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JUN 08 2016

WA State Department  
of Ecology (SWRO)

UNDERGROUND STORAGE TANK  
SITE CHARACTERIZATION  
REPORT

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Conducted at:

7202 South Park Avenue  
Tacoma, WA

Prepared for:

Owner  
DOE  
TPCHD

April 20, 1999

RECEIVED

MAY 12 1999

Tacoma-Pierce County  
Health Dept.

## TABLE OF CONTENTS

- I. EXECUTIVE SUMMARY
- II. BACKGROUND AND INTRODUCTION
- III. UST DATA
- IV. GEOLOGY/HYDROGEOLOGY
- V. DISCUSSION
- VI. QUANTITATIVE ANALYSIS
- VII. METHODS OF SAMPLING
- VIII. CONCLUSIONS
- VIII. LIMITATIONS
- PHOTOS

## LIST OF APPENDICES

- Appendix A Site Sampling Diagram  
Site Map
- Appendix B Vicinity Map
- Appendix C Laboratory Analysis  
Chain of Custody  
QA/QC
- Appendix D DOE Checklists
- Appendix E Permits, Receipts

## 1. EXECUTIVE SUMMARY

AA ENVIRO ASSESSMENT, INC. (AEA) served as the owner's representative in the Underground Storage Tank (UST) removal/decommissioning project and Site Characterization conducted at 7202 South Park Avenue, Tacoma, WA. Fieldwork included observing the excavations, piping, service islands, decommissioning, soil sampling/laboratory analysis, and the removal of five (5) regulated UST'S on October 16 of 1998. Our observations and findings were then compiled to prepare a site closure report.

Our investigations of the subject site were conducted under the guidelines set forth in the Washington State Department of Ecology "Guidance for Site Checks and Site Assessments for Underground Storage Tanks" (October, 1992 revision), and Tacoma Pierce County Health Department (TPCHD) content and form requirements for Underground Storage Tank and Site Assessment/Tank Closure requirements.

During the excavation process, visual observation conducted during the tank removal revealed readily detectable contaminants on and around tank #1 and petroleum contamination was observed in the soils around and below all the tanks in the major excavation. Over excavating proceeded in the major tank excavation, both pump islands, and the waste oil tank excavation, and the non regulated heating oil excavation. Soil samples were collected from the bottom of the tanks and along the sidewalls of the excavations, along the piping, and under the pump islands.

2 During the excavation process for the piping and pumps, visual observation conducted revealed hydrocarbon odors and petroleum contaminated soil (PCS) under both pump islands. A total of 721.55<sup>lb</sup> was over excavated and hauled off site to TPS Technologies, Inc. Final soil samples were collected from under the piping and pumps as required and in consultation with Mark LaVergne of TPCHD. Based on laboratory results, no hydrocarbon contamination above cleanup standards was left in the excavations, and under the piping and pump island #1. PCS are still present in the north sidewall of pump island #2. Over excavation took place up to the sidewalk along 72<sup>nd</sup>, and further excavation was not conducted beneath the sidewalk. at 770 ppm - Gas

Upon receipt of the laboratory results, the site was backfilled with existing stockpiled soils and gravel.

Based on our investigations and observations, and laboratory results, AEA recommends closure of this site. No further environmental work is recommended for the site at this time. To my knowledge, it is not expected to "chase" the PCS beneath the sidewalk.

## II. BACKGROUND AND INTRODUCTION

The subject site is located at 7202 South Park Avenue, Tacoma, WA. Zoning in the area is considered Commercial. The site is relatively flat, and is covered with asphalt. A small home is located directly adjacent to the site west. Tai-Le market is located across 72<sup>nd</sup> north. Across South Park Avenue to the east is 72<sup>nd</sup> Deli and Market on the corner. Adjacent south is Park Avenue Foods.

The subject operated a grocery store roughly 73 years ago. In 1956, the store was demolished. In 1956, a new store was built. Between 1958 and 1960 the tanks were installed with the exception of tank #1. Tank #1 was installed in approximately 1975.

## III. UST DATA

All UST's were single wall steel and the piping was also steel. The UST system is believed to have been suction.

The major tank excavation consisted of four (4) UST's. Information on the tanks is as follows:

Tank ID	Tank Capacity	Age	Substance Stored	Dimensions
1	10,000	17	gasoline	8' by 27'9"
2	3,000	40	gasoline	6' by 13'
3	3,000	40	gasoline	6 by 13'
4	2,000	40	Diesel	6' by 9'

Waste Oil tank – 500 gallon, 40 years old, 3' by 5'.

Heating Oil tank – 500 gallon, 40 years old, 3' by 5'.

Cable and telephone are located underground. Everything else is overhead.

## IV. GEOLOGICAL INFORMATION

### Soils/Hydrogeology

Soils at the subject site are the Alderwood series, brown loamy sand to sandy loam, weather till over compact glacial till, and appears to be classified as SM under the Unified Soil Classification System, and may be described as Alderwood gravelly sandy loam according to the USDA-Soil Conservation Service Soil Survey of Pierce County Area. Water was not encountered at depths up to 15 feet. The general area consists of lenses of groundwater at varying depths. The regional aquifer has depths to groundwater generally between 80 to 100 feet and sits beneath the city of Tacoma. The inferred directional flow of groundwater appears to be west. The nearest body of water is Wapato

Lake located approximately 1 mile west of the site. The site receives it's water from the City. There are no private wells within 1/2 mile radius of the site.

## **V. DISCUSSION**

On October 15, 1998, four (4) UST's were decommissioned according to all local, County, State, and Federal regulations.(tanks 1,2,3,4) All applicable permits were acquired for the project and are attached in Appendix D.

The tanks were pumped and triple rinsed by Amalgamated Services, Inc. Once the project was completed, Liberte called Amalgamated Services located in Sumner, WA. All tanks were transported off site to Pearson Metal Salvage, Inc., located in Tacoma for disposal. (See Appendix E).

Prior to the removal, the tanks were inerted utilizing dry ice.

### **MAJOR TANK EXCAVATION**

Tanks 1,2,3 and 4 were removed from the subsurface on October 15 , 1998. There was a 6 inch cover of asphalt, and a 3 foot cover of soil to the top of the tanks, and 11 feet to the bottom of the tanks. There were petroleum contaminated soils observed around the fill pipe area of tank 4. Strong hydrocarbon odors were detected within the excavation.

The tanks were then marshaled from the excavation pit, and secured adjacent to the cavity, and inspected. The tanks were in reasonably good condition with no evidence of pitting/cell corrosion on the tanks.

There was no water seepage observed in the excavation pit. Approximately 35 cubic yards of uncontaminated soils from above the tanks were temporarily placed on visqueen adjacent to the excavation pending laboratory results.

The tanks were loaded on a truck for safe transport on October 15 and 16, 1998.

During the tank removal, no underground utility lines, sewers, storm drains, drop boxes, or overhead power lines were disrupted or altered by the tank pit excavation as there were none of these fixtures within the operating area of the tank closure.

Due to the lack of space on site, trucks were lined up and petroleum contaminated soils were excavated and loaded onto the trucks and transported to TPS Technologies for proper disposal and treatment. PCS were transported off site from October 20 through October 26, 1998.

On October 15, 1998 soil samples were collected from the stockpile (SP1, SP2) and one from the excavation (PCS1) as a representative sample of contamination concentrations of the soils within the excavation.

PCS1 was well above MTCA Method A cleanup standards at 5300ppm for gas, and 3200ppm for diesel. Cleanup standards for gas are 100ppm, and diesel are 200ppm.

On October 16, over excavating proceeded within the major excavation. Approximately 2.5 feet from the south sidewall, and 2 feet from the north sidewall, and 3 to 4 feet from the bottom was overexcavated.

Upon completion, on October 21, soil samples were collected from the cavity floor and from the sidewalls of the pit cavity. (E1 through E10) The soil samples were analyzed for Hydrocarbon Identification by WTPH-Gx, WTPH-Dx, BTEX, and Total Lead. The results for all samples were non-detect or below cleanup standards. The results for the stockpiled soil samples were non-detect.

Both the waste oil tank and the heating oil tank were removed. The heating oil tank is not an issue in this report as it is not regulated.

Samples were collected from beneath the waste oil tank and both ends. (WO1, WO2, WO3) and analyzed for WTPH-Dx Extended, Specific Halogenated Hydrocarbons and BTEX, PCB's, Lead, RCRA 8. Laboratory results were above cleanup standards for heavy oil in sample WO1 at 930ppm.

Over excavating proceeded another 3 feet in depth and WO1B was collected. The analyses results were below cleanup standards at 130ppm for heavy oil.

Soil samples were placed in Transglobal Environmental Geosciences Northwest, Inc. supplied airtight 4 oz. glass containers. The samples were then placed in a cooler for sample integrity and transported to TEG for analysis.

Tables A, and B, showing the results of chemical analysis of the soils collected from the excavations and stockpiled clean soils is presented below:



TABLE B

## RESULTS OF FIELD SCREENING AND CHEMICAL ANALYSIS SAMPLING OF SOILS

Sample ID #	Sample Location	Sample Depth	Date Analyzed	Field Screening results		EPA 8020		B	T	E	X	7420 Pb
				Headspace vapors (ppm)	Sheen	WTPII-G (mg/kg)	WTPII-D (mg/kg)					
	SEE DIAGRAM											
E1			10-2-83			nd		0.05	nd	0.05	0.88	nd
E2						nd		nd	nd	nd	nd	nd
E3						nd		nd	nd	nd	nd	nd
E4						nd		nd	nd	nd	nd	nd
E5						nd		nd	nd	nd	nd	nd
E6						nd		nd	nd	nd	nd	nd
E7						nd		nd	nd	nd	nd	nd
E8						nd		nd	nd	nd	nd	nd
E9							nd					
E10							nd					
P3							nd					

\* Indicates water sample, in ppb

Note: Field Test Using a Gastec GT 202 PID meter

 4-1  
 ENVIRONMENTAL  
 INVESTIGATION





SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

Specific Halogenated Hydrocarbons and BTEX (BPA 8021B) in Soil

Sample-Number	MDL	Method Blank	WO1	MS	MSD	RPD
Date	mg/kg	10/21/98 mg/kg	10/21/98 mg/kg	10/21/98 %	10/21/98 %	10/21/98
Vinylchloride	0.05	nd	nd	--	--	--
Benzene	0.05	nd	0.24	82	89	8.2%
Toluene	0.05	nd	nd	86	82	4.8%
Ethylbenzene	0.05	nd	nd	--	--	--
Total-Xylene	0.05	nd	nd	--	--	--
1,1 Dichloroethene	0.05	nd	nd	--	--	--
Dichloromethane	0.05	nd	nd	--	--	--
Trans-1,2 Dichloroethene	0.05	nd	nd	--	--	--
1,1 Dichloroethane	0.05	nd	nd	--	--	--
Cis-1,2 Dichloroethene	0.05	nd	nd	--	--	--
Chloroform	0.05	nd	nd	--	--	--
1,1,1 Trichloroethane	0.05	nd	nd	--	--	--
Carbon Tetrachloride	0.05	nd	nd	--	--	--
1,2 Dichloroethane	0.05	nd	nd	--	--	--
Trichloroethene	0.05	nd	nd	82	82	0.0%
1,1,2 Trichloroethane	0.05	nd	nd	--	--	--
Tetrachloroethene	0.05	nd	nd	--	--	--
1,1,1,2-Tetrachloroethane	0.05	nd	nd	--	--	--
1,1,2,2-Tetrachloroethane	0.05	nd	nd	--	--	--
Chlorobenzene	0.05	nd	nd	111	120	7.8%
Spike Recovery (%)		70	81	96	117	19.7%

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

## PIPING AND PUMP ISLAND EXCAVATION PROCESS

On October 22, 1998, the excavation and removal of the piping and pump island process was conducted. The piping (associated lines) was located directly beneath the asphalt. Visual and olfactory observation noted strong hydrocarbon odors beneath both islands. The dispensers did not exist at the time, so exactly how the soils were impacted is only assumptions. There was no visible punctures, tears, or loose joints in the piping, odors were not detected beneath the piping. One soil sample was collected (L1), and the result was non-detect. Field screening and sheen testing indicated PCS above MTCA cleanup standards beneath both islands. The island was excavated to depths of 10 feet beneath island # 1. Two soil samples were collected (P1 and P2) and analyzed for gas, diesel, and lead. Analyses results were non-detect or below cleanup standards. Again, all PCS were continually transported off site to TPS.

