KITTITAS COUNTY PARCEL 456234
ROSLYN, WASHINGTON 98941

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Prepared for
FORTERRA ROSLYN LLC
October 7, 2020
Project No. 1122.05.01

Prepared by
Maul Foster & Alongi, Inc.
109 East 13th Street, Vancouver, WA 98660

MAUL FOSTER ALONGI

APPENDIX G

FILE REVIEW RECORDS



Cleanup Site Details

Cleanup Site ID: 9001

Cleanup Site ID: 9001 **Facility/Site ID:** 39286399 **UST ID:** 1849 Site Page | Site Documents | View Map

Cleanup Site Name: ROSLYN CITY OF Glossary

Alternate Names: ROSLYN CITY, ROSLYN CITY OF

LOCATION

Address: 201 S 1ST ST **City:** ROSLYN **Zip Code:** 98941 **County:** Kittitas

Latitude: 47.22195 **Longitude:** -120.99240 **WRIA:** 39 **Legislative District:** 13 **Congressional District:** 8 **TRS:** 20N 15E 17

DETAIL

Status:	No Further Action	**NFA Received?**	Yes	**Is PSI site?**	No		
Statute:	MTCA	**NFA Date:**	1/25/2006	**Current VCP?**	No	**Past VCP?**	No
Site Rank:	N/A	**NFA Reason:**	Historic LUST	**Brownfield?**	No		
Site Manager:	Central Region	**Responsible Unit:**	Central	**Active Institutional Control?**		No	

CLEANUP UNITS

Cleanup Unit Name	Unit Type	Unit Status	Resp Unit	Unit Manager	Current Process
ROSLYN CITY OF	Upland	No Further Action Required	CE	Central Region	Independent Action

ACTIVE INSTITUTIONAL CONTROLS

Instrument Type	Restriction Media	Restrictions/Requirements	Date	Recording Number	Recording County	Tax Parcel
There are no current Institutional Controls in effect for this site.						

AFFECTED MEDIA & CONTAMINANTS

	MEDIA					
Contaminant	**Soil**	**Groundwater**	**Surface Water**	**Sediment**	**Air**	**Bedrock**
Petroleum-Gasoline	C					

Key:
B - Below Cleanup Level
S - Suspected
C - Confirmed Above Cleanup Level
R - Remediated
RA - Remediated-Above
RB - Remediated-Below

SITE ACTIVITIES

Activity	Status	Start Date	End Date/ Completion Date
LUST - Notification	Completed		10/11/1996
LUST - Report Received	Completed		10/11/1996
Site Status Changed to NFA	Completed		1/25/2006

Closed #1849 U1274

RECEIVED
OCT 11 1996
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

JW

UST Closure Site Assessment & Independent Remedial Action Report

For Removal of One UST
and Associated Ancillary Equipment
At The City of Roslyn City Hall Facility,
Roslyn, WA

Prepared For:

The City of Roslyn
P.O. Box 451
Roslyn, WA 98941-0451

Prepared By:

SAGE
Earth Sciences, Inc.
P.O. BOX 1644, ZILLAH, WA 98953
PHONE (509) 829-6400

October, 1996

Executive Summary

On August 14, 1996, Northwest Petroleum Equipment (NPE) and the City of Roslyn decommissioned and removed one (1) Underground Storage Tank (UST) at the City of Roslyn City Hall facility, 13 South First Street, Roslyn, WA. The WSDOE Site Identification number is 001849. The tank consisted of one (1) 550 gallon regular leaded gasoline tank (Tank #1). Sage Earth Sciences, Inc. (Sage) provided closure site assessment services upon removal of the UST's. A visual inspection of the tank found it to be in good condition and no holes were observed.

Sage collected five (5) soil samples (NWP-0996-S1 through NWP-0996-S5) from within the UST excavation for field screening and independent laboratory analysis. Field screening with a Flame Ionization Detector (FID) indicated the presence of organic vapors at the floor of the UST excavation. Based upon field screening results, the City of Roslyn excavated approximately six (6) cubic yards of apparently impacted soil from the floor of the excavation. When field screening indicated that petroleum impacted soil was adequately removed, Sage collected seven (7) additional soil samples to characterize the final UST excavation.

These samples were submitted to Friedman & Bruya, Inc. (FBI), Seattle, WA for independent laboratory analysis. Analysis of soil samples collected from within the UST excavation found no petroleum hydrocarbon or total lead at concentrations exceeding the Method A Soil Cleanup Levels of WAC 173-340-740.

Sage also collected a soil sample (NWP-0996-S6) from beneath the fuel line leading from the UST to a fuel dispenser. In addition, Sage collected a soil sample (NWP-0996-S18) from within an opening in the concrete fuel dispenser pad. FBI analysis of the fuel line sample found no detectable petroleum hydrocarbons. FBI analysis of the fuel dispenser sample found diesel and motor oil range petroleum hydrocarbons at a concentration of 660 parts per million (ppm). Additional analysis of the fuel dispenser sample found total lead at a concentration of 830 ppm.

The City of Roslyn removed the small concrete pad and Sage collected an additional sample (NWP-0996-S19) at a depth of two (2) feet below ground surface. Analysis of this sample found no detectable petroleum hydrocarbons and total lead at a concentration of 6 ppm. Based upon field observations, field screening and laboratory analysis, Sage estimates the quantity of impacted soil remaining at the dispenser location is less than one -half cubic yard.

