidewalk.

The main part of this excavation (Figure 5, southern portion) was excavated to a total depth of 13 feet bgs. Old piping was found at approximately 3 feet bgs in the northeast corner of the pit. Contamination associated with the piping was found and excavated.

Confirmation samples were collected to verify removal of all contamination. Three samples had remaining contamination above the current Method A cleanup levels: DISP-BOT3, 8 feet bgs, along the west wall, had benzene at 0.11 mg/kg; NW-1, 8.5 feet bgs, in the northeast base, had TPH-G at 82 mg/kg, and DISP-EW-3, 5 feet bgs, along the northeast wall, had TPH-G at 59 mg/kg. These locations, along with SW-2 and SW-5 along the south wall, were the only remaining areas of results above the current Method A cleanup levels.

During the excavation and sampling activities, two samples, DISP-BOT-3 and WW-1, were analyzed for lead. The results were non-detect.

TPH-D and TPH-O were not considered to be a contaminant of concern since the pit water analyses for these compounds were non-detect. One detection of TPH-D was found in one of the 1999 stockpiles, at a concentration of 21 mg/kg, which is below the current Method A cleanup level of 2,000 mg/kg.

Upon completion of excavation activities, a total of 925.58 tons of contaminated soil was transported to the Olympic View Landfill in Port Orchard, Washington, for disposal.

## **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**

Method B cleanup levels were selected for comparison of remaining soil contamination at the Site.

The Method B cleanup levels were determined using guidance in the *Model Remedies for Sites with Petroleum Contaminated Soils*, Toxics Cleanup Program, September 2015, Publication No. 15-09-043.

Model Remedy 4 was selected for establishing cleanup levels at the Site. This remedy states it may be used where Method B has been selected to establish the cleanup levels and removal of the contaminated soil is sufficient to meet the calculated Method B levels.

Since Site-specific Method B values were not obtained, the generic Method B direct contact TPH-G cleanup level of 1,500 mg/kg was used. For benzene, the generic Method B cleanup level of 18.2 mg/kg in soil was used.

Remaining levels of contamination are below these cleanup levels. All remaining TPH-G and benzene concentrations are below these concentrations.

**Please note that these generic Method B cleanup levels apply only when the affected soils are left in place. If removed, these cleanup levels no longer apply and removed soil will need to comply with Method A soil cleanup levels. Any soils above Method A cleanup levels will require characterization for disposal at a facility licensed to accept them.**

**b. Points of compliance**

Standard points of compliance for each potential exposure pathway were used for the Site.

**The Points of Compliance used were:**

**Soil -Direct Contact:** For soil cleanup levels based on human exposure via direct contact, the point of compliance is: *"...throughout the Site from ground surface to 15 feet below the ground surface."*

The direct contact pathway has been determined to be incomplete since measured TPH-G and benzene levels in soil are below the Method B direct contact level of 1,500 mg/kg and 18.2 mg/kg, respectively, for unrestricted use. All contaminated soil in the direct-contact pathway has been removed thus resulting in an incomplete exposure route.

**Soil- Leaching:** For sites where soil cleanup levels are based on the protection of groundwater: *"...the point of compliance is throughout the Site."*

This exposure pathway is incomplete since regional groundwater is approximately 100 feet bgs and was never encountered at the Site.

**Groundwater:** For groundwater, the standard point of compliance as established under WAC 173-340-720(8) is: *"...throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site."*

This exposure pathway is incomplete since regional groundwater is approximately 100 feet bgs.

**Vapor:** Ambient and indoor air throughout the site was determined to be below risk levels and is thus not a complete pathway of exposure.

The vapor intrusion pathway was screened out and is thus not a complete pathway. The area has remained unpaved for at least 16 years and no buildings occupy the Site, thus rendering this pathway incomplete.

**3. Selection of cleanup action.**

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The remedy selected for cleanup of the Site consisted of excavation of contaminated soil with off-Site treatment and disposal.

**4. Cleanup.**

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

The selected remedy was accomplished during four periods of activity.

The first round of work, conducted in 1996, consisted of removal of the USTs, piping, and dispenser island. Contaminated soil removed at that time was stockpiled on Site and the excavations backfilled.

The second period of remedial activities, conducted in 1998, removed 302.04 tons of contaminated soil from the Site. Only the area of the western pump island was excavated during this work. The soil was taken to TPS Technologies in Tacoma, Washington, for treatment and disposal. No groundwater was encountered.

The third period of activity, in 1999, discovered additional tanks that had been abandoned in place. More excavation was completed although no documentation was ever produced to record the activities or any contaminated soil removal. The excavation was fenced and left open. Some soil was stockpiled on Site.