Over excavation proceeded beneath Pump Island #2 due to obvious visual and olfactory evidence of PCS. At approximately 10 feet in depth, one composite soil sample was collected and analyzed for gas, diesel, and BTEX.(P4). Further over excavation proceed north toward 72<sup>nd</sup> street and one sample was collected and analyzed for WTPH-HCID for hydrocarbon identification between 5 and 8 feet in depth.(SW72) Upon completion of analyses, gasoline was detected.

Table C, showing the results of chemical analysis of the soils collected from the piping, islands, and stockpiled PCS is presented below:



Over excavation again proceeded to a depth of 10 feet and all the way to the sidewalk at 72<sup>nd</sup> Street on October 26, 1998. Sample SW72B was collected and results were above cleanup standards for gas at 770ppm.

Final samples were collected and analyzed and all results were below cleanup standards with the exception of SW72B.

Soil samples were placed in TEG supplied air tight glass containers. The samples were then placed in a cooler for integrity and transported to the laboratory for analysis. Laboratory analysis reports and chain-of-custody records are provided in Appendix C.

Table 3 , showing the results of all finalchemical analysis of the soils collected is presented below:

TABLE D

✱

10  
MAY  
1961

Note: Field Test Using a Gastec (GT 202 PH) meter

A total of 721.55 tons of PCS were transported off site to TPS for treatment and disposal. (See appendix E).

## **VI. QUANTITATIVE ANALYSIS**

Soil samples were collected from over excavated sidewalls and bottoms. Soil samples were also collected from beneath over excavated pump islands, and clean stockpiled soils. The samples were analyzed in accordance with DOE requirements for underground storage tank decommissioning. The samples were also collected and analyzed with the approval of Mark Lavergne, TPCHD. Independent laboratory analyses were performed by Transglobal Environmental Geosciences Northwest, Inc., 7110 38th Drive SE, Lacey, WA. All laboratory reports and chain-of custody records are provided in Appendix C.

## **VII. METHODS OF SAMPLING**

Soil samples were collected using a backhoe bucket and hand tools. Samples were selected from at least 6 inches into the soil to ensure collection from unexposed areas and to minimize the loss of volatile contaminants. Tools were decontaminated between samples with Alconox solution wash and TSP rinsate followed with a distilled water rinse.

## **VIII. CONCLUSIONS**

There was five (5) regulated underground storage tanks successfully decommissioned and removed from the subject site in October of 1998. The PCS found beneath the tanks and dispensers suggests the impact to the soil was most likely due to overfill, leaky joints, leaks from filters and union joints. Cavity closure samples were collected for analysis following the excavation of the tanks and soils. The independent laboratory analysis indicated that all samples collected from the tank cavity yielded no contamination levels above MTCA Method A cleanup standards with the exception of SW72B.

The subject site was backfilled with existing stockpiled soils and gravels, backfilled with Groundwater or seepage was not encountered.

Based on the results of our observations, investigations, and laboratory analysis, it appears that the subject site meets MTCA Method A Cleanup Standards with the exception of the PCS located beneath the sidewalk along 72<sup>nd</sup>. The depth of PCS appears to be approximately 4 to 6 feet bgs. The length of PCS running along 72<sup>nd</sup> is approximately 8 feet. Further investigation as to how far the PCS extends beneath the sidewalk was not conducted. Underground cable/phone lines were approximately 1 foot further north beneath the sidewalk and we were not comfortable digging any further

beneath the sidewalk. Pierce County and DOE policy allows for clean up to the property line which is where the overexcavation stopped.

AEA recommends no further environmental impact work at this time. Due to the underground lines in the area of existing PCS, any attempt to determine the extent of PCS beneath the sidewalk should proceed with extreme caution and under the supervision of Underground Locator Service Representatives.

#### **VIII. LIMITATIONS:**

AEA does not assume liability for any other potential release, threatened release or other conditions at the subject site.

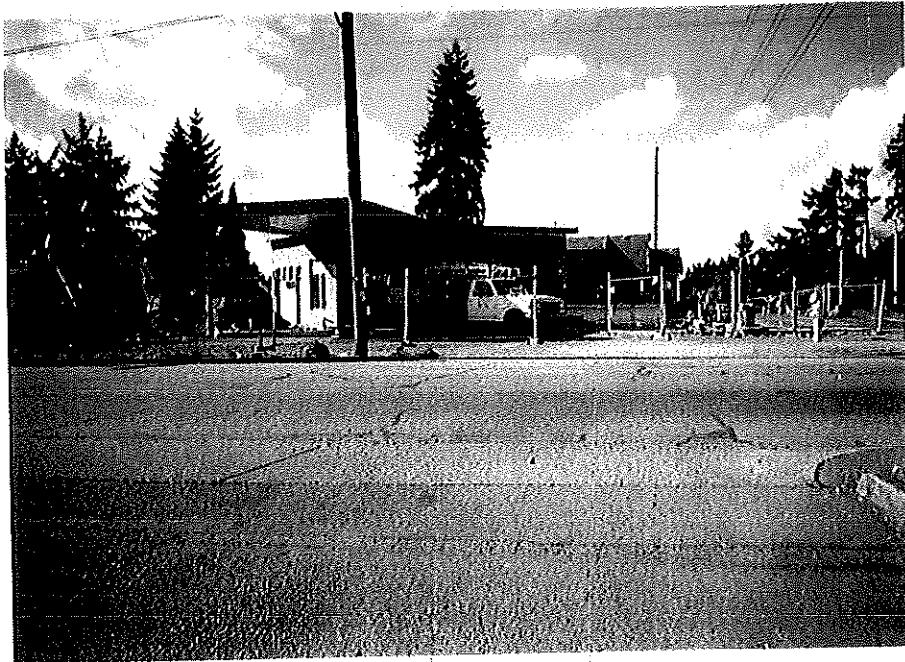
AEA is not responsible for any claims, damages, or liabilities associated with the interpretations of findings presented in this report.

If you have questions, or need further information, feel free to call. We appreciate the opportunity to provide our services for this project.

  
Cathy J. Frey-Hartwell, Site Assessor



## PHOTOGRAPHS



Subject  
Site



Tanks  
prior to  
removal

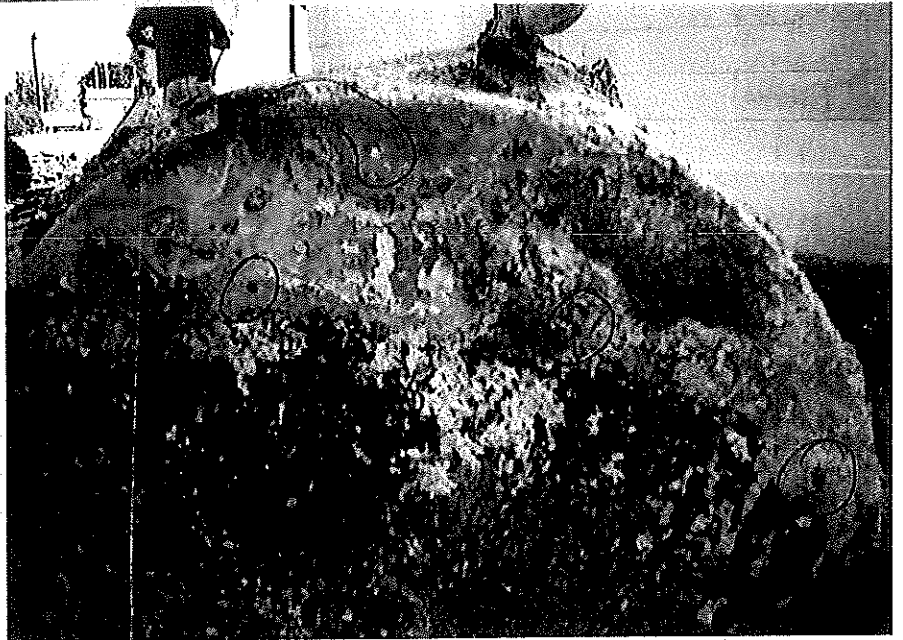


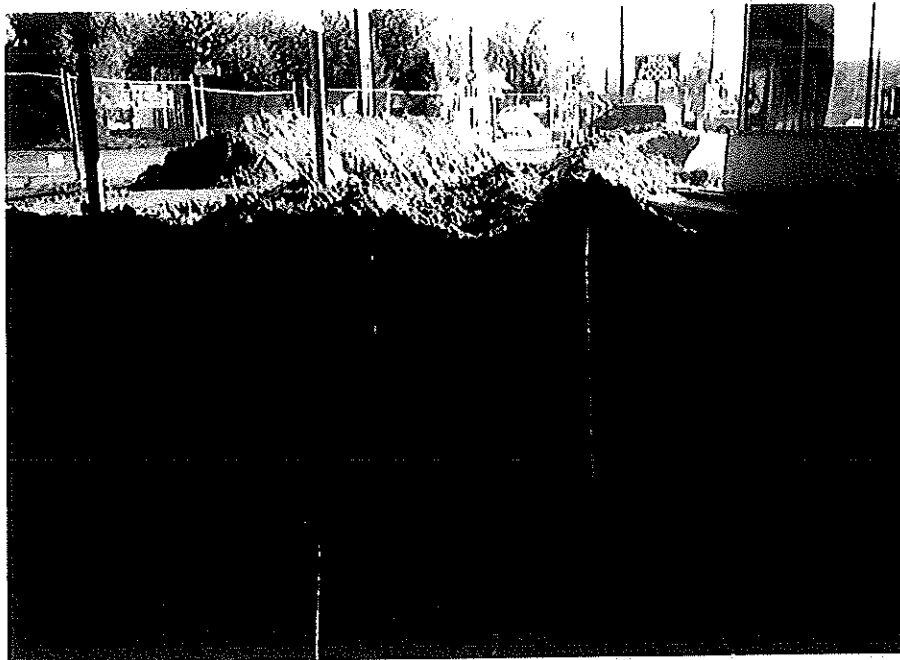
Tank 1



Tanks 2, 3, 4

Waste oil tank  
with pinholes in  
the end of tank.





N

Pump Island 1.

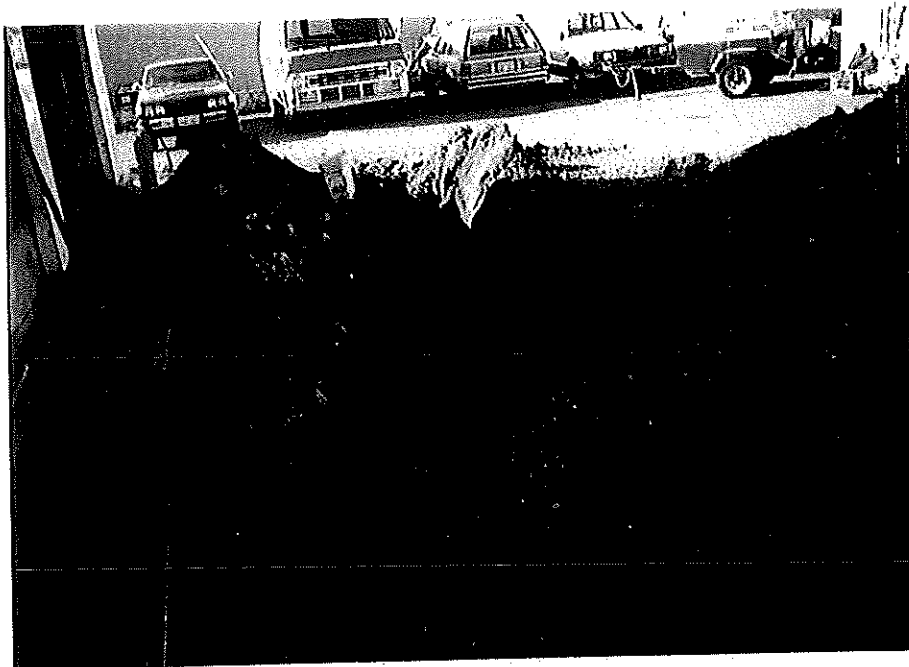


W

Pump Island 2  
(after overexcavating to sidewalk.)



found within pump Island 2 pit.