Sage collected three (3) samples (NWP-0996-SP7 through SP9) from the stockpile of soil generated during the UST removal and remediation process (approximately eight cubic yards). Comparison of analytical results with the WSDOE "End Use Criteria for Petroleum Contaminated Soils" indicates that the soil stockpile is designated as "Class 4 Soil".

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WSDOE UST Temporary/Permanent Closure and Site Assessment Notice

1.0 Introduction

1.1 Purpose

The purpose of this report is to describe findings and actions taken associated with the removal of one (1) Underground Storage Tank (UST) and limited Petroleum Contaminated Soil (PCS) removal at the City Hall Building (the site), Roslyn, Washington. This tank removal and closure site assessment project responds to regulatory requirements set forth by the Washington State Department of Ecology (WSDOE).

1.2 Scope of Work

Northwest Petroleum Equipment (NPE) of Selah, WA provided UST decommissioning services. The City of Roslyn provided UST removal and excavation services. Sage Earth Sciences, Inc. (Sage) provided closure site assessment services upon removal of one (1) UST and associated ancillary equipment. Sage provided field screening services and collected representative soil samples in accordance with the WSDOE Guidance for Site Checks and Site Assessments for Underground Storage Tanks (February, 1991; 90-52, Revised October, 1992). Soil samples were submitted to Friedman & Bruya, Inc. (FBI), Seattle, WA. for independent laboratory analysis.

1.3 Site Location

The site is located at 13 South First Street, Roslyn, WA. It is situated within the SW 1/4 of the SE 1/4 of Section 17, Township 20 North, Range 15 East, Willamette Meridian. The site latitude is 47^0, 13', 20" and the longitude is 120^0, 59', 30". The location of the site is shown by Figure 1.

1.4 Site Description

The site is currently used for the City of Roslyn maintenance operations headquarters and the City Library. The facility is owned and operated by:

The City of Roslyn
P.O. Box 451
Roslyn, WA 98941-0451
Phone (509) 649-3105

The authorized site contact is Mr. Robert Fischer.

The Fire Department Building is located south of the subject property. South First Street lies immediately west of the site. East Dakota Avenue lies immediately north of the site. The area west of the site, across First Street, is primarily residential. The