A final cleanup was accomplished at the Site in 2000. Cleanup activities consisted of excavation and disposal of 925.58 tons of contaminated soil at the Olympic View Landfill in Port Orchard, Washington. Confirmation sampling at the completion of excavation verified removal of all contaminated soil above the Method B generic cleanup levels. No groundwater was encountered during this work.



Between the two documented soil removal periods, a total of 1,227.62 tons of contaminated soil was removed from the Site and disposed of at TPS Technologies in Tacoma, Washington, and Olympic View Landfill in Port Orchard, Washington. An unknown amount was removed in 1999 and is assumed to have been taken to Fife Sand and Gravel for treatment and disposal.

### **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. Dan Durr  
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### **Termination of Agreement**

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Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW1564).

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (360) 407-6263 or e-mail at [Carol.Johnston@ecy.wa.gov](mailto:Carol.Johnston@ecy.wa.gov).

Sincerely,



Carol A. Johnston  
SWRO Toxics Cleanup Program

CAJ: kb

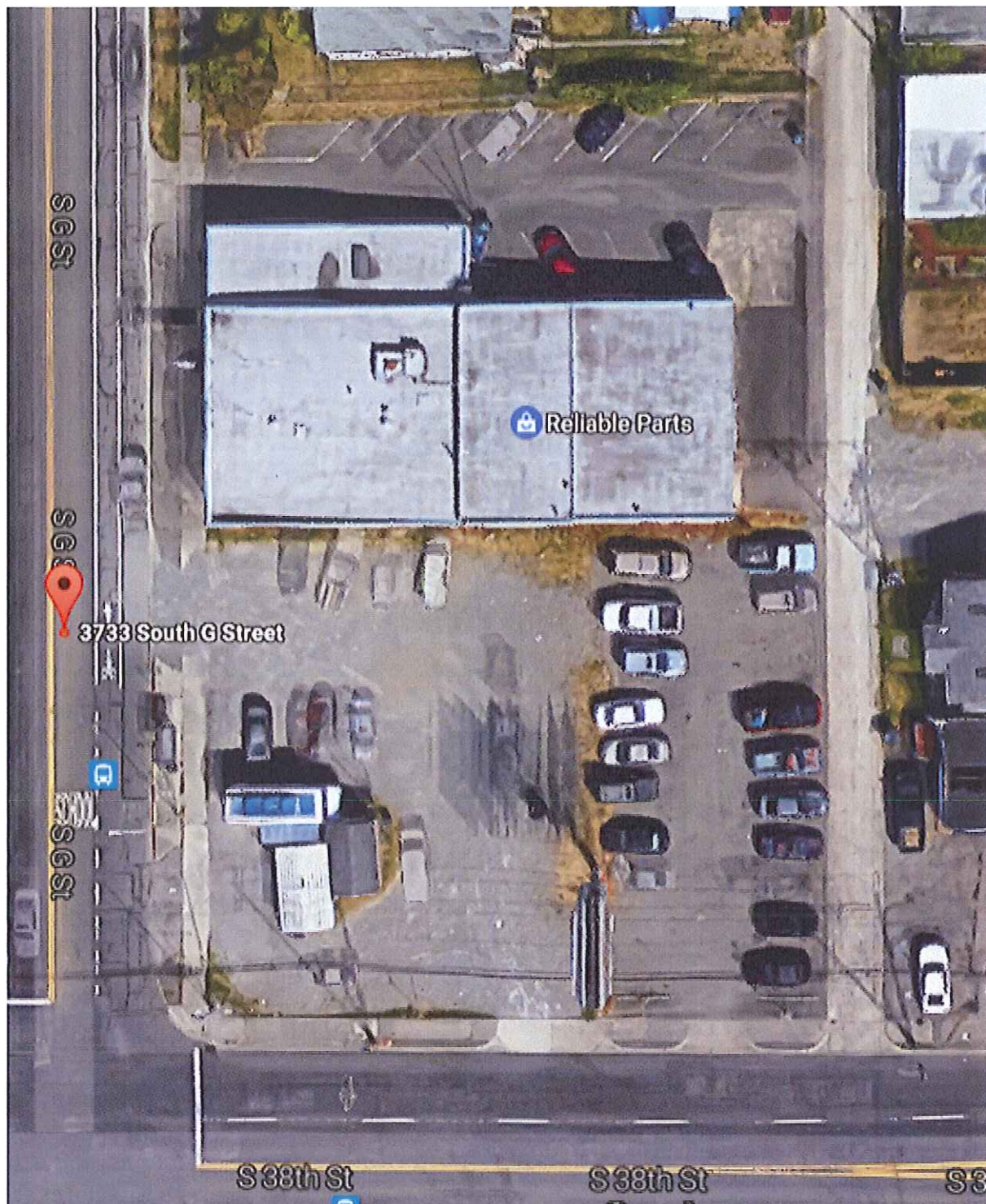
Enclosures (7):   Figure 1: Location Map  
                      Figure 2: Site Features Map  
                      Figure 3: UST Removal Sampling Locations  
                      Figure 4: 1998 Soil Sampling Locations  
                      Figure 5: Final Cleanup Sampling Locations  
                      Table 1: 1996 – 1998 Sampling Results  
                      Table 2: Final Cleanup Sampling Results