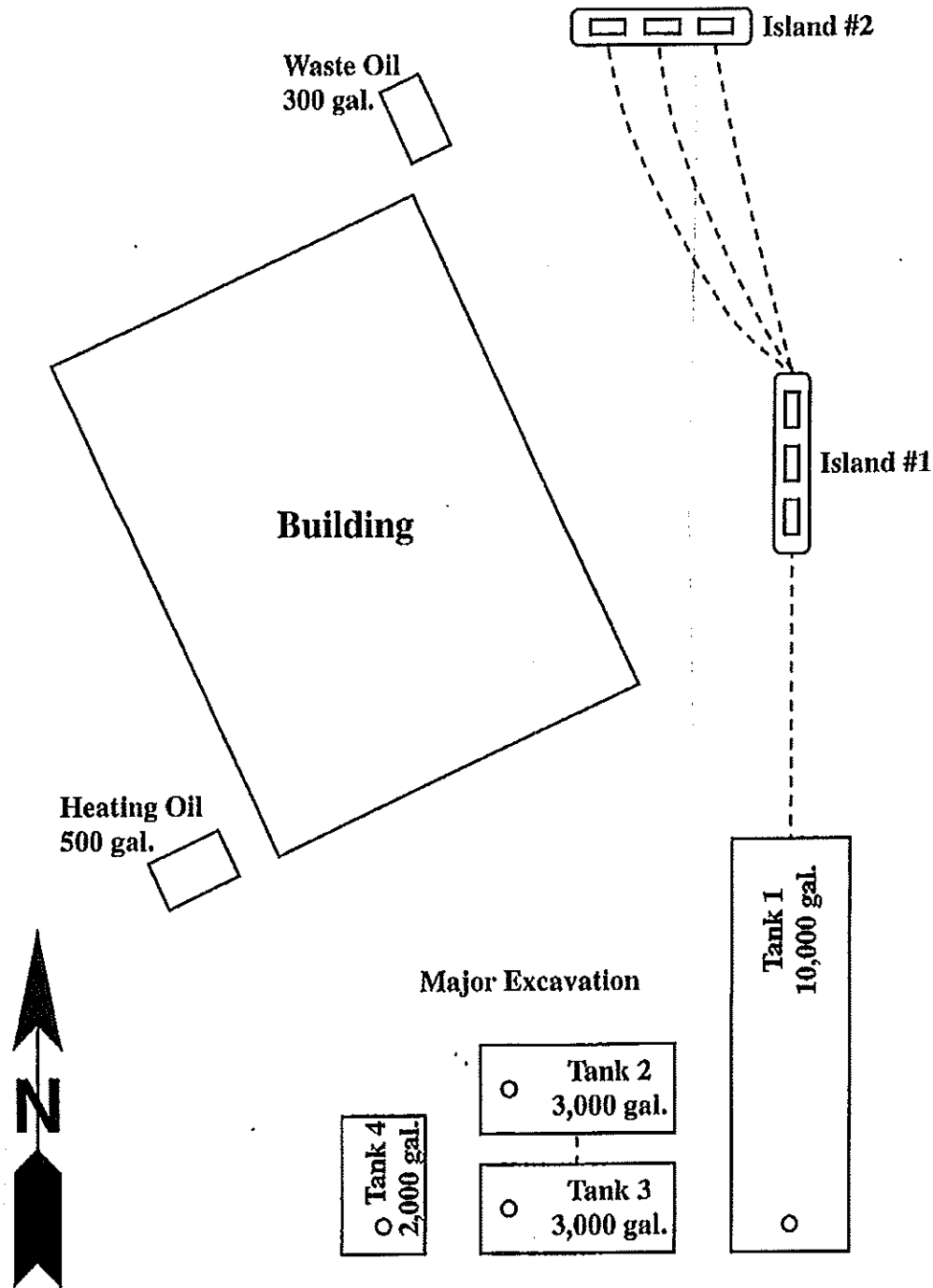
Waste Oil tank excavation.

## Appendix A

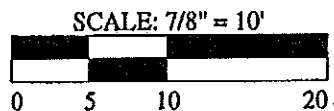
# SAMPLE DIAGRAM

72nd St.

This is an illustration of locations where a sample was taken. Locations are approximate and are given for information purposes only.



Subject Site  
7202 South Park Ave.  
Tacoma, Wa 98446

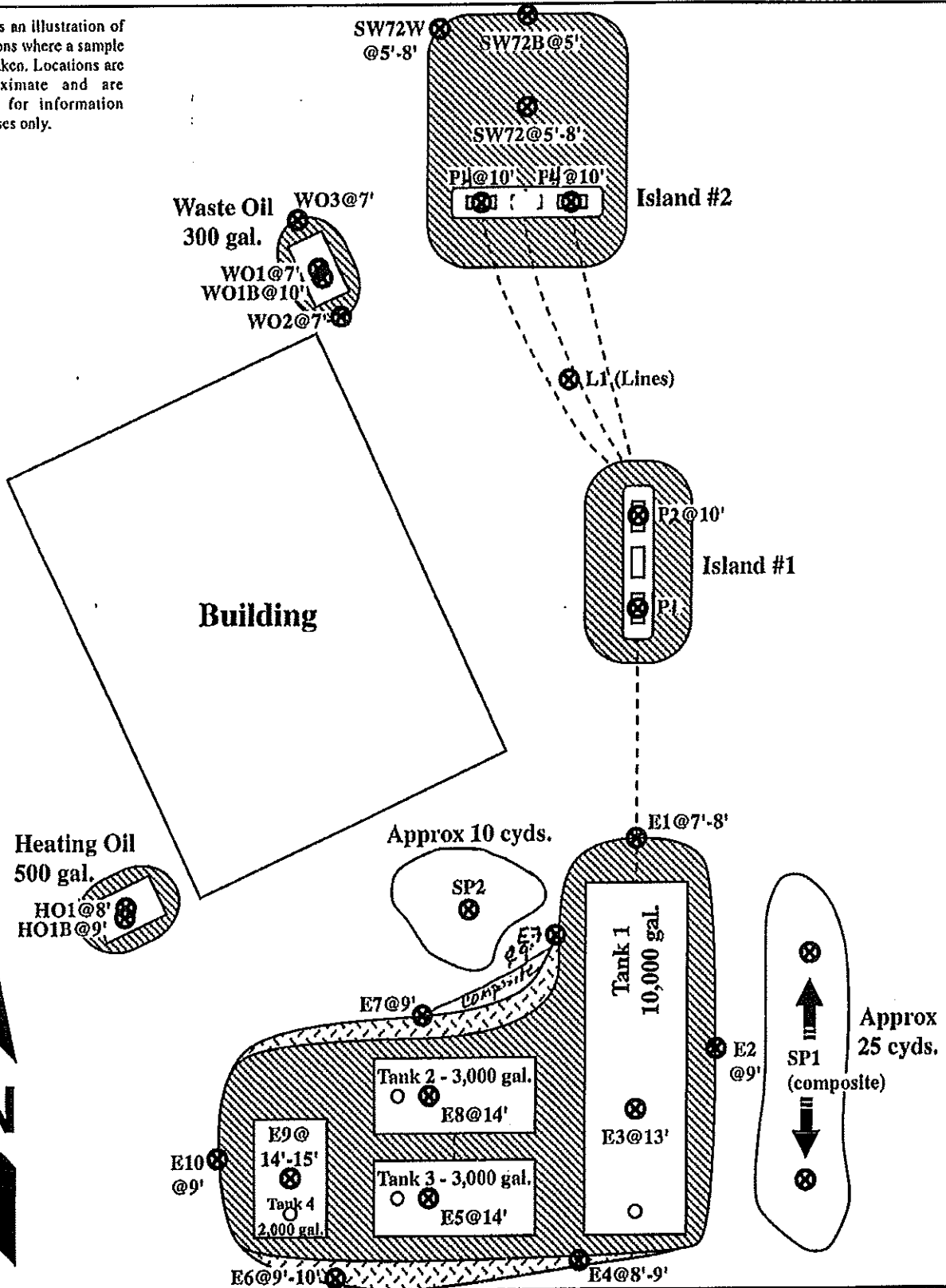


ENVIRO  
ASSESSMENT, INC.

# SAMPLE DIAGRAM

72nd St.

This is an illustration of locations where a sample was taken. Locations are approximate and are given for information purposes only.



Park Ave. South

Subject Site  
7202 South Park Ave.  
Tacoma, Wa 98446



ENVIRO  
ASSESSMENT, INC.

## Appendix B





## Map Results

use subject to  
license/copyright



Find it now  
Yellow Pages

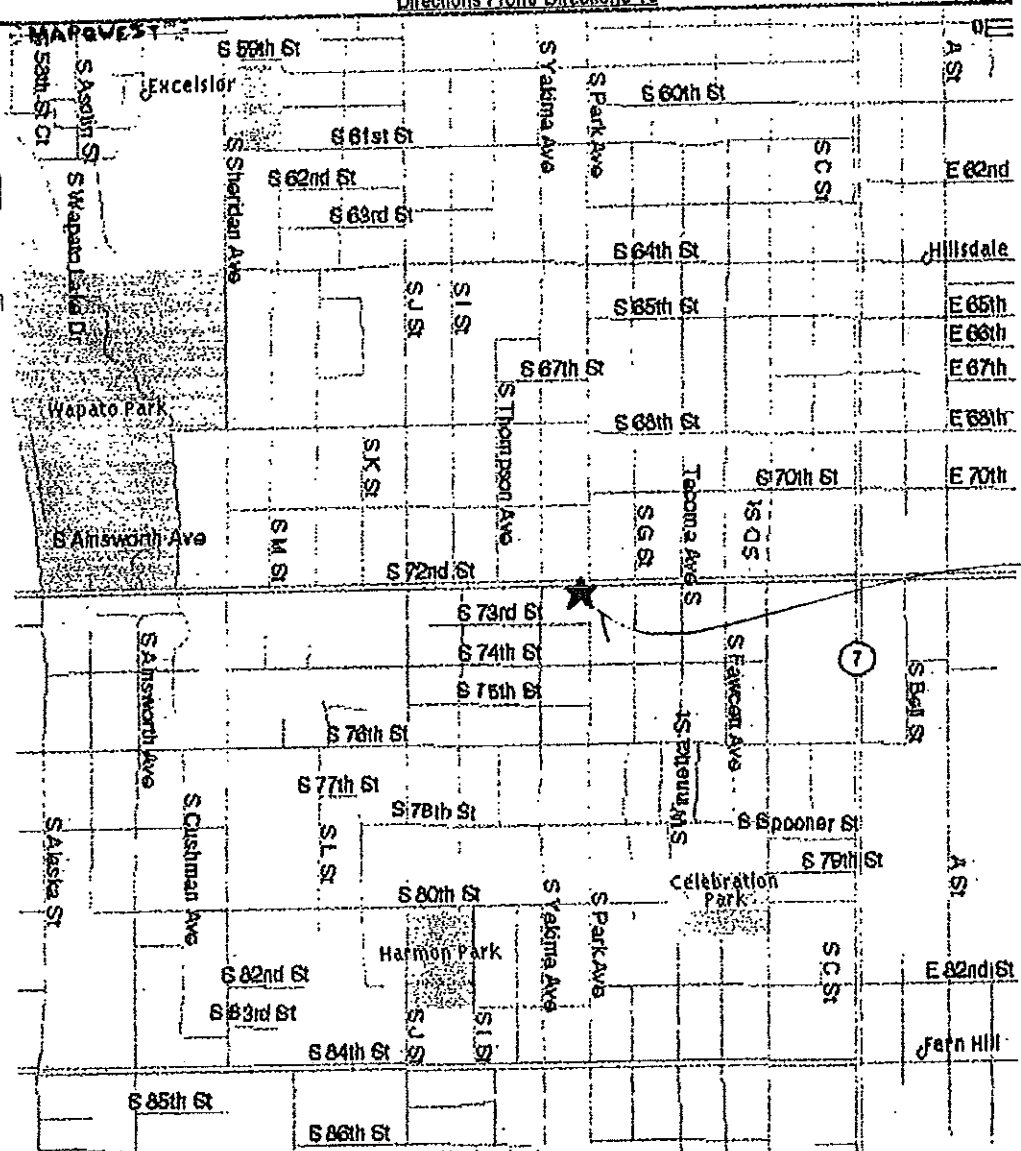
What are you looking for?

go!

ADDRESS: 7202 S PARK AVE TACOMA WA 98408-5414 US  
Directions From/ Directions To



- Click on compass pointer to show map.
- Select location and click on map.
- Recenter Map
- Identify Icon
- Recenter Map
- Street and Zoom In



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Tip: You must have the zoom level set at City level or lower in order to view any Places Of Interest (POIs) on the Map.

### Quick Places of Interest

Click on buttons to show / remove the location(s) on the map.