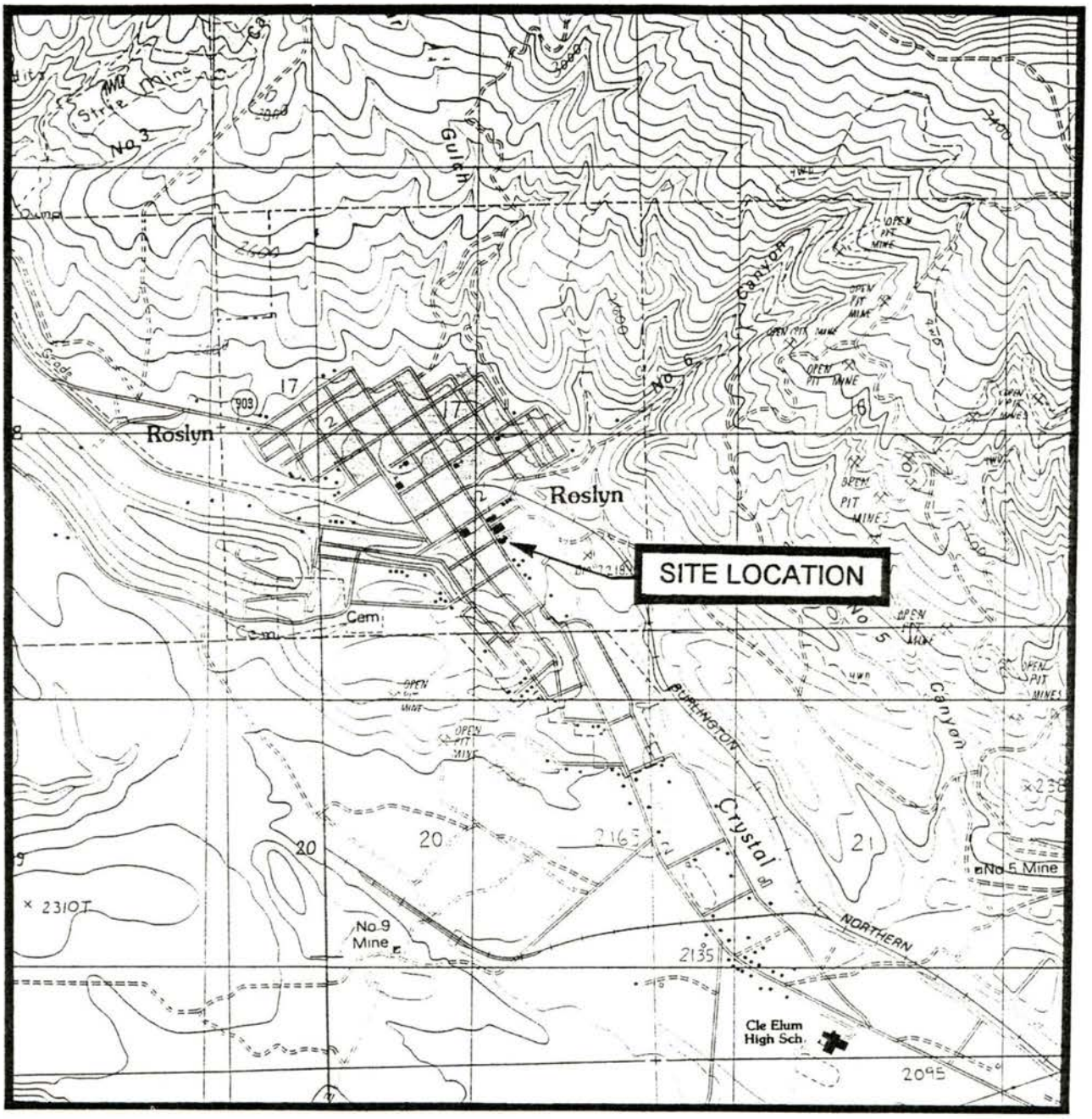


Figure 1. Site Location Map

Cascade Motors property is located north of the site, across East Dakota Avenue. The city storage yard is located east of the site.

The general topography of the site slopes moderately southeast. Crystal Creek lies approximately one-fourth (1/4) mile east of the site. A site vicinity map is presented as Figure 2.

1.5 UST System Information

The WSDOE site identification number is 001849. The UST system consisted of one (1) 550 gallon underground regular gasoline storage tank (Tank #1) that historically contained regular leaded gasoline. The tank was installed to replace a previously removed UST that had leaked at this location. Although the UST is known to be installed prior to 1983, the year that the UST was installed is unknown. The tank was positioned southwest of the building as shown by Figure 3. The UST was utilized for refueling city vehicles and equipment. Approximately thirty (30) feet of piping led from the tank to a dispenser located adjacent to the southwest corner of the building. The vent line led from the UST to the southwest corner of the City Hall building.

1.6 Soils Description

The uppermost two and one-half (2.5) feet of soil at the site consists of brown silty, clayey sand that appears to consist of imported fill material due to the presence of included debris. This soil unit is classified as "SM" according to the *Unified Soil Classification System*. Below the sand, and extending to the floor of the excavation, which lies at a depth of eleven and one-half (11.5) feet Below Ground Surface (BGS), the soil consists of inorganic sandy, silty clay with small coal inclusions. The silt is classified as "ML" according to the *Unified Soil Classification System*. Soils encountered within the excavation are described by the Soil Excavation Profile (Appendix A).

1.7 Hydrogeology

No hydrogeologic investigation was conducted during the investigation. Groundwater was not encountered during excavation activities at depths up to eleven and one-half (11.5) feet BGS. Depth to groundwater at the site was not determined but appears to be at a depth greater than eleven and one-half (11.5) feet BGS at the time of this investigation.

2.0 Field Activities

NPE and the City of Roslyn provided tank decommissioning and removal services on August 14, 1996. Rodney Heit, a site assessor registered with the International Fire Code Institute (I.F.C.I. #947832236), provided closure site assessment services during and after removal of the tank.