By Certified Mail: [91 7199 9991 7037 0279 7932]

Cc:   Verna Lee Curry, V Environmental  
      Rob Olsen, TPCHD  
      Nicholas Acklam, Ecology  
      Matthew Alexander, Ecology  
      Mark Gordon, Ecology

Figure 1

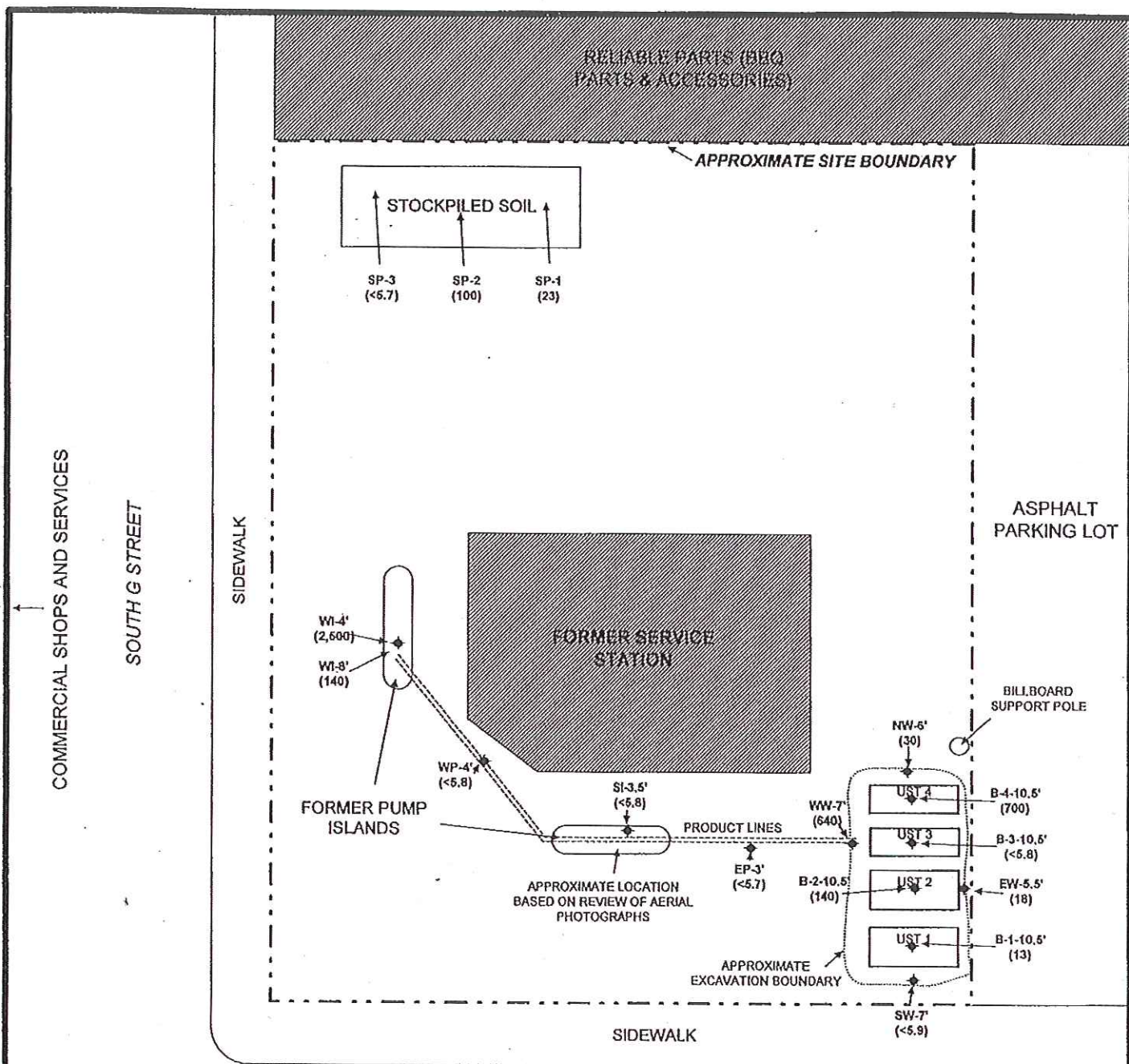




Site Features Map

Figure 2





# **LEGEND:**

- SI-3.5' ◆ = APPROXIMATE LOCATION OF SOIL SAMPLE
- BGW ◆ = APPROXIMATE LOCATION OF EXCAVATION WATER SAMPLE
- (540) = TOTAL PETROLEUM HYDROCARBONS (WTPH-G) mg/kg (~ppm)