### Places of Interest (US/E)

Select a category and click on L

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> Attractions  | <input type="checkbox"/> Lodging             |
| <input type="checkbox"/> Banks & ATMs | <input type="checkbox"/> Recreation          |
| <input type="checkbox"/> Dining       | <input type="checkbox"/> Transportation      |
| <input type="checkbox"/> Education    | <input checked="" type="checkbox"/> Personal |

## Appendix C

# MTCA Method A Cleanup Standards

## Cleanup Levels

<u>Hazardous Substance</u>	<u>Ground Water</u>	<u>Soil</u>
Benzene	5 ppb <sup>1</sup>	0.5 ppm
Ethylbenzene	30 ppb	20.0 ppm
Toluene	40 ppb	40.0 ppm
Xylene	20 ppb	20.0 ppm
Total Petroleum Hydrocarbons (TPH):		
Gasoline TPH	1000 ppb	100.0 ppm
Diesel & Other TPH	1000 ppb	200.0 ppm
Total Lead	5 ppb	250.0 ppm

<sup>1</sup> If the amount of benzene in ground water is above 1 ppb, the owner or operator must submit a state remedial investigation/feasibility report (WAC 173-340-450(5)(a)(i)).

**TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.**

**7110 38th Drive SE  
Lacey, Washington 98503**

**Mobile Environmental Laboratories  
Environmental Sampling Services**

**Telephone: 360-459-4670  
Fax: 360-459-3432**

**October 19, 1998**

**Cathy Frey-Hartwell  
AA Enviro Assessment, Inc.  
6501 27th Lane SE  
Lacey, WA 98503**

**Dear Ms. Frey-Hartwell:**

Please find enclosed the analytical data report for the South Park Project in Tacoma, Washington. Soil samples were analyzed for Diesel Range Hydrocarbons by NWTPH-Dx, Gasoline by NWTPH-Gx and BTEX by Method 8020 on October 16, 1998.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to AA Enviro Assessment for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

**Sincerely,**



**Michael A. Korosec  
President**

S. PARK PROJECT  
Tacoma, Washington  
AA Environmental Assessment, Inc.

*Handwritten notes:*  
Fair: 591.7663  
Aiken  
Klein  
HAT  
(A-1)

Gasoline (NWTPH-Gx) & BTEX (EPA 8020) Analyses for Soils

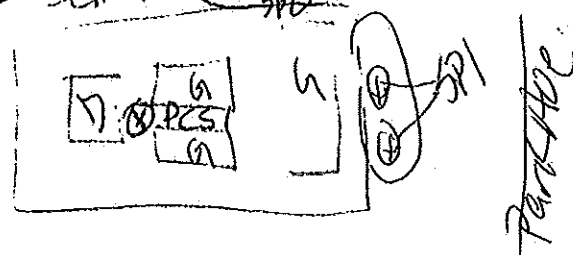
Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/16/98	nd	nd	nd	nd	nd	89
SP1	10/16/98	nd	nd	nd	nd	nd	78
SP1 Dup	10/16/98	nd	nd	nd	nd	nd	87
SP2	10/16/98	nd	nd	nd	nd	nd	89
PCS1	10/16/98	6.4	4.7	24	47	5300	127
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

*Handwritten notes:*  
SP1 } 50 cu yds of currently stockpiled soil  
SP2 }

*Handwritten notes:*  
PCS1 - Representative of contaminated soil in site & soil to be removed off-site.



TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 2

S. PARK PROJECT  
Tacoma, Washington  
AA Environmental Assessment, Inc.

Diesel Range Hydrocarbons in Soil by NWTPH-Dx

Sample Number	Date	Recovery (%)	Diesel mg/kg
Meth. Blank	10/16/98	103	nd
PCS1	10/16/98	int	3200

Method Detection Limit 20

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interfering peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 1

S. PARK PROJECT  
Tacoma, Washington  
AA Environmental Assessment, Inc.

Gasoline (NWTPH-Gx) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blahk	10/16/98	nd	nd	nd	nd	nd	89
SP1	10/16/98	nd	nd	nd	nd	nd	78
SP1 Dup	10/16/98	nd	nd	nd	nd	nd	87
SP2	10/16/98	nd	nd	nd	nd	nd	89
PCS1	10/16/98	6.4	4.7	24	47	5300	127
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

# CHAIN-OF-CUSTODY RECORD

[illegible]



# TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE  
Lacey, Washington 98503

Mobile Environmental Laboratories  
Environmental Sampling Services

Telephone: 360-459-4670  
Fax: 360-459-3432

November 3, 1998

Cathy Frey-Hartwell  
AA Enviro Assessment, Inc.  
6501 27th Lane SE  
Lacey, WA 98503

Dear Ms. Frey-Hartwell:

Please find enclosed the analytical data report for the South Park Project in Tacoma, Washington. Soil samples were analyzed for Diesel Range Hydrocarbons by NWTPH-Dx, Diesel and Oil by NWTPH-Dx/Dx Extended, Specific Halogenated Hydrocarbons and BTEX by Method 8021B, PCBs by Method 8080, Lead by Method 7420, RCRA 8, Gasoline by NWTPH-Gx, and BTEX by Method 8020 on October 21, 22, and 28, 1998.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to AA Enviro Assessment for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec  
President

## **QA/QC FOR ANALYTICAL METHODS**

### **GENERAL**

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

### **ANALYTICAL METHODS**

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

#### **TPH-Gasoline, TPH-Diesel**

**(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)**

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

**Purgeable Volatile Aromatics**  
**(BTEX, EPA 602/8020)**

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

**Purgeable Volatile Halocarbons**  
**(Chlorinated Hydrocarbons, EPA 601/8021B)**

A calibration standard is run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

**PCBs, Polychlorinated Biphenyls**  
**(EPA 8080, 8081)**

A method blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The check standard may be run at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. Samples which measure outside of the linear range of the calibration curve must be carefully diluted to fall into the upper range of the linear calibration. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

Gasoline (NWTPH-Gx) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/21/98	nd	nd	nd	nd	nd	89
E1	10/21/98	0.05	nd	0.05	0.88	nd	91
E2	10/21/98	nd	nd	nd	nd	nd	101
E3	10/21/98	nd	nd	nd	nd	nd	82
E3 Dup.	10/21/98	nd	nd	nd	nd	nd	114
E4	10/21/98	nd	nd	nd	nd	nd	99
E5	10/21/98	nd	nd	nd	nd	nd	13
E6	10/21/98	nd	nd	nd	nd	nd	101
E7	10/21/98	nd	nd	nd	nd	nd	100
E8	10/21/98	nd	nd	nd	nd	nd	108
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

**SOUTH PARK PROJECT**

Tacoma, Washington

AA Environmental Assessment, Inc.

**Diesel Range Hydrocarbons in Soil by NWTPH-Dx**

Sample Number	Date	Recovery (%)	Diesel mg/kg
Meth. Blank	10/21/98	98	nd
B9	10/21/98	102	nd
E10	10/21/98	97	nd
P3	10/21/98	103	nd
Method Detection Limit			20

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interfering peaks prevent determination.

## SOUTH PARK PROJECT

Tacoma, Washington

A A Environmental Assessment, Inc.

## Diesel and Oil in Soil by NWTPH-Dx/Dx-Extended

Sample Number	Date	Recovery %	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/21/98	96	nd	nd
WO1	10/21/98	105	nd	930
WO2	10/21/98	70	nd	nd
WO3	10/21/98	133	nd	nd
HO1	10/21/98	86	nd	210
MDL			20	40

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

Mark,

I left the site yesterday with instructions to overexcavate another 3 to 5 feet in waste oil pit & 1 foot in Heating oil pit. Will swing by the site today on my way home from Seattle. Don't have results for dispensers yet, but it didn't look good at the Island along 72nd. Took a sample of sidewall (sw72) for HCLD. Strong, strange smell to it. RCRA8, Lead, & PCB's not in yet.

SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

Diesel and Oil in Soil by NWTPH-Dx/Dx-Extended

Sample Number	Date	Recovery %	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/21/98	96	nd	nd
WO1	10/21/98	105	nd	930
WO2	10/21/98	70	nd	nd
WO3	10/21/98	133	nd	nd
HO1	10/21/98	86	nd	210
MDL			20	40

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTH PARK PROJECT

Tacoma, Washington

A A Environmental Assessment, Inc.

Heavy Metals in Soil by EPA-7000 Series

EPA-Method #		7420
Sample Number	Date	Pb mg/kg
Meth. Blank	10/28/98	nd
E3	10/28/98	nd
E3 Dup.	10/28/98	nd
E5	10/28/98	nd
E8	10/28/98	nd
Method Detection Limit		5

"nd" Indicates not detected at the listed detection limit.



TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTH PARK PROJECT  
Tacoma, Washington  
AA Environmental Assessment

Polychlorinated Biphenyls (PCBs) in Soil (EPA Method 8080)

Sample Number	Date Analyzed	Recovery %	1221 mg/kg	1232 mg/kg	1242 mg/kg	1248 mg/kg	1254 mg/kg	1260 mg/kg	Total mg/kg
Meth. Blank	10/28/98	92	nd	nd	nd	nd	nd	nd	nd
W01 (10/21/98)	10/28/98	126	nd	nd	nd	nd	nd	nd	nd
Detection Limit			0.05	0.05	0.05	0.05	0.05	0.05	0.05

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference peaks prevent determination.

**SOUTH PARK PROJECT**  
Tacoma, Washington  
A A Environmental Assessment, Inc.

**Diesel and Oil in Soil by NWTPH-Dx/Dx-Extended**

Sample Number	Date	Recovery %	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/21/98	96	nd	nd
WO1	10/21/98	105	nd	930
WO2	10/21/98	70	nd	nd
WO3	10/21/98	133	nd	nd
HO1	10/21/98	86	nd	210
MDL			20	40

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

# SOUND ANALYTICAL SERVICES, INC.

Client Name	TEG Northwest, Inc.
Client ID:	W01
Lab ID:	76476-01
Date Received:	10/21/98
Date Prepared:	10/22/98
Date Analyzed:	10/22/98
Dilution Factor	1
% Solids	89.36

## Metals by ICP - USEPA Method 6010

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	88	
Barium	93	1.1	
Cadmium	ND	18	
Chromium	46	2.2	
Lead	52	33	
Selenium	ND	180	
Silver	ND	2.2	✓

# SOUND ANALYTICAL SERVICES, INC.

Client Name	TEG Northwest, Inc.
Client ID:	W01
Lab ID:	78476-01
Date Received:	10/21/98
Date Prepared:	10/22/98
Date Analyzed:	10/22/98
Dilution Factor	1
% Solids	89.36

## Mercury by CVAA - USEPA Method 7471

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	ND	0.1	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - S070
Date Received:	-
Date Prepared:	10/22/98
Date Analyzed:	10/22/98
Dilution Factor	1

## Metals by ICP - USEPA Method 6010

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	80	
Barium	ND	1	
Cadmium	ND	16	
Chromium	ND	2	
Lead	ND	30	
Selenium	ND	160	
Silver	ND	2	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: SLUDGE CAKE  
Lab ID: 76404-01  
Date Prepared: 10/22/98  
Date Analyzed: 10/22/98  
QC Batch ID: S070

### Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Arsenic	0	0	NC	
Barium	120	120	0.0	
Cadmium	0	0	NC	
Chromium	9.7	12	-21.0	
Lead	0	0	NC	
Selenium	0	0	NC	
Silver	25	28	-11.0	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: SLUDGE CAKE  
Lab ID: 76404-01  
Date Prepared: 10/22/98  
Date Analyzed: 10/22/98  
QC Batch ID: S070

### Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Arsenic	0	3060	3230	106	
Barium	120	3060	3420	108	
Cadmium	0	76.4	59.6	78	
Chromium	9.7	306	323	103	
Lead	0	16800	16000	95	
Selenium	0	3060	2910	95	
Silver	25	1600	1610	99	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - S079
Date Received:	-
Date Prepared:	10/22/98
Date Analyzed:	10/22/98
Dilution Factor	1

## Mercury by CVAA - USEPA Method 7471

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	ND	0.1	



# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID:	SLUDGE CAKE
Lab ID:	76404-01
Date Prepared:	10/22/98
Date Analyzed:	10/22/98
QC Batch ID:	S079

## Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Mercury	3.2	2.8	13.0	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: SLUDGE CAKE  
Lab ID: 76404-01  
Date Prepared: 10/22/98  
Date Analyzed: 10/22/98  
QC Batch ID: S079

### Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Mercury	3.22	3.3	5.81	79	

**CHAIN-OF-CUSTODY RECORD**

[illegible]

**TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.**

**7110 38th Drive SE  
Lacey, Washington 98503**

**Mobile Environmental Laboratories  
Environmental Sampling Services**

**Telephone: 360-459-4670  
Fax: 360-459-3432**

**October 29, 1998**

**Cathy Frey-Hartwell  
AA Enviro Assessment, Inc.  
6501 27th Lane SE  
Lacey, WA 98503**

**Dear Ms. Frey-Hartwell:**

Please find enclosed the analytical data report for the South Park Project in Tacoma, Washington. Soil samples were analyzed for Diesel Range Hydrocarbons by NWTPH-Dx, Hydrocarbon Identification by NWTPH-HCID, Lead by Method 7420, Gasoline by NWTPH-Gx and BTEX by Method 8020 on October 22, 1998.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to AA Enviro Assessment for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



**Michael A. Korosec  
President**

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 1

SOUTH PARK PROJECT  
Tacoma, Washington  
AA Enviro Assessment, Inc.