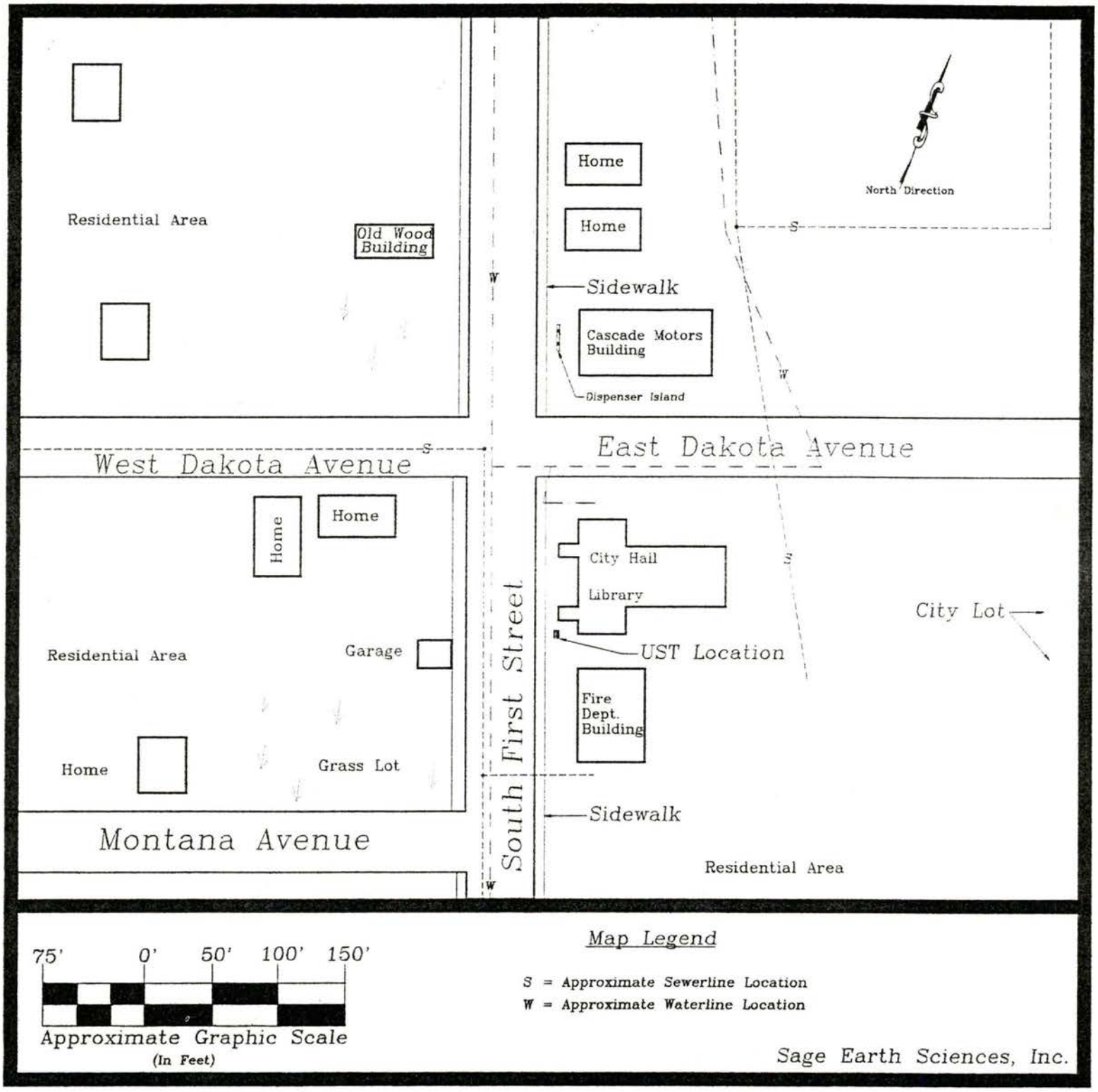


Figure 2. Site Vicinity Map

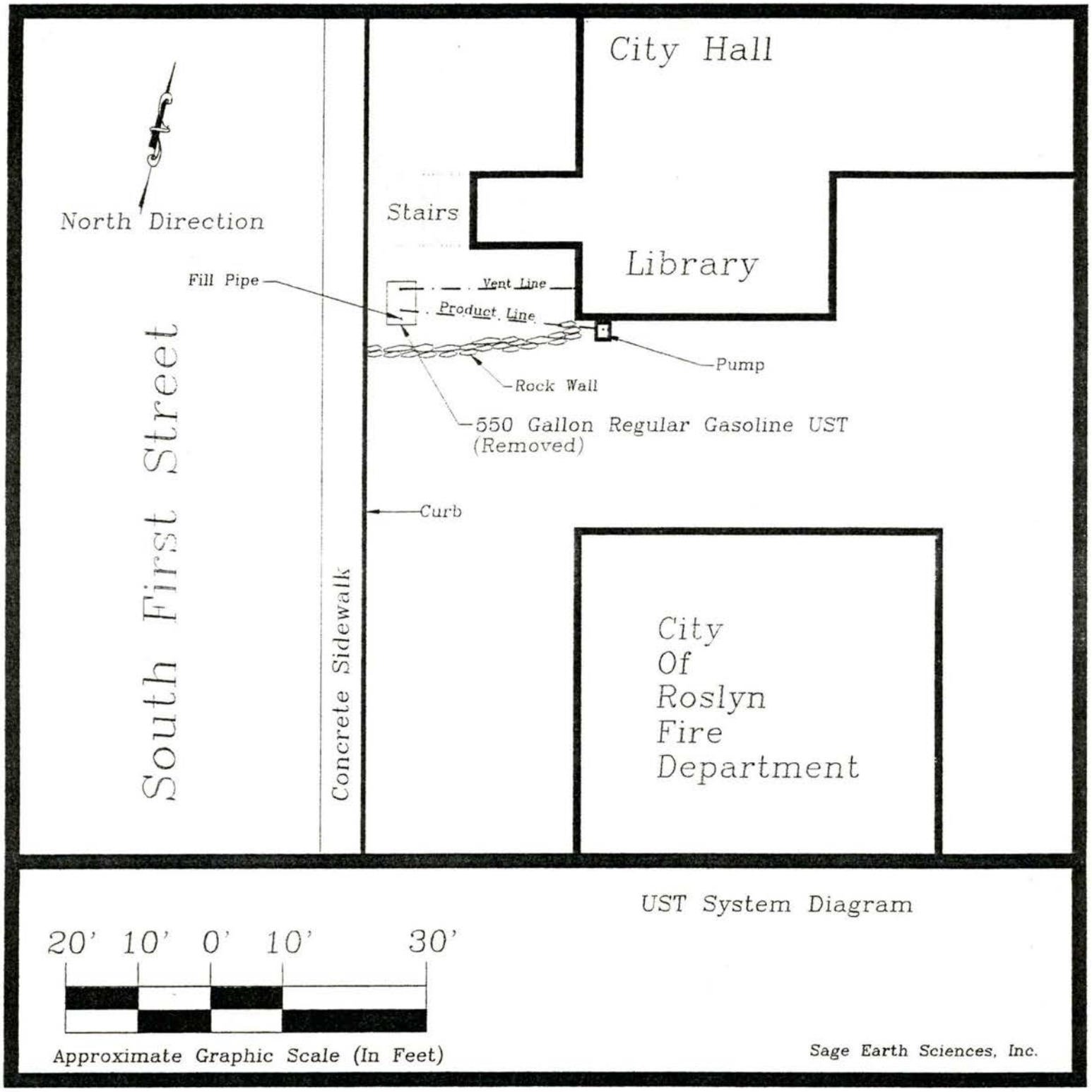


Figure 3. Site Sketch Showing Original Position of the UST System

Soil sampling methodologies are described in Appendix B. Field screening was accomplished using a Flame Ionization Detector (FID) and Thin Layer Chromatography (TLC). The field screening methodology is described in Appendix C. Sample descriptions are presented as Appendix D.