SOUTH 38TH STREET

US POST OFFICE

FLYING BOOTS CAFE

PROJECT NO.: 1-96-0004

FIGURE 3

DESIGNED BY: DFK

SCALE: 1" ~ 15'

DRAWN BY: DFK

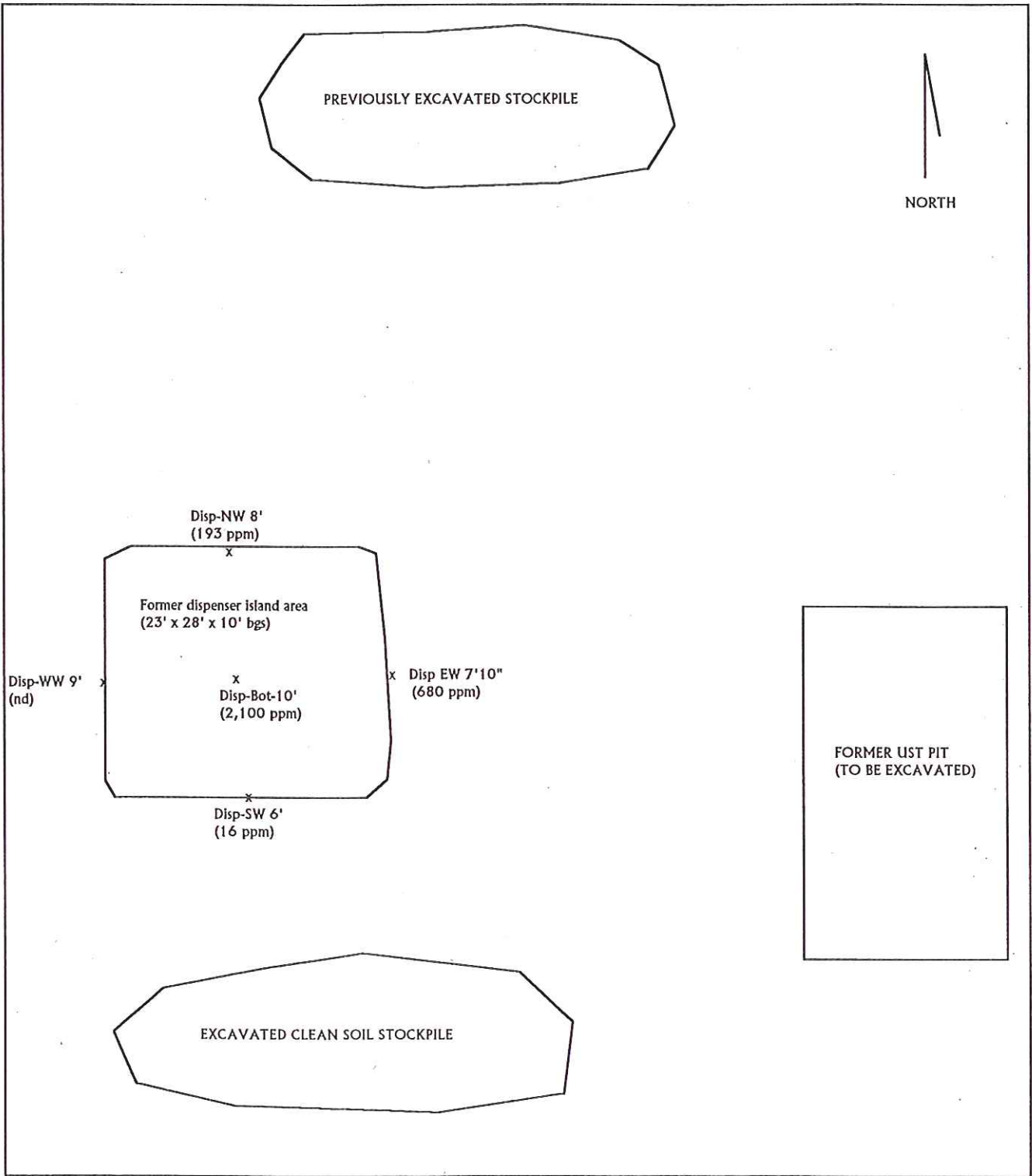
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## **SOIL ANALYTICAL RESULTS**

UST SITE ASSESSMENT  
WELLS FARGO BANK PROPERTY  
3733 - 3737 SOUTH G STREET  
TACOMA, WASHINGTON 98408



Note:  
 bgs ... below ground surface  
 x Bot-10' ... Soil sample location with sample ID  
 ( 900 ppm) ... Gasoline range Intermediate petroleum distillates

LYONS TRUST - 3733-3737 SOUTH G, TACOMA, WA

FIGURE 4 SOIL SAMPLE LOCATIONS

1" = 15'

NOWICKI & ASSOCIATES, INC.