Gasoline (NWTPH-Gx) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/22/98	nd	nd	nd	nd	nd	90
L1	10/22/98	nd	nd	nd	nd	nd	112
L1 Dup.	10/22/98	nd	nd	nd	nd	nd	108
P1	10/22/98	nd	nd	nd	nd	nd	86
P4	10/22/98	nd	0.14	0.47	1.62	71	104
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 2

SOUTH PARK PROJECT

Tacoma, Washington

AA Enviro Assessment, Inc.

Diesel Range Hydrocarbons in Soil by NWTPH-Dx

Sample Number	Date	Recovery (%)	Diesel mg/kg
Meth. Blank	10/22/98	82	nd
L1	10/22/98	110	nd
L1 Dup.	10/22/98	108	nd
P2	10/22/98	93	nd
Method Detection Limit			20

"nd" Indicates not detected at the listed detection limit.

"Int" Indicates that interfering peaks prevent determination.

*Gas?*  
*Gas* 6/2

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 3

SOUTH PARK PROJECT

Tacoma, Washington

AA Enviro Assessment, Inc.

Hydrocarbon Identification by NWTPH-HCID for Soils

Sample Number	Date	Recovery %	Gasoline mg/kg	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/22/98	105	nd	nd	nd
SW72	10/22/98	int	D	nd	nd
Method Detection Limits			20	50	100

"nd" Indicates not detected at the listed detection limit.

"D" Indicates detected above the listed detection limit.





**TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.**

**7110 38th Drive SE  
Lacey, Washington 98503**

**Mobile Environmental Laboratories  
Environmental Sampling Services**

**Telephone: 360-459-4670  
Fax: 360-459-3432**

**October 29, 1998**

**Cathy Frey-Hartwell  
AA Enviro Assessment, Inc.  
6501 27th Lane SE  
Lacey, WA 98503**

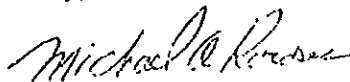
**Dear Ms. Frey-Hartwell:**

Please find enclosed the analytical data report for the South Park Project in Tacoma, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Lead by Method 7420, Gasoline by NWTPH-Gx and BTEX by Method 8020 on October 26, 1998.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to AA Enviro Assessment for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

**Sincerely,**



**Michael A. Korosec  
President**

# TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 1

## SOUTH PARK PROJECT Tacoma, Washington AA Enviro Assessment, Inc.

### Diesel and Oil in Soil by NWTPH-Dx/Dx-Extended

Sample Number	Date	Recovery %	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/26/98	99	nd	nd
H01B	10/26/98	109	84	84
H01B Dup.	10/26/98	97	53	73
W01B	10/26/98	86	nd	130
SW72W	10/26/98	116	nd	nd
MDL			20	40

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 2

SOUTH PARK PROJECT

Tacoma, Washington

AA Enviro Assessment, Inc.

Gasoline (WTPH-Gx) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/26/98	nd	nd	nd	nd	nd	101
SW72B	10/26/98	0.10	0.60	2.7	15	770	99
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"Int" Indicates that interferences prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTH PARK PROJECT

Tacoma, Washington

A A Environmental Assessment, Inc.

Heavy Metals in Soil by EPA-7000 Series

=====		
EPA-Method #		7420
Sample Number	Date	Pb mg/kg
=====		
Meth. Blank	10/28/98	nd
SW72B	10/28/98	nd
SW72B Dup.	10/28/98	nd
Method Detection Limit		5

-----  
"nd" Indicates not detected at the listed detection limit.  
=====

# CHAIN-OF-CUSTODY RECORD

[illegible]

## QA/QC FOR ANALYTICAL METHODS

### GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4<sup>0</sup> C.

### ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

#### **TPH-Gasoline, TPH-Diesel**

**(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)**

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

### **Purgeable Volatile Aromatics (BTEX, EPA 602/8020)**

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

### **TPH-Hydrocarbon Identification (NWTPH-HCID)**

Calibration standards are run at the beginning of the day. The standards must be within 15% of the continuing calibration curve value. Check standards are run at the close of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

## Appendix D





# UNDERGROUND STORAGE TANK Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY	
Site ID #	
Owner ID #	

Please ☒ the appropriate box(es)
☐ Temporary Tank Closure    ☐ Change-In-Service    ☒ Permanent Tank Closure    ☐ Site Check/Site Assessment
**Site Information****Owner Information**

(This form will be returned to this address)

Site ID Number \_\_\_\_\_ UST Owner/Operator Pat Kuchenmeister  
 (Available from Ecology if the tanks are registered)  
 Site/Business Name owner Pat Kuchenmeister Mailing Address 17815 40th Ave E  
 Site Address 7202 S. Park Ave. Tacoma  
 City/State Tacoma, WA City/State WA 98446  
 Zip Code \_\_\_\_\_ Telephone 253 847.1234 Zip Code \_\_\_\_\_ Telephone 253 847.1234

☒ Owner's Signature Patricia A. Kuchenmeister

**Tank Closure/Change-In-Service Company**

Service Company APS  
 Certified Supervisor Melvin Ditt Decommissioning Certification No. ASI 3200653  
☒ Supervisor's Signature Melvin Ditt  
 Address 1085 Valentine Ave  
 Street Pacific WA 98017 Telephone 800 660.6557  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

**Site Check/Site Assessor**

Certified Site Assessor Cathy Frey-Hartwell  
 Address 6501 27th N SE P.O. Box \_\_\_\_\_  
 City Everett State WA Zip Code 98503 Telephone 425 459.5514

**Tank Information**

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
1	10-16-98	removed	10K	Gas
2	10-16-98		3K	Gas
3	10-16-98		3K	Gas
4	10-16-98		2K	Diesel
5	10-16-98		500	Heating Oil
6	10-16-98		300	Waste Oil

**Contamination Present at the Time of Closure**

☒ Yes    ☐ No    ☐ Unknown  
 Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☒ Yes    ☐ No  
 If contamination is present, has the release been reported to the appropriate regional office?

To receive this document in an alternative format, contact the TOXICS CLEANUP PROGRAM at 1-800-826-7716 (voice) OR (360) 407-6006 (TDD).  
 ECV 020-94 (Rev. 6/85)

\* ALL TCS transported off site to TPS.  
 Final report will be submitted within 90 days



# UNDERGROUND STORAGE TANK

## Site Check / Site Assessment Checklist

FOR OFFICE USE ONLY

Site #:

Owner #:

### INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by IFCI or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

**SITE INFORMATION:** Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

**TANK INFORMATION:** Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

**REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT:** Please check the appropriate item:

**CHECKLIST:** Please initial each item in the appropriate box.

**SITE ASSESSOR INFORMATION:** This form must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section  
Department of Ecology  
PO Box 47655  
Olympia WA 98504-7655

### SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered):

Site/Business Name: None - owner, Pat Kuchanowster

Site Address: 7202 S. Park Avenue

Telephone: 253) 847.1234

Tacoma  
City

Street

WA  
State

Zip Code

### TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
<u>1</u>	<u>10K</u>	<u>gas</u>
<u>2</u>	<u>3K</u>	<u>gas</u>
<u>3</u>	<u>3K</u>	<u>gas</u>
<u>4</u>	<u>2K</u>	<u>Diesel</u>
<u>5</u>		<u>1.0052 Oil</u>

### REASON FOR CONDUCTING SITE CHECK / SITE ASSESSMENT

Check one:

- ☐ Investigate suspected release due to on-site environmental contamination.  
☐ Investigate suspected release due to off-site environmental contamination.  
☐ Extend temporary closure of UST system for more than 12 months.  
☐ UST system undergoing change-in-service.  
☐ UST system permanently closed-in service.  
☒ UST system permanently closed with tank removed.  
☐ Abandoned tank containing product.  
☐ Required by Ecology or delegated agency for UST system closed before 12/22/88.  
☐ Other (describe):

**CHECKLIST**

Each item of the following checklist shall be initiated by the person registered with the Department of Ecology whose signature appears below.

	YES	NO
1. The location of the UST site is shown on a vicinity map.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A summary of UST system data is provided. (see Section 3.1.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. The soils characteristics at the UST site are described. (see Section 5.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is there any apparent groundwater in the tank excavation?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6. A brief description of the surrounding land use is provided. (see Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. A sketch or sketches showing the following items is provided:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- location and ID number for all field samples collected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- groundwater samples distinguished from soil samples (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- samples collected from stockpiled excavated soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- tank and piping locations and limits of excavation pit	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- adjacent structures and streets	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- approximate locations of any on-site and nearby utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. A table is provided showing laboratory results for each sample collected including: sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Any factors that may have compromised the quality of the data or validity of the results are described.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**SITE ASSESSOR INFORMATION**

Person Registered with Ecology: Cathy Frey-Hartwell
 Firm Affiliated with: HA ENVIRONMENTAL, INC.

Business Address: 6501 27th LN SE
 Telephone: 360-459-5566

City: Lacey
 State: WA
 Zip Code: 98503

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 7B.360 WAC.

Date: 11-5-98
 Signature of Person Registered with Ecology: [Signature]

## Appendix E



## UNDERGROUND STORAGE TANK

## 30 DAY NOTICE

See back of form for instructions  
Please ☒ the appropriate box

☐ Intent  
to Install

☒ Intent  
to Close

☐ Both

For Office Use Only

Owner # \_\_\_\_\_

Site # \_\_\_\_\_

## SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tank is registered): 2

Site/Business Name: DWAW PAT Kuchnermeister

Site Address: 7202 South Park Ave

Owner/Operator Telephone: (253) 842 1232

Tacoma Washington

98146

## TANK INFORMATION:

## TANKS TO BE CLOSED

This section to be filled out ONLY if tanks are being removed.

Tank ID	Projected Closure Date	Substance Stored	Date last used	Is there production from tank (yes/no)	If no production was pumped
1	1/1/98	Gas	3	yes	
2	1/1/98	Gas	7	yes	
3	1/1/98	Gas		yes	
4	1/1/98	Gas		yes	
5	1/1/98	Gas		yes	
6	1/1/98	Gas		yes	

## TANKS TO BE INSTALLED

This section to be filled out ONLY  
if tanks are being installed

Tank ID      Approx.  
Install Date

## TANK INSTALLATION TO BE PERFORMED BY (if known):

This section to be filled out ONLY if tanks are being installed

Service Provider: APS SERVICES

Contact Name: DAN THOMAS

Telephone: (253) 842 8555

Address: 1085 Valentine Ave

P.O. Box

98047

City

State

ZIP Code

## TANK PERMANENT CLOSURE TO BE PERFORMED BY (if known):

This section to be filled out ONLY if tanks are being removed

Service Provider:

Contact Name:

Telephone:

Address:

This form will be returned to the address:

UST OWNER/  
OPERATOR

MAILING  
ADDRESS

Street

City

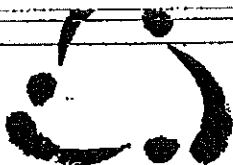
State

ZIP Code

Once validated by Ecology, this form serves as your  
temporary permit for the tanks listed above.