2.1 UST Excavation

Petroleum odors were observed in site soils during the UST removal process. The soil excavated during the UST removal process was transported to the City Yard, located east of City Hall. Approximately two (2) cubic yards of apparently impacted soil was initially placed upon a plastic liner for temporary storage at the site.

A visual inspection of the tank found it to be in good condition and no holes were observed. After the tank was removed, Sage collected five (5) soil samples (NWP-0996-S1 through S5) from within the tank excavation. These sampling locations are shown by Figure 4.

Field screening of these samples indicated the presence of organic vapors in a soil sample (NWP-0996-S5) collected from the floor of the UST excavation. Field screening of the remaining UST excavation samples (NWP-0996-S1 through NWP-0996-S4) found no detectable organic vapors.

Based upon field screening results the City of Roslyn excavated approximately six (6) cubic yards from the floor of the UST excavation and placed it upon the plastic liner for temporary storage at the site. When field screening of these samples indicated the absence of petroleum hydrocarbons in the soil, Sage collected seven (7) additional soil samples (NWP-0996-S11 through NWP-0996-S17) from within the final remedial excavation and submitted them to FBI for independent laboratory analysis. These sampling locations are shown by Figure 4. The FBI analytical methods are identified in Appendix E. The following sidewall samples were composited at the FBI laboratory:

- NWP-0996-S1 & S2,
- NWP-0996-S3 & S4,
- NWP-0996-S14 & S15 and
- NWP-0996-S16 & S17.

Hydrocarbon Identification (HCID) analysis of the composite samples found no detectable petroleum hydrocarbons. HCID analysis of the remaining soil samples (NWP-0996-S11 through NWP-0996-S13) collected from within the final remedial excavation found no detectable petroleum hydrocarbons and total lead at concentrations ranging from 3 parts per million (ppm) up to 6 ppm.

The FBI analytical data reports are attached as Appendix F. Comparison of the analytical results (Appendix F) with the Cleanup Levels (Appendix G), indicates that no additional remedial action is required within the final UST excavation.