4-15-98



HALLADAY'S BRAKES & MUFFLERS

CLEAN SOIL STOCKPILED SOILS

STOCKPILE B  
APPROX. 100 YARDS

SP2-2  
X

SP2-1  
X

SP2-3  
X

SP1-6  
X

SP1-4  
X

SP1-1  
X

STOCKPILE A  
APPROX. 150 YARDS

SP1-3  
X

SP1-2  
X

SP1-5  
X

SP1-7  
X

ASPHALT-PAVED  
PARKING LOT

B-3-10.5'  
GAS<5.8 ppm

B-2-10.5'  
GAS=140 ppm

Samples in *italics* were collected  
during tank removal in 7/96

EW-5.5'  
GAS=18 ppm

B-1-10.5  
GAS=13 ppm

SW-7', GAS<5.9 ppm

FORMER UST  
EXCAVATION

Limits of Large  
Excavated Pit

ACKERLY  
SIGN POST

NW-6'  
GAS=30  
ppm

TP-2, 11'  
ND

TP-1, 9'  
ND

CONCRETE  
SIDEWALK

SOUTH  
38TH  
STREET

SW-4, 6'-6.5'  
GAS=ND

SW-5, 8'-8.5'  
GAS=1,200 ppm  
B=1.2 ppm  
T=1.5 ppm  
E=4.8 ppm  
X=13 ppm

CROSS-WALK  
POST  
(REFERENCE  
POINT)

SW-1, 8'  
ND

SW-2, 8'  
GAS=139 ppm  
B=.08 ppm  
T=.28 ppm  
E=.5 ppm  
Xx=1.26 ppm

SW-3, 7'  
ND

BOT-7, 13'  
ND

Excavated Depths:  
12' to 13' bgs

BOT-6, 12.5'  
ND

NW-1, 8.5'  
GAS=82 ppm

BOT-9, 12'  
ND

DISP-BOT-2, 12'  
ND

DISP-NW2, 12'  
ND

BOT-4, 8.5'  
ND

BOT-8, 11.5'-12'  
ND

DISP-BOT-1, 14'  
ND

BOT-11, 12'  
ND

WW-2, 8.5'  
ND

WW-1, 7'  
ND

WW-4, 6' ND

WW-3, 8.5'  
ND

DISP-BOT3, 8' GAS=ND  
B=.11 ppm  
T=.11 ppm  
E=.07 ppm  
X=.28 ppm

DISP-WW-3, 5'  
ND

DISP-WW-2, 7'  
ND

DISP-NW-3, 7'  
ND

DISP-EW4, 7'  
ND

DISP-EW-4, 7'  
ND

DISP-EW-3, 5'  
GAS=59 ppm

DISP-EW-2, 8'  
ND

DISP-EW-1, 9'  
ND

DISP-NW-3, 5'  
ND

DISP-NW-2, 12'  
ND

DISP-BOT-1, 14'  
ND

DISP-BOT-2, 12'  
ND

DISP-BOT-3, 8'  
GAS=ND

DISP-BOT-4, 9'  
ND

DISP-BOT-5, 10'  
ND

DISP-BOT-6, 12.5'  
ND

DISP-BOT-7, 13'  
ND

DISP-BOT-8, 11.5'-12'  
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DISP-BOT-9, 12'  
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DISP-BOT-10, 12'  
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DISP-BOT-73, 12'  
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DISP-BOT-74, 12'  
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DISP-BOT-75, 12'  
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DISP-BOT-76, 12'  
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DISP-BOT-77, 12'  
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DISP-BOT-78, 12'  
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DISP-BOT-79, 12'  
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DISP-BOT-80, 12'  
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DISP-BOT-81, 12'  
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DISP-BOT-82, 12'  
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DISP-BOT-83, 12'  
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DISP-BOT-84, 12'  
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DISP-BOT-85, 12'  
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DISP-BOT-86, 12'  
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DISP-BOT-87, 12'  
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DISP-BOT-88, 12'  
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DISP-BOT-89, 12'  
ND

DISP-BOT-90, 12'  
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DISP-BOT-91, 12'  
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DISP-BOT-92, 12'  
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DISP-BOT-96, 12'  
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DISP-BOT-97, 12'  
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DISP-BOT-98, 12'  
ND