Please type or print information

ECY 020-33



TACOMA-PIERCE COUNTY  
**HEALTH**  
DEPARTMENT

Federico Cruz-Urbe, MD, MPH  
Director of Health

Governed by a local  
Board of Health

- Community Based
- Competitive
- Integrated
- Preventive

July 27, 1998

Pat Kuchenmeister  
Alice Edwards ET AL  
17815 40th Ave E  
Tacoma, WA 98446

Dear Ms. Kuchenmeister:

This letter is to provide you with a copy of the Underground Storage Tank (UST) removal permit for tank(s) located at 7202 S. Park Ave (enclosed). In addition, please find enclosed the requirements for site assessments and site closure reports to be completed upon UST removal. A site assessment report is due within ninety (90) days of UST removal.

As owner or operator of this facility, you are responsible to demonstrate that no contamination has occurred at this site (Pierce County Code Chapter 8.34; City of Tacoma Code Chapter 5.47) to the satisfaction of the Tacoma-Pierce County Health Department (TPCHD). Any cleanup or remediation at this property must be conducted in accordance with the Model Toxics Control Act Cleanup Regulation, WAC 173-340, and work plans approved by the TPCHD.

If you have any questions regarding the UST removal or remediation process, please contact the Source Protection Program at 798-6470.

Sincerely,

Mark LaVergne  
Environmental Health Specialist I  
Source Protection Programs

Enclosures

♻️ Printed on 100% recycled paper  
3629 South D Street  
Tacoma WA 98408-6897

253/798-6500  
TDD: 798-6050  
800/992-2456

[www.healthdept.co.pierce.wa.us](http://www.healthdept.co.pierce.wa.us)

OWNR.TX.UST

**Permit**

(Non-Transferable)

☐ Annual☒ Special**ABANDONMENT/REMOVAL OF  
UNDERGROUND TANK**

TACOMA FIRE DEPARTMENT • Fire Prevention Bureau • Telephone: 591-5740 • Tacoma, Washington

Date June 17 1998 Expiration Date 8-17-98Issued To Pat Kuchanmeister Phone No. 847-1234Address 17815 40th Ave E. Tac. 98446

For \_\_\_\_\_

Location 7202 So. Park**Conditions:**

1. Comply with Article 79 of the Uniform Fire Code (1994).
2. Comply with NFPA Standard #30.
3. Comply with TFD abandonment or removal of underground tank procedures.
4. Pay \$50 permit fee per tank; \$100 maximum per site.
5. Call for inspection AT LEAST 48 HOURS before tanks are removed from ground. Need to inspect tank and open hole.
6. Acquire permit from Pierce County Health Department, 3629 South D Street, 591-6469.

x Pat Kuchanmeister  
Responsible PartyBy Gene E. Williams  
Fire Marshal

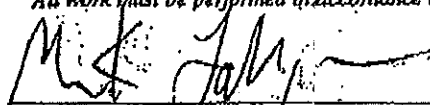
It is understood and agreed that this permit may be revoked for cause at any time.

Permit # 9859**UNDERGROUND STORAGE TANK REMOVAL PERMIT**

Tacoma-Pierce County Health Department (TPCHD)

Site Location 7202 S. PARK AVE.  
Facility Name —  
Removal Firm A.P.S. SERVICES INC  
Number of Tanks to be Removed (SIX) 6

*All work must be performed in accordance with current laws, ordinances, resolutions and rules and regulations.*

  
Approval Signature

VALIDATION:

Health-Environment Health  
For Deposit Only:

TPCHD Tacoma Wash

3936 885.00 TOTAL

3936 885.00 CHECK

000001 07-24-98 113138

Permit must be accessible at site - DO NOT ALTER OR DEFACE

Expires 180 days from validation date.

Forty-eight (48) hour notice must be provided to the TPCHD prior to removal/abandonment.  
Site assessment report for TPCHD due 90 days after removal.

Source Protection Program • 3620 South "D" Street • Tacoma, WA 98408-6807 • (253) 796-8470

HEA 1161 (4/98)



10/14/1998 4:10PM

FROM AMALGAMATED SVCS. 200 110 0000

**AMALGAMATED SERVICES INC.**

Tim (Jake) Jacobson

P.O. BOX 97

Sumner, WA 98390

(253) 826-1127

**A.S.I.****NAME/ADDRESS****APS Services**  
1085 Valentine Ave. S.E.  
Pacific, WA 98047  
Attention:

DATE	ESTIMATE #
10/14/98	29

ITEM	DESCRIPTION	QTY
1002	Hours - Pump and Rinse	5.5
1009	Gallons - Disposal Non Haz Liquid	700
	Sales Tax	
1.5% Finance Charge after 30 days		TO

Phone: (253) 826-1127

**PEARSON METAL SALVAGE, INC.**

10403 PORTLAND AVE

TACOMA, WA 98445

(253) 535-4809

MAIL: 2532 59TH AVE NE

TACOMA, WA 98422

(253) 952-9008

October 22, 1998

**APS SERVICE**

Fax: (253) 863-9844

Attn: Dave

Pearson Metal Salvage received from APS Service of Pacific, WA six underground fuel tanks. The tanks were delivered to our salvage yard by APS and are being disposed of by Pearson Metal Salvage according to all federal, state and county regulations.

Sincerely,

Verne E. Pearson  
President

253535 4809

10-16-98

All underground piping from 7207 136 Park  
Ave, Tarrytown, NY was given to the bleichenman  
for scrap. All piping was empty and cut  
before leaving the job site.

Scrap Collector

AP5

Don Williams

Soil Master (c)

TPS Technologies, Inc.

## Customer Job Report

Gross & Tare Weight Codes: M=Manual; S=Scale; T=Trk File

Job Number Name	Site Address	Site City	State	Zip Code
A03 -- 02056 SOUTH PARK PROJECT	7202 SOUTH PARK AVENUE SO.	TACOMA	WA	00000

Load #	Date & Time Out	Transporter #	Truck & Trailer Number	Gross (lb)	Tare (lb)	Net (lb)	Net Wt (tons)
1	10/20/98 07:47	1001484	GARRETT	112,320M	40,420M	71,900	35.93
2	10/20/98 07:48	1001484	BOB	112,280M	41,480M	70,800	35.40
3	10/20/98 07:48	1001484	GARRETT	101,800M	40,420M	61,380	30.69
4	10/20/98 07:48	1001484	BOB	103,980M	41,480M	62,420	31.21
5	10/20/98 07:48	1001484	GARRETT	103,900M	40,420M	63,480	31.74
6	10/21/98 06:53	1001484	GARRETT	115,400M	40,420M	74,980	37.49
7	10/21/98 06:54	1001484	BOB	112,480M	41,480M	71,000	35.50
8	10/21/98 06:54	1001484	GARRETT	111,800M	40,420M	71,380	35.69
9	10/21/98 06:54	1001484	BOB	113,420M	41,480M	71,940	35.97
11	10/21/98 06:55	1001484	BOB	104,040M	41,480M	62,560	31.28
12	10/21/98 06:55	1001484	GARRETT	112,120M	40,420M	71,700	35.85
13	10/21/98 06:55	1001484	BOB	110,020M	41,480M	68,540	34.27
10	10/21/98 06:55	1001484	GARRETT	108,720M	40,420M	68,300	34.15
14	10/21/98 06:56	1001484	GARRETT	108,560M	40,420M	68,140	34.07
16	10/26/98 07:47	1001484	LLOYD	50,760M	25,120M	25,640	12.82
17	10/26/98 07:47	1001484	LLOYD	51,460M	25,120M	26,340	13.17
15	10/26/98 07:47	1001484	TERRY	58,480M	26,080M	32,400	16.20
18	10/26/98 07:48	1001484	LLOYD	52,520M	25,120M	27,400	13.70
19	10/26/98 07:48	1001484	TERRY	58,080M	26,080M	32,000	16.00
20	10/26/98 07:49	1001484	LLOYD	49,380M	25,120M	24,260	12.13
21	10/26/98 07:50	1001484	TERRY	60,360M	26,080M	34,280	17.14
22	10/26/98 07:50	1001484	LLOYD	52,400M	25,120M	27,280	13.64
23	10/26/98 07:50	1001484	TERRY	61,820M	26,080M	35,740	17.87
24	10/26/98 07:51	1001484	LLOYD	51,340M	25,120M	26,220	13.11
25	10/26/98 07:51	1001484	TERRY	61,280M	26,080M	35,200	17.60
26	10/26/98 07:51	1001484	LLOYD	54,300M	25,120M	29,180	14.59
27	10/26/98 07:51	1001484	TERRY	62,180M	26,080M	36,100	18.05
28	10/26/98 07:52	1001484	LLOYD	53,060M	25,120M	27,940	13.97
29	10/26/98 07:52	1001484	TERRY	62,040M	26,080M	35,960	17.98
30	10/26/98 08:15	1001484	TERRY	54,720M	26,080M	28,640	14.32

Completed Loads	Manifests Received	Completed Weight	Estimated Weight	TOTAL Net Wt
75.00%	30	481.00%	150.00 (tons)	721.55 (tons)

[SM-R

Post-It Fax Note	7871	Date	10/27	Page	1
To	Dave Everett	From	TP3		
Company	APS	Co.	TP3		
Phone #		Phone #	253-584-8309		
Fax #	253-584-8309	Fax #			

10/26/98

FAX COVER SHEET

Thursday, October 22, 1998 05:33:17 AM

RECEIVED

OCT 22 1998

Tacoma-Pierce County  
Health Dept.

To: MARK LAVERGNE  
At: TPCHD  
Fax #: 12537987663

Fax: 5 pages and a cover page.

## TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 3

SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

RECEIVED

OCT 22 1998

Tacoma-Pierce County  
Health Dept.

## Diesel and Oil In Soil by NWTPH-Dx/Dx-Extended

Sample Number	Date	Recovery %	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/21/98	96	nd	nd
WO1	10/21/98	105	nd	930
WO2	10/21/98	70	nd	nd
WO3	10/21/98	133	nd	nd
HO1	10/21/98	86	nd	210
MDL			20	40

"nd" Indicates not detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

Mark,  
I left the site yesterday with instructions to overexcavate another 3 to 5 feet in waste oil pit & 1 foot in heating oil pit. Will swing by the site today on my way home from Seattle. Don't have results for dispensers yet, but it didn't look good at the Island along 72nd. Took a sample of sidewall (SW72) for HClD. Strong, strange smell to it. ACRAS, Lead, & PCB's not in yet.

## TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 4

SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

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OCT 22 1998

Tacoma-Pierce County  
Health Dept.

## Specific Halogenated Hydrocarbons and BTEX (BPA 8021B) in Soil

Sample-Number	MDL	Method Blank	WO1	MS	MSD	RPD
Date	mg/kg	10/21/98 mg/kg	10/21/98 mg/kg	10/21/98 %	10/21/98 %	10/21/98
Vinylchloride	0.05	nd	nd	--	--	--
Benzene	0.05	nd	0.24	82	89	8.2%
Toluene	0.05	nd	nd	86	82	4.8%
Ethylbenzene	0.05	nd	nd	--	--	--
Total-Xylene	0.05	nd	nd	--	--	--
1,1 Dichloroethene	0.05	nd	nd	--	--	--
Dichloromethane	0.05	nd	nd	--	--	--
Trans-1,2 Dichloroethene	0.05	nd	nd	--	--	--
1,1 Dichloroethane	0.05	nd	nd	--	--	--
Cis-1,2 Dichloroethene	0.05	nd	nd	--	--	--
Chloroform	0.05	nd	nd	--	--	--
1,1,1 Trichloroethene	0.05	nd	nd	--	--	--
Carbon Tetrachloride	0.05	nd	nd	--	--	--
1,2 Dichloroethane	0.05	nd	nd	--	--	--
Trichloroethene	0.05	nd	nd	82	82	0.0%
1,1,2 Trichloroethane	0.05	nd	nd	--	--	--
Tetrachloroethene	0.05	nd	nd	--	--	--
1,1,1,2-Tetrachloroethane	0.05	nd	nd	--	--	--
1,1,2,2-Tetrachloroethane	0.05	nd	nd	--	--	--
Chlorobenzene	0.05	nd	nd	111	120	7.8%
Spike Recovery (%)		70	81	96	117	19.7%

"nd" Indicates Not Detected at the listed detection limit.

"In" Indicates that interference peaks prevent determination.

## TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 1

SOUTH PARK PROJECT  
Tacoma, Washington  
AA Environmental Assessment, Inc.

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OCT 22 1998

Tacoma-Pierce County  
Health Dept.