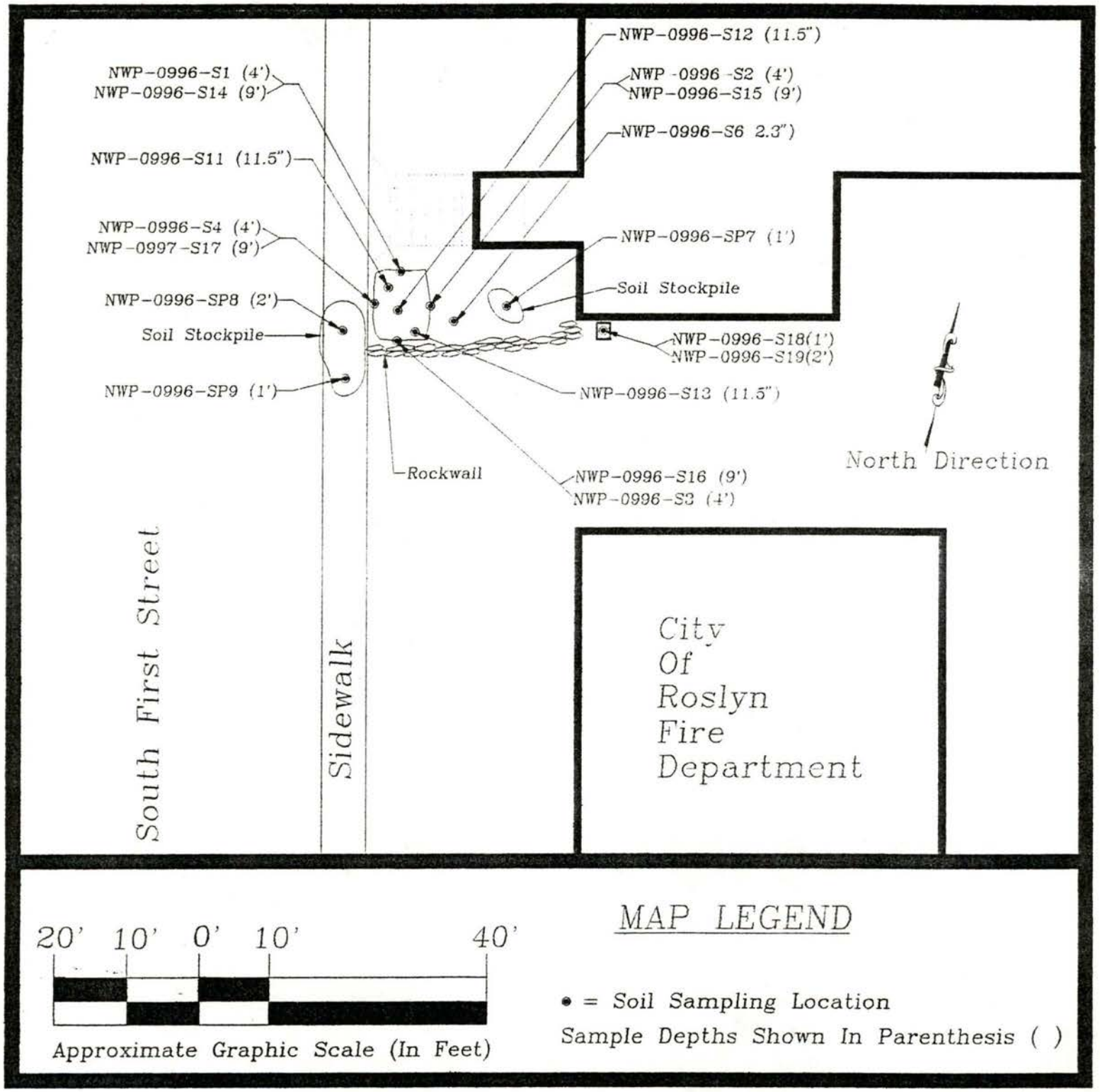


Figure 4. Final Sampling Locations

2.2 Fuel Line and Dispenser

NPE capped the fuel line and left it in-place on August 14, 1996. Sage collected one (1) soil sample (NWP-0996-S6) from beneath the underground fuel line at the location shown by Figure 4. HCID analysis of the fuel line sample found no detectable petroleum hydrocarbons. The FBI analytical data reports are attached as Appendix F. Comparison of the analytical results (Appendix F) with the Cleanup Levels (Appendix G) indicates that no additional remedial action is required at this sampling location.

On August 24, 1996 Sage collected one (1) sample (NWP-0996-S18) of soil exposed immediately beneath the terminal end of the fuel line, within an opening in a small concrete pad upon which the fuel dispenser was positioned. This sampling location is shown by Figure 4. FBI analysis of this sample found diesel and motor oil range petroleum hydrocarbons at a concentration of 660 ppm. Additional analysis of this sample found total lead at a concentration of 830 ppm.

The City of Roslyn removed the small concrete pad and Sage collected an additional soil sample (NWP-0996-S19) at a depth of two (2) feet BGS at the location shown by Figure 4. HCID analysis of this sample found no detectable petroleum hydrocarbons. Additional analysis of this sample found total lead at a concentration of 6 ppm.

Comparison of the analytical results (Appendix F) with the Cleanup Levels (Appendix G), indicates that remedial action is required in the upper one (1) foot of soil beneath the original position of the fuel dispenser to reduce diesel, heavy oil and total lead concentrations to acceptable levels. However, the comparison indicates that no remedial action is required in soil at a depth of two (2) feet BGS. Based upon field observations, field screening and independent laboratory analysis, Sage estimates that the quantity of impacted soil at the fuel dispenser location is less than one-half (1/2) cubic yard.

2.3 Impacted Soil Stockpile

Sage collected three (3) samples (NWP-0996-SP7 through NWP-0996-SP9) from the stockpile of apparently impacted soil. Soil sampling locations are shown by Figure 4. FBI analysis of the soil stockpile samples found:

- gasoline range petroleum hydrocarbons at concentrations ranging from 1 ppm up to 1,400 ppm,
- benzene at concentrations ranging from 0.06 ppm up to 0.6 ppm,
- toluene at concentrations ranging from 0.16 ppm up to 4.5 ppm,
- ethylbenzene at concentrations ranging from 0.02 ppm up to 5.9 ppm,
- xylenes at concentrations ranging from 0.15 ppm up to 33 ppm and
- total lead at concentrations ranging from 38 ppm up to 54 ppm.

The analytical data reports are attached as Appendix F. Comparison of the analytical results (Appendix F) with the WSDOE "End Use Criteria for Petroleum Contaminated Soils" (Appendix H) found that the soil stockpile is designated as a "Class 4 Soil". According to the Guidance for Remediation of Releases from Underground Storage Tanks, July 1991; 91-30, "Untreated or treated soils with residual petroleum contamination greater than "Class 3" should be treated (or re-treated), landfilled in a permitted, municipal landfill, or permitted as a new PCS landfill. The goal of any treatment should be to meet the Cleanup Standards".

Sage completed a copy of the WSDOE Site Check/Site Assessment Checklist and it is included as Appendix I.

3.0 Recommendations

Based upon the data and findings reported herein, Sage recommends no further remedial action within the final remedial excavation. Sage recommends capping the small quantity (approximately one-half cubic yard) of impacted soil remaining beneath the fuel dispenser location with asphalt pavement.

The City of Roslyn has indicated that they wish to "landfarm" petroleum impacted soil generated at the site at the City Yard. If the landfarming method is chosen, approval must be obtained from the Kittitas County Health Department and the local Clean Air Authority prior to initiating treatment activities. If this method of treatment is selected, Sage recommends meeting the following criteria:

- The depth to groundwater at the treatment site should be greater than ten (10) feet.
- The soil should be spread to a maximum thickness of six (6) inches.
- Construct an impermeable barrier (dike) around the treatment area to prevent surface water runoff from contacting PCS.
- Restrict public access to the PCS storage site by implementing sturdy fencing. The must be installed around the perimeter of the treatment area.
- Signage must be installed to keep the general public out of the treatment area. The name of a contact person should also be displayed on signage in case of emergency.
- The soil should be tilled on a bi-monthly basis to provide adequate oxygen for micro-organisms to metabolize the hydrocarbons.
- Cover the PCS during periods of precipitation with a plastic liner.
- A minimum of three (3) soil samples should be collect after six (6) months of active treatment to ensure adequate treatment progress and/or to determine if treatment activities are complete.