DISP-BOT-99, 12'  
ND

DISP-BOT-100, 12'  
ND

DISP-BOT-101, 12'  
ND

DISP-BOT-102, 12'  
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DISP-BOT-103, 12'  
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DISP-BOT-104, 12'  
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DISP-BOT-105, 12'  
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DISP-BOT-106, 12'  
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DISP-BOT-107, 12'  
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DISP-BOT-108, 12'  
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DISP-BOT-109, 12'  
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DISP-BOT-110, 12'  
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DISP-BOT-111, 12'  
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DISP-BOT-112, 12'  
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DISP-BOT-113, 12'  
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DISP-BOT-147, 12'  
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DISP-BOT-186, 12'  
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DISP-BOT-187, 12'  
ND

DISP-BOT-188, 12'  
ND

DISP-BOT-189, 12'  
ND

Table 1. Laboratory Data from Site Assessment and Prior Soil Excavation Activities

Sample ID	Collection Date	Description	Gas TPHs (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenz (ppm)	Xylenes (ppm)
SW-7'	7-25-96	Former tank excavation south wall, 7' bgs	nd	nd	nd	nd	nd
B-1 10.5'	"	Below tank #1, 10' bgs	13	nd	nd	nd	nd
EW 5.5'	"	East excavation wall, 5.5' bgs	18	nd	nd	nd	nd
B-2 10.5'	"	Below tank #2, 10.5' bgs	140	nd	1.3	1	3.6
B-3 10.5'	"	Below tank #3, 10.5' bgs	nd	nd	nd	nd	nd
WW 7'	"	West wall, 7' bgs	640	nd	3.6	3.6	16
NW 6'	"	North wall, 6' bgs	30	nd	nd	nd	.3
B4 10.5'	"	Below tank #4, 10.5' bgs	700	nd	4.4	8.1	22
SI 3.5'	"	Below product piping, 3.5' bgs	nd	nd	nd	nd	nd
WI 4'	"	Under dispenser island, 4' bgs	2500	10	nd	nd	nd
WP 4'	"	Under product piping, 4' bgs	nd	nd	nd	nd	nd
EP 3'	"	Under product piping, 3' bgs	nd	nd	nd	nd	nd
BGW	"	Water sample from tank excavation	25	.71	.3	.58	1.2
WI 8'	8-2-96	Under dispenser island, 8' bgs	140	nd	nd	nd	1.4
SP 1	"	Excavated stockpiled soil	23	nd	nd	nd	nd
SP 2	"	"	100	nd	.47	.36	nd
SP 3	"	"	nd	nd	nd	nd	nd
Disp-Bot 3.5' 10'	4-14-98	Dispenser island excavation bottom, 10 bgs	2100 <sup>1</sup>	nd	nd	nd	11.7
Disp 4'-NW 8'	"	Dispenser island excavation north wall, 8' bgs	193 <sup>1</sup>	nd	nd	nd	1.16
DWP 4'isp-SW 6'	"	Dispenser island excavation 6' bgs	16 <sup>1</sup>	nd	nd	nd	nd
Disp-EW 7'10"	"	Dispenser island excavation east wall, 7' 10" bgs	680 <sup>1</sup>	nd	nd	nd	1.14
Disp-WW 9'	"	Dispenser island excavation west wall, 9' bgs	nd <sup>1</sup>	nd	nd	nd	nd
Disp-EX1	"	Dispenser island excavated impacted soil	450 <sup>1</sup>	nd	nd	nd	2.73
SW-7'	7-25-96	Former tank excavation south wall, 7' bgs	nd	nd	nd	nd	nd
B-1 10.5'	"	Below tank #1, 10' bgs	13	nd	nd	nd	nd
EW 5.5'	"	East excavation wall, 5.5' bgs	18	nd	nd	nd	nd
B-2 10.5'	"	Below tank #2, 10.5' bgs	140	nd	1.3	1	3.6
B-3 10.5'	"	Below tank #3, 10.5' bgs	nd	nd	nd	nd	nd
WW 7'	"	West wall, 7' bgs	640	nd	3.6	3.6	16
NW 6'	"	North wall, 6' bgs	30	nd	nd	nd	.3
B4 10.5'	"	Below tank #4, 10.5' bgs	700	nd	4.4	8.1	22
SI 3.5'	"	Below product piping, 3.5' bgs	nd	nd	nd	nd	nd
WI 4'	"	Under dispenser island, 4' bgs	2500	10	nd	nd	nd
WP 4'	"	Under product piping, 4' bgs	nd	nd	nd	nd	nd
EP 3'	"	Under product piping, 3' bgs	nd	nd	nd	nd	nd
BGW	"	Water sample from tank excavation	25	.71	.3	.58	1.2
WI 8'	8-2-96	Under dispenser island, 8' bgs	140	nd	nd	nd	1.4
SP 1	"	Excavated stockpiled soil	23	nd	nd	nd	nd
SP 2	"	"	100	nd	.47	.36	nd
SP 3	"	"	nd	nd	nd	nd	nd
Disp-Bot 3.5' 10'	4-14-98	Dispenser island excavation bottom, 10 bgs	2100 <sup>1</sup>	nd	nd	nd	11.7
Disp 4'-NW 8'	"	Dispenser island excavation north wall, 8' bgs	193 <sup>1</sup>	nd	nd	nd	1.16
DWP 4'isp-SW 6'	"	Dispenser island excavation 6' bgs	16 <sup>1</sup>	nd	nd	nd	nd
Disp-EW 7'10"	"	Dispenser island excavation east wall, 7' 10" bgs	680 <sup>1</sup>	nd	nd	nd	1.14
Disp-WW 9'	"	Dispenser island excavation west wall, 9' bgs	nd <sup>1</sup>	nd	nd	nd	nd
Disp-EX1	"	Dispenser island excavated impacted soil	450 <sup>1</sup>	nd	nd	nd	2.73