## Gasoline (NWTPH-Gix) &amp; BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/21/98	nd	nd	nd	nd	nd	89
E1	10/21/98	0.05	nd	0.05	0.88	nd	91
E2	10/21/98	nd	nd	nd	nd	nd	101
E3	10/21/98	nd	nd	nd	nd	nd	82
E3 Dup.	10/21/98	nd	nd	nd	nd	nd	114
E4	10/21/98	nd	nd	nd	nd	nd	99
E5	10/21/98	nd	nd	nd	nd	nd	13
E6	10/21/98	nd	nd	nd	nd	nd	101
E7	10/21/98	nd	nd	nd	nd	nd	100
E8	10/21/98	nd	nd	nd	nd	nd	108
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.



TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

Page 2

SOUTH PARK PROJECT  
Tacoma, Washington  
A A Environmental Assessment, Inc.

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OCT 22 1998

Tacoma-Pierce County  
Health Dept.

## Diesel Range Hydrocarbons in Soil by NWTPH-Dx

Sample Number	Date	Recovery (%)	Diesel mg/kg
Meth. Blank	10/21/98	98	nd
P9	10/21/98	102	nd
E10	10/21/98	97	nd
P3	10/21/98	103	nd

Method Detection Limit 20

"nd" Indicates not detected at the listed detection limit.

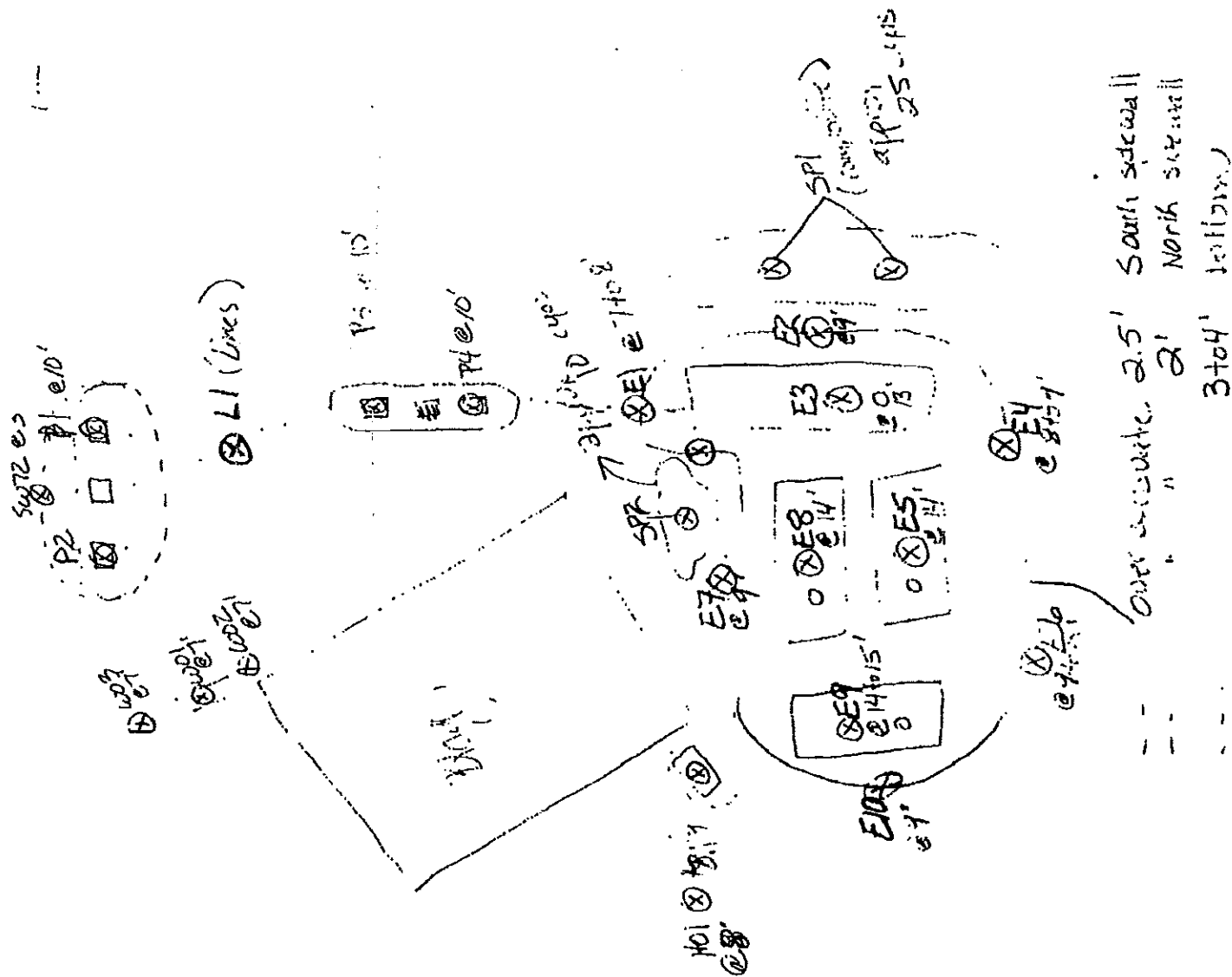
"int" Indicates that interfering peaks prevent determination.

PAID 1000.00

RECEIVED

OCT 22 1998

Tacoma-Pierce County  
Health Dept.



AN

# DON GOLDEN CO., INC.

TACOMA 474-0148

SEATTLE 243-3899

4704 SOUTH WASHINGTON STREET

TACOMA, WASHINGTON 98403

PETROLEUM AND INDUSTRIAL EQUIPMENT

April 12, 1977

## PROPOSAL

RECEIVED

JUL 24 1988

Tacoma-Pierce County  
Health Dept

Proposal submitted to:

Mrs. Audrey C. Edwards  
151 South 67th. Street  
Tacoma, Washington

We hereby submit specifications and estimates for:  
Quotation to furnish and install 1 - 10,000 gallon tank and install at  
72nd. and Park Ave. Tacoma, Washington.

Job to consist of excavation - with all new backfill, piping, electrical,  
concrete work, asphalt patching, change piping on two 3,000 gallon tanks  
to syphon system, install sub pump from 3,000 gallon tank in new 10,000  
gallon tank and all necessary work to complete job.

Contractor shall not be liable for any unknown underground objects.

We hereby propose to furnish labor and materials - complete in accordance  
with the above specifications, for the sum of \$6,466.80.

\$6153.00	
313.80	Sales Tax
<u>\$6466.80</u>	Total

\$2,155.60	due upon acceptance of proposal
2,155.60	progress payment due when job is 1/2 completed
2,155.60	due upon completion
<u>\$6,466.80</u>	

Authorized signature

Note: This proposal may be withdrawn by us if not  
accepted within 30 days

### Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and are  
hereby accepted. You are authorized to do the work as specified. Payments  
will be made as outlined above.

Date

Signature

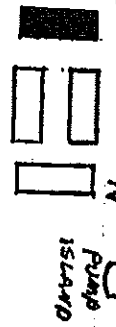
Signature

Carl's Auto Repair 7202 S. Park Ave. Tacoma WA 98402 11-21-89

15. TANK TO TEST

West Tank  
Diesel  
Identify by position  
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD



16. CAPACITY

Nominal Capacity 2000 Gallons  
By most accurate capacity chart available 2005 Gallons

From Station Chart  
☒ Tank Manufacturer's Chart  
☐ Company Engineering Dept.  
☐ Charts supplied with  
☐ Other

17. FILL-UP FOR TEST

Suck Water Bottom before Filling 0 to 3" 0 Gallons  
Tank Diameter 64 in.  
Inventory

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (27).  
Use maximum allowable test pressure for all tests. Flow pointed rule does not apply to double-walled tanks.  
Complete section below.  
1. Is four pound test required? Yes ☒ No ☐  
2. Height to 12" mark from bottom of tank 154.6 in.  
3. Pressure at bottom of tank 4.79 P.S.I.  
4. Pressure at top of tank 2.79 P.S.I.

☐ Water in tank ☐ Liquid being tested with LEVELT  
☒ High water table in tank excavation

19. TANK MEASUREMENTS FOR TST ASSEMBLY

Bottom of tank to grade 112 in.  
Add 30" for "T" probe assembly 30 in.  
Total tubing for assembly - approximate 142 in.

20. EXTENSION HOSE SETTING

Tank top to grade 48 in.  
Extended hose on suction tube 6" or more below tank top 52 in.

21. FILL PIPE EXTENDS ABOVE GRADE, USE TOP OF THE

22. Thermal-Sensor reading after circulation 105.78 degs  
54.55 degs  
311

23. Diggs per "F" in range of expected change

COEFFICIENT OF EXPANSION (Complete after circulation)  
24a. Corrected A.P.L. Gravity  
Observed A.P.L. Gravity

Hydrometer employed  
Observed Sample Temperature

Corrected A.P.L. Gravity @ 60°F, from Table A  
Coefficient of Expansion by Inched Product

From Table B  
Transfer COE to Line 25b

25. (a) Total quantity in tank (18 or 17)  
(b) Coefficient of expansion for Inched Product

26. (a) 910528694  
Volume change per °F (25 or 26)  
Diggs per °F in test  
Range (23)

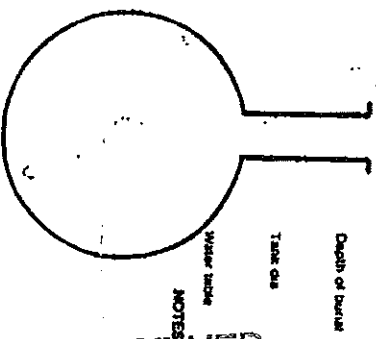
21. VAPOR RECOVERY SYSTEM

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD  
Type of Product Diesel  
Hydrometer Employed 4 in.  
Temperature in Tank After Circulation 54 °F  
Temperature of Sample 55 °F  
Difference (°F) 1 °F  
Observed A.P.L. Gravity 32.2  
Reciprocal 2213 Page 36  
Total quantity in tank (18 or 17) 2015  
Volume change in this tank per °F 910528694  
Transfer to Line 25a

24c. FOR TESTING WITH WATER

Water Temperature after Circulation  
Table C  
Coefficient of Water  
Table D  
Added Surfactant? Yes ☐ No ☐ Transfer COE to Line 25b

(c) Volume change in this tank per °F  
= 002927744  
Volume change per diggs  
Compares to 4 decimal places  
This is tank factor (a) .0029



RECEIVED  
JUL 24 1998  
Tacoma-Pierce County Health Dept

OVER

COPY

27. Season Calibration			28. LOG OF TEST PROCEDURES		29. Adjusting		30. HYDROSTATIC PRESSURE (PSI)		31. VOLUME MEASUREMENTS (m)		32. TEMPERATURE CORRECTION		33. NET VOLUME CHANGES		34. ACCUMULATED CHANGE	
DATE	Period of time of setting up and running test (See last page of Book of Records)	Adjusting To	Reading at Setting	Reading at which Adjusted	Before Reading	After Reading	Product (Barrels)	Product (Barrels)	Normal Setting Reading	Change (PSI)	Change (PSI)	Change (PSI)	Change (PSI)	Change (PSI)	Change (PSI)	Change (PSI)
	Set up equipment for test. Purged air from tubing and lines, then plugged. Circulated product through 42" line for 30 minutes.															
1130	Lowered to 42"		42	660	660	660	10570									
1145	Returned to 42"	1	41.9	42	660	655	-005	598	120	+058	-063					
1200	" " "	2	41.8	42	655	645	-010	613	116	+044	-054					
1215	" " "	3	41.9	42	645	640	-005	629	116	+044	-051					
1230	" " "	4	42.0	42	640	640	+000	641	112	+035	-035					
	Lowered to 12"			12												
1245	Returned to 12"	1	12.5	12	640	665	+025	654	113	+038	-013					
1300	" " "	2	12.2	12	665	675	+010	666	112	+035	-035					
	Began readings at 5 minute intervals															
1305	Returned to 12"	1	12.2	12	675	685	+010	670	114	+012	-002	-002				
1310	" " "	2	12.1	12	685	690	+005	673	113	+009	-004	-004				
1315	" " "	3	12.1	12	690	695	+005	677	114	+012	-007	-013				
1320	" " "	4	12.1	12	695	700	+005	680	113	+009	-004	-017				
1325	" " "	5	12.1	12	700	705	+005	682	113	+006	-001	-015				
1330	" " "	6	12.1	12	705	710	+005	685	113	+009	-004	-022				
1335	" " "	7	12.1	12	710	715	+005	688	113	+009	-004	-026				
1340	" " "	8	12.1	12	715	720	+005	690	112	+006	-001	-027				
1345	" " "	9	12.1	12	720	725	+005	692	112	+006	-001	-028				
1350	" " "	10	12.1	12	725	730	+005	695	113	+009	-004	-032				
1355	" " "	11	12.1	12	730	735	+005	698	113	+009	-004	-036				
1400	" " "	12	12.1	12	735	740	+005	701	113	+009	-004	-040				
1405	" " "	13	12.1	12	740	745	+005	704	113	+009	-004	-044				
1410	" " "	14	12.1	12	745	750	+005	707	113	+009	-004	-048				
1415	" " "	15	12.1	12	750	755	+005	710	113	+009	-004	-052				
1420	" " "	16	12.1	12	755	760	+005	712	112	+006	-001	-053				
1425	" " "	17	12.1	12	760	765	+005	715	113	+009	-004	-057				
1430	" " "	18	12.1	12	765	770	+005	718	113	+009	-004	-061				
1435	" " "	19	12.1	12	770	775	+005	721	113	+009	-004	-065				
1440	" " "	20	12.1	12	775	780	+005	724	113	+009	-004	-069				
1445	" " "	21	12.1	12	780	785	+005	727	113	+009	-004	-073				
1450	" " "	22	12.1	12	785	790	+005	729	112	+006	-001	-074				
1455	" " "	23	12.1	12	790	795	+005	731	112	+006	-001	-075				
1500	" " "	24	12.1	12	795	800	+005	733	112	+006	-001	-076				
	Stopped Test - Passed															
	The sum of the net volume changes for the 14 data point readings divided by two for a one hour average volume change reading is															-038

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Health Dept.