4.0 Limitations

In performance of this project, Sage Earth Sciences has conducted its activities in accordance with current regulatory guidelines. The conclusions and recommendations are based upon our field observations, field screening and laboratory analyses. Since the investigation is limited to the closure site assessment of one (1) UST and limited contaminated soil removal project, this document does not imply that the property is free of other environmental constraints.

Appendix A

SOIL EXCAVAT N PROFILE

SAGE
Earth Sciences, Inc.
602 Cherryhill Lane
P.O. Box 1644
Zillah, WA 98953
Phone (509) 829-6400

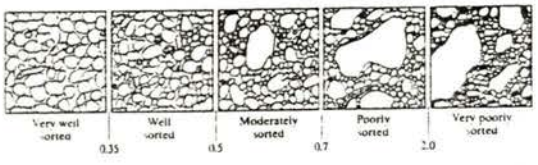
Field Crew RODNEY HEIT

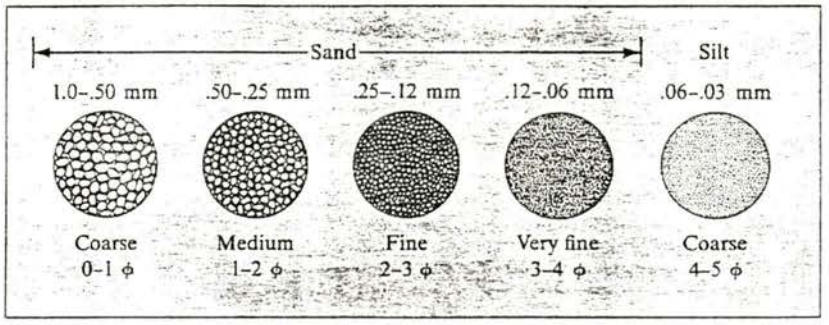
Project Name CITY OF ROSLYN Project # NWP-0996

Address FIRST STREET AND DAKOTA AVENUE Date 8-14-96

Location SW 1/4 SE 1/4 Sec. 17 T. 20 N. R. 15 E., W.M. Elevation ~2210 Datum MSL

Pit Dimensions 7' X 10' X 11.5" Finish Depth 11.5" Pit Orientation NORTH-SOUTH





Additional Detrital Rock Classifications on Reverse

Sample #	Matrix	Groundwater	Depth (11.5")	Graphic Log	Unified Soil Classification	Description of Lithologies
		NOT ENCOUNTERED	1		SM	GRASS AND TURF TO THREE INCHES 3" BGS. TOP SOIL LIGHT BROWN TO MEDIUM BROWN SILTY, CLAYEY SAND. INDICITIVE OF IMPORTED FILL MATERIAL FROM TOP OF GROUND TO APPROX. TWO FEET SIX INCHES (2'6") BG.S.
			2			
			3		ML	MEDIUM GRAY, OLIVE, BROWN CLAYEY INORGANIC SILTS. SANDY SILTY CLAYS. WITH WHOLE COAL PARTICLES INCLUDED WITHIN.
			4			
			5			
			6			
			7			
			8			
			9			
			10			
			11			EXCAVATION TERMINATED AT EIEVEN FEET FIVE INCHES BGS. (11.5").
			12			

Rodney L Heit 8-14-96

SAGE Representative Date

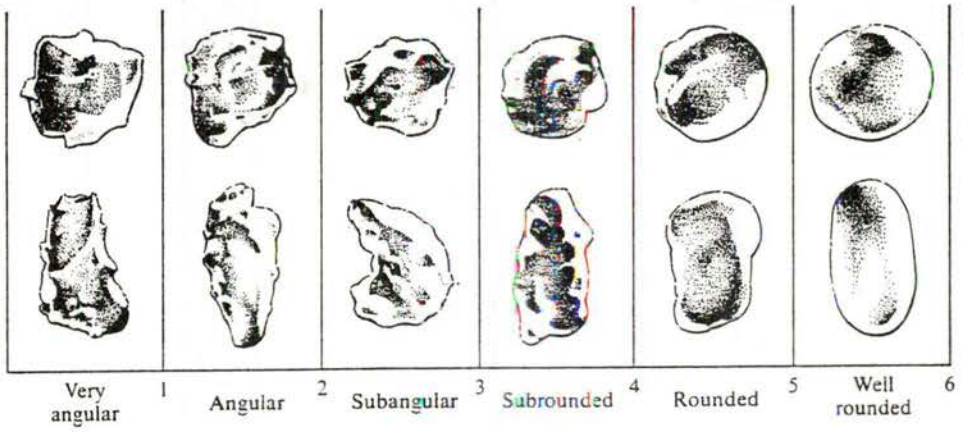


Figure 13–4
Terminology for degree of rounding of detrital grains using a hand lens. The numbers assigned to each roundness class permit calculation of mean roundness and standard deviation. [After M. C. Powers, 1953, *Jour. Sed. Petrology, 23,* Fig. 1.]