## Note:

All impacted soils as indicated in Table 2 above have been excavated for off-site disposal during subsequent site clean-up activities. Final confirmational samples results are listed in Table 1.

nd ... Non-detect at the method detection limit(s).

<sup>1</sup> ... Values reported as Intermediate Petroleum Distillate (IPD).

Data of samples collected on 7/25/96 and 8/2/96 were obtained from ALS Site Assessment Report dated August 19, 1996.

Refer to attached reports for method detection levels.

	Method Detection Limit	S: 10 GW: 100 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb
	Current MTCA Method A Clean-up Level	S: 100 ppb GW: 1,000 ppb	S: 0.5 ppm GW: 5.0 ppb	S: 40 ppb GW: 40 ppb	S: 20 ppb GW: 30 ppb	S: 20 ppb GW: 30 ppb

## Note:

nd = Non-detect at the method detection limit.

S ... Denotes soil

GW ... Denotes groundwater

<sup>1</sup> ... Samples were also non-detect for diesel and oil TPHs.

<sup>2</sup> ... Sample was detected with total lead at 7 ppm, below MTCA Method A level of 250 ppm.

<sup>3</sup> ... Samples were non-detect for total lead.



Table 2 - Final Site Clean-up Laboratory Data

Sample ID	Collection Date	Description	Gas TPHs (ppm)	Benzene (ppm)	Toluenes (ppm)	Ethylbenz (ppm)	Xylenes (ppm)
SPL-1	11-29-00	Clean excavated stockpiled soil	nd <sup>1</sup>	nd	nd	nd	nd
SPL-2	"	"	nd <sup>1</sup>	nd	nd	nd	nd
SPL-3	"	"	nd <sup>1</sup>	nd	nd	nd	nd
SPL-4	"	"	nd <sup>1</sup>	nd	nd	nd	nd
SPL-5	"	"	nd <sup>1</sup>	nd	nd	nd	nd
SP2-1	"	"	nd <sup>1,2</sup>	nd	nd	nd	nd
SE-1	"	Suspected clean sand at southeast corner of the lot	nd <sup>1</sup>	nd	nd	nd	nd
WW-1	11-30-00	Main excavated pit, west wall, 7' bgs	nd	nd	nd	nd	nd
WW-2	"	West wall, middle, 8' bgs	nd	nd	nd	nd	nd
WW-3	"	West wall, south end, 8.5' bgs	nd	nd	nd	nd	nd
WW-4	"	West wall, south end, 6' bgs	nd	nd	nd	nd	nd
SW-1	"	South wall, west end, 8' bgs	nd	nd	nd	nd	nd
SW-2	"	South wall, west end, 8' bgs	139	.08	.28	.5	1.26
SW-3	"	South wall, east end, 7' bgs	nd	nd	nd	nd	nd
EW-1	"	East wall, south end, 7.5' bgs	nd	nd	nd	nd	nd
NB-1	"	East wall, middle, 10' bgs	nd	nd	nd	nd	nd
NW-1	"	Northeast area, 8.5' bgs	82	nd	.14	.1	.83
Bot-2	"	Excavation base, southwest corner, 10' bgs	nd	nd	nd	nd	nd
Bot-3	"	Removed contaminated soil from approx. middle of excavation base (10' bgs)	\$,200 <sup>3</sup>	8.5	22.6	32.7	156
Bot-4	"	Excavation base, west side, middle, 8.5' bgs	nd	nd	nd	nd	nd
Bot-6	"	Excavation base, east side, middle, 12.5' bgs	nd	nd	nd	nd	nd
Bot-7	"	Excavation base, southeast, 13' bgs	nd	nd	nd	nd	nd
SP2-2	"	Clean excavated stockpiled soil	nd	nd	nd	nd	nd
SP2-3	"	"	nd	nd	nd	nd	nd
EX-1	"	Hot spot from existing soil stockpile (removed for disposal)	246	.06	.8	.54	1.8
TP-1	"	Former tank pit, west wall, 11' bgs	nd	nd	nd	nd	nd