P-T Tank Test Data Chart  
Additional Info

1 Net Volume Change at Conclusion of Precision Test  
Name of Tester: *Timothy E. Nelson*  
Date: *11-21-99*  
TESTED BY: *DON GOLDEN COMPANY INC.*  
4704 So Washington  
Tacoma, WA 98409

2 Statement  
3 Tank and product handling system has been tested right according to the Precision Test Criteria as established by HFA Publication 219. This is not intended to indicate permission to a test.  
4 Tank and product handling system has been tested right according to the Precision Test Criteria as established by HFA Publication 219.  
5

It is the responsibility of the owner and/or operator of this system to immediately advise state and local authorities of any unsafe condition and to immediately remove the system from the environment as a result of the indicated failure of the system. Health Consultants Incorporated does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner Operator

File

Certified Tester: *Technician-Travis Nelson* Certificate #4451064

**SME CORPORATION**

2302 "A" ST.  
TACOMA, WA 98402  
FAX (206) 572-0978  
FROM SEATTLE (206) 682-9412  
TACOMA (206) 572-3822

SEATTLE, WA  
(206) 767-5032  
PORTLAND, OR  
(503) 286-3728  
SPOKANE, WA  
(509) 927-3129

**UNIVOLGE**

INVOICE NO.

**BILL TO:**

PATRICIA KUCHENMEISTER  
c/o CARL'S AUTO REPAIR  
17815 40th AVE. EAST  
TACOMA, WA. 98446

**SHIP TO:**

CARL'S AUTO REPAIR  
7202 SOUTH 14th AVE.  
TACOMA, WA. 98402  
TANK TESTING

WORK AUTHORIZED BY	DATE AUTH.	CUST. NO.	CUST. PHONE NO.	SITE NO.
PATRICIA / CARL	12/05/1994	CARL01	206-472-4000	CARL'S
INVOICE DATE	OUR ORDER NO.	YOUR ORDER NO.	TERMS	CONTRACT NO.
01/17/1995	941205036		DUE UPON RECEIPT	

**DESCRIPTION OF PROBLEM/WORK PERFORMED**

US TEST 10,000 GAL. UNDERGROUND STORAGE TANK CONTAINING  
REG. UNL. FUEL TO INCLUDE PRODUCT LINES

PART NO.	PART DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
Ticket # 105393 TANK	Date: 12/09/1994 Employee: KEVIN WILSON TANK SYSTEMS TIGHTNESS TEST	1.00 TL	305.00	305.00

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Tacoma-Pierce County  
Health Dept.

*Quail 2-1-98*  
*Check # 11744*

☐ Cash ☐ Check ☐ Charge ☐ Net 10th Prox ☐ Resale

**PLEASE PAY ON THIS INVOICE. STATEMENT SENT TO DELINQUENT ACCOUNTS ONLY.**

"Customer agrees that title to all materials noted above and furnished by Seller remains with Seller until all payments have been received by Seller".

All accounts are due and payable by the 10th of the month following date of invoice. FINANCE CHARGE OF 1½% per month which is an ANNUAL PERCENTAGE RATE OF 18%, or 50¢ minimum, charge on all past due accounts. Customer shall pay reasonable attorney's fees and legal expense incurred, if this account is referred for legal action.

*Thank You*



INVOICE #SM000234

TEST DATE: 12/09/94

S.M.E. CORPORATION  
2302 A ST.  
TACOMA, WA. 98402

TANK STATUS EVALUATION REPORT  
-----

\*\*\*\*\* CUSTOMER DATA \*\*\*\*\*

KUCHENMEISTER GAFFIKIN & EDWARDS  
151 S. 67TH

TACOMA, WA.  
98408-7305

CONTACT:  
PHONE #: (206)847-1234

\*\*\*\*\* SITE DATA \*\*\*\*\*

CARLS AUTO REPAIR  
7202 SO. PARK AVE

TACOMA, WA.  
98408-5414

CONTACT: HAMMERICH CARL  
PHONE #: (206)472-4000

\*\*\*\*\* COMMENT LINES \*\*\*\*\*

SITE # 007010 WA: ECOLOGY. TEST TANK ONLY, NO LEAK DETECTORS  
ON PRODUCT LINE TO ISOLATE AND TEST AT 1 1/2 OPERATING PRESSURE  
2 LEAKS - TURBINE SEAL AND N. DISPENSOR - REPAIRED. LEAK DE-  
TECTORS REQUIRED DEC. 1990 ON PRESSURIZED LINES.

CURRENT EPA STANDARDS DICTATE  
THAT FOR UNDERGROUND FUEL TANKS, THE MAXIMUM ALLOWABLE LEAK/GAIN RATE  
OVER THE PERIOD OF ONE HOUR IS .07 GALLONS.

TANK #1: REG UNLEADED      TYPE: STEEL      RATE: .112568 G.P.H. LOSS

TANK IS NOT TIGHT.  
-----

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Tacoma-Pierce County  
Health Dept.

OPERATOR:

*Devon Wilkerson*

SIGNATURE:

*[Signature]*

DATE:

*12/9/94*



**SME CORPORATION**

2302 "A" ST.  
TACOMA, WA 98402  
FAX (206) 572-0978  
FROM SEATTLE (206) 682-9412  
TACOMA (206) 572-3822

SEATTLE, WA  
(206) 767-5032  
PORTLAND, OR  
(503) 286-3728  
SPOKANE, WA  
(509) 927-3129

INVOICE NO. 44196

**BILL TO:**

PATRICIA KUCHENMEISTER  
c/o CARL'S AUTO REPAIR  
17815 40th AVE. EAST  
TACOMA, WA. 98446

**SHIP TO:**

CARL'S AUTO REPAIR  
7202 SOUTH PARK AVE.  
TACOMA, WA. 98408  
TANK TESTING

WORK AUTHORIZED BY	DATE AUTH	CUST. NO.	CUST. PHONE NO.	SITE NO.
OWNER	03/13/1995	CARL 01	206-472-4000	CARL'S
INVOICE DATE	OUR ORDER NO.	YOUR ORDER NO.	TERMS	CONTRACT NO.
03/23/1995	950323015		DUE UPON RECEIPT	

**DESCRIPTION OF PROBLEM / WORK PERFORMED**

DISCONNECT ELECTRICAL TO DISPENSERS AND TURBINES. BLOW BACK  
PRODUCT LINES, PUMP OUT AND BARREL CONTAMINATED FUEL/WATER.  
PERFORM TEMPORARY CLOSURE ON UNDERGROUND STORAGE TANKS  
SOFT CAP ALL TANK FILLS AND LOCK DISPENSERS

PART NO.	PART DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
	----- See attached for Invoice detail -----			
			Material	930.02
			Labor	714.75
			Travel	94.25
			Mileage	0.00

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Health Dept.

☐ Cash ☐ Check ☐ Charge ☐ Net 10th Prox ☐ Resale

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Gross	1739.02
Tax 7.90%	137.37
Payments	0.00
Net Amnt	1876.39

Thank You

## SME CORPORATION MATERIAL REPORT

TODAY'S DATE 03/23/95

PAGE 1

WORK ORDER # 950323015

CUSTOMER:

PART NUMBER	DESCRIPTION	QUANT.	U/M	UNIT PRICE	EXTENDED
SME01	SIMER PUMP RENTAL	1.00	EA	15.00	15.00
DISPOSAL	DIESEL / WATER	550.00	GL	1.20	660.00
DISPOSAL	GASOLINE / WATER	150.00	GL	1.20	180.00
CONCRETE	PRE-MIX	6.00	BO	2.27	13.62
S100	ABSORB PAD/% ENVIRO-DISPOSAL	10.00	EA	2.14	21.40
AB6-2A	ABUS LOCK	8.00	EA	5.00	40.00

MATERIAL TOTAL 930.02

## WORK ORDER LABOR SUMMARY REPORT

SME Corporation

DATE 03/23/95

Employee Name	Date	Reg Hrs/ Rate	OT Hrs/ Rate	Travel/ Rate	Mileage/ Rate	Total
SCOTT D. HILLER	03/13/1995	2.50 36.00		0.50 HR 36.00	0.00 0.00	108.00
Description:	DISCONNECT ELECTRICAL TO DISPENSERS AND TURBINES					
CURTIS C. JACKSON	03/13/1995	2.50 36.00		0.50 HR 36.00	0.00 0.00	108.00
Description:	BLOW BACK LINES, PUMP OUT AND BARREL FUEL/WATER MIXTURE					
WILLIAM S. CUSICK	03/14/1995	1.50 44.50		0.50 HR 44.50	0.00 0.00	89.00
Description:	PERFORM TEMPORARY TANK CLOSURES					
HARVIN EDELBACH	03/14/1995	6.00 36.00		0.50 HR 36.00	0.00 0.00	234.00
Description:	PUMP OUT TANKS - SOFT CAP AND LOCK ALL DISPENSERS					
CURTIS C. JACKSON	03/14/1995	6.00 36.00		0.50 HR 36.00	0.00 0.00	234.00
Description:	PUMP OUT TANKS AND BARREL. MIX CONCRETE AND CAP OFF FILLS					
CURTIS C. JACKSON	03/14/1995	1.00 36.00		0.00 HR 0.00	0.00 0.00	36.00
Description:	PUMP OUT BARRELS INTO HOLDING TANK IN YARD FOR ENVIRONMENTAL DISPOSAL					
		19.50 HRS	0.00 HRS			807.00

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Health Dept

**SME CORPORATION**

2302 "A" ST.

TACOMA, WA 98402

.. 572-3822

FROM SEATTLE 682-9412

110566

CUSTOMER <u>CARL ØI</u>		DATE <u>3-14-95</u>	
ADDRESS _____		SHIP TO/JOB LOCATION _____	
CITY _____		T. Person <u>72</u> <u>100</u> <u>100</u> <u>100</u>	
ATTENTION: _____		CARL'S Auto Repair	
Description of Work To Be Done: _____		SHIP VIA _____ DATE _____	
		950323015	

**Description of Work To Be Done:**

Temporary Close Fuel System +  
lock all pump

Tank Size	Diesel	2 - 3,000
	Phen	3000
	Washoil	10,000
	Waste oil	300

**WORK PERFORMED**

[illegible][illegible]

RECEIVED

JUL 24 1998

Tacoma-Pierce County  
Health Dept

**Travel Time:**

Miles at

per mile

Quoted Price

☒ Check    ☐ Charge    ☐ Net 10th Prox    ☐ Resale

Freight, UPS, P.O., etc.

**AY ON THIS INVOICE, STATEMENT SENT TO DELINQUENT ACCOUNTS ONLY.**

**Sub Total**

title to all materials noted above and furnished by Seller remains with Seller until all payments have been

Tax

due payable by the 10th of the month following date of invoice. FINANCE CHARGE OF 1½% per month PERCENTAGE RATE OF 18%, OR 50¢ minimum, charge on all past due accounts. Customer shall pay and legal expense incurred, if this account is referred, if this account is referred for legal action.

**TOTAL**

44/

x

by