TP-2	"	Former tank pit, north wall, 9' bgs	nd	nd	nd	nd	nd
Disp-Bot-1	12-1-00	Below former dispenser island, 14' bgs	nd	nd	nd	nd	nd
Disp-Bot-2	"	Below former dispenser island, east end, 12' bgs	nd	nd	nd	nd	nd
Disp-EW-1	"	East wall, 9' bgs	nd	nd	nd	nd	nd
Disp-EW-2	"	East wall, 8' bgs	nd	nd	nd	nd	nd
Disp-EW-3	"	East wall, 5'	59	nd	.05	nd	1.4
Disp-NW-1	"	Northeast area of excavation, 8.5' bgs	nd	nd	nd	nd	nd
Disp-NW-2	"	North of former dispenser island, 12' bgs	nd	nd	nd	nd	nd
Disp-NW-3	"	North wall, 7' bgs	nd	nd	nd	nd	nd
Disp-WW-1	"	Excavated impacted soil west of former dispenser island	1800 <sup>3</sup>	nd	.45	1.13	16.4
SPL-6	"	Clean stockpiled soil	nd	nd	nd	nd	nd
SPL-7	"	"	nd	nd	nd	nd	nd
SP3-1	"	Suspected contaminated stockpiled soil (removed for disposal)	162	nd	.21	.65	1.42
SP3-2	"	"	74	nd	nd	nd	.44
SP3-3	"	"	198	.22	.93	.66	1.53
SP3-4	"	"	33	.23	.1	nd	.23
SP3-5	"	"	58	nd	nd	nd	.27
Disp-Bot-3	12-5-00	Excavation base, west of former dispenser island, 8' bgs	nd	.11	.11	.07	.28
Disp-WW-2	"	West wall, northwest of former dispenser island, 7' bgs	.07	.05	nd	.18	nd
Disp-WW-3	"	NW corner, 5' bgs	nd	nd	nd	nd	nd
Disp-NW-3	"	North wall, 7' bgs	nd	nd	nd	nd	nd
Disp-Bot-4	"	Excavation base, northwest corner, 9' bgs	nd	nd	nd	nd	nd
Disp-EW-4	"	East wall, north end, 7' bgs	nd	nd	.3	.11	.65
SC-SPL	"	Clean stockpiled soil	nd	nd	nd	nd	nd
SC-SP2	"	"	nd	nd	nd	nd	nd
SC-SP3	12-6-00	"	nd	nd	nd	nd	nd
SC-SP4	"	"	nd	nd	nd	nd	nd
SC-SP5	"	"	nd	nd	nd	nd	nd
SW-4	"	South wall, middle, beneath concrete sidewalk, 6'-6.5' bgs	nd	nd	nd	nd	nd
SW-5	"	South wall, middle, beneath concrete sidewalk, 8'-8.5' bgs	1200	1.2	1.5	4.8	13
Bot-8	"	Excavation base, 11.5'-12' bgs	nd	nd	nd	nd	nd
Bot-9	"	Excavation base, 12' bgs	nd	nd	nd	nd	nd
Bot-10	"	Excavation base, southwest corner, 12' bgs	nd	nd	nd	nd	nd
Bot-11	"	Excavation base, west end, 12' bgs	nd	nd	nd	nd	nd
Near	12-11-00	Test pit #1, northwest corner of lot, 3' bgs	nd	nd	nd	nd	nd
Far	"	Test pit #3, northeast corner of lot, 3' bgs	nd	nd	nd	nd	nd
Exc-W	9-18-00	Water from excavated pit prior to site clean-up activities	nd <sup>1</sup>	nd	nd	nd	nd
Dis-W-1	11-30-00	Water from excavated pit during pumping	nd <sup>1</sup>	nd	nd	nd	nd

	Method Detection Limit	S: 10 GW: 100 ppb	S: 43 GW: 1 ppb	S: 53 GW: 1 ppb	S: 43 GW: 1 ppb	S: 43 GW: 1 ppb
	Current MTCA Method A Clean-up Level	S: 100 ppm GW: 1,000 ppb	S: 8.5 ppm GW: 5.5 ppb	S: 40 ppm GW: 40 ppb	S: 20 ppm GW: 20 ppb	S: 20 ppm GW: 20 ppb

Note:

nd = Non-detect at the method detection limit.

S ... Denotes soil

GW ... Denotes groundwater

<sup>1</sup> ... Samples were also non-detect for diesel and oil TPHs.<sup>2</sup> ... Sample was detected with total lead at 7 ppm, below MTCA Method A level of 250 ppm.<sup>3</sup> ... Samples were non-detect for total lead.