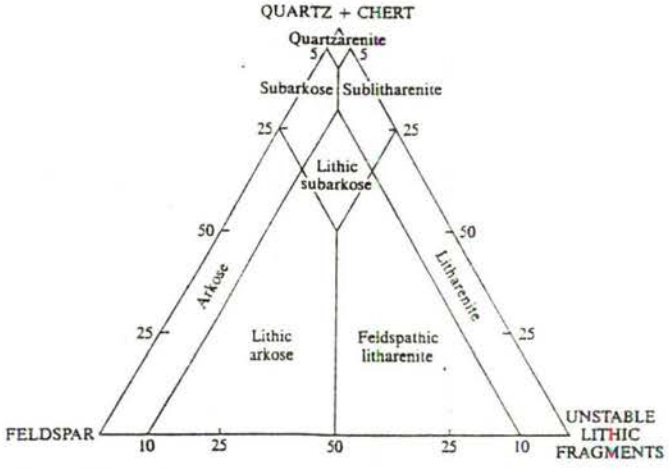
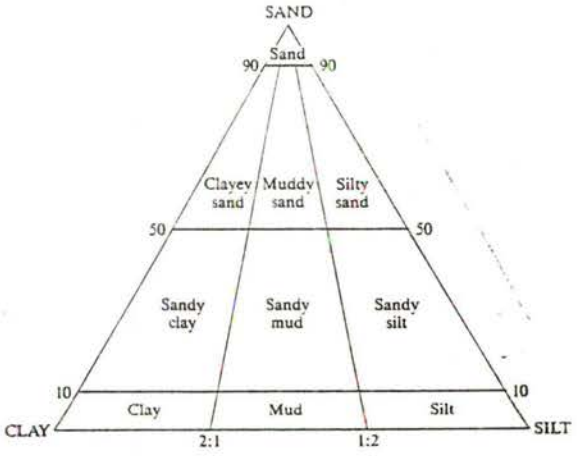


Figure 13–37
One of the many mineralogical classifications of sandstones in common use. [From E. F. McBride, 1963, *Jour. Sed. Petrology, 33,* Fig. 1.]

The Udden–Wentworth Grain Size Scale for Clastic Sediments[a]

	Name	Millimeters	Micrometers	ϕ
GRAVEL		4,096		−12
	Boulder	256		−8
	Cobble	64		−6
	Pebble	4		−2
	Granule	2		−1
SAND	Very coarse sand	1		0
	Coarse sand	0.5	500	1
	Medium sand	0.25	250	2
	Fine sand	0.125	125	3
	Very fine sand	0.062	62	4
MUD	Coarse silt	0.031	31	5
	Medium silt	0.016	16	6
	Fine silt	0.008	8	7
	Very fine silt	0.004	4	8
	Clay	↓	↓	↓

[a]As devised by J. A. Udden (1898) and C. K. Wentworth (1924). The ϕ scale (Krumbein, 1934) was devised to facilitate statistical manipulation of grain-size data and is commonly used. $\phi = -\log_2$ mm.



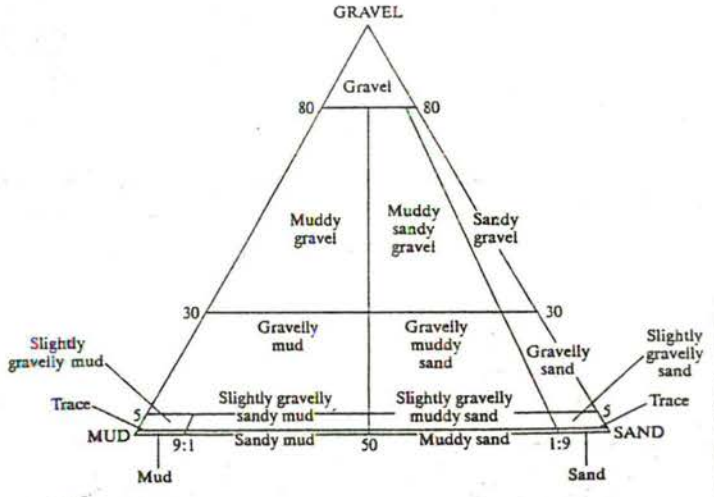


Figure 13–3
Triangular classification of grain sizes in detrital rocks. If no gravel is present, triangle A is used; if gravel is present, triangle B. Note the emphasis given to even a trace amount of gravel. [From R. L. Folk, 1954, *Jour. Geology, 62,* Fig. 1.]

Appendix B

Soil Sampling Methodology

Soil sampling locations were chosen at locations considered representative of soil conditions. To collect representative soil samples, Sage Earth Sciences uses the methodology outlined below.

1. Select a new sample jar whose volume is adequate for the appropriate analysis.

2. Remove a minimum of six (6) inches of soil to minimize the loss of volatile compounds.

3. Immediately transfer to soil to the sample container, using the container itself to collect the sample. Using new nitrile gloves, pack the soil tightly into the container to prevent the loss of volatile compounds. Ensure that the container is filled completely to exclude any airspace in the sample.

4. Label the jar with a unique identification number, the analytical procedure to be used, the time and date of sample collection and the person who collected the sample.

5. Enter the sample on the Chain-of-Custody form and the Daily Field Sampling Log.

6. Place the sample in wet ice to cool the samples to approximately four (4) degrees Celsius.

7. Place the samples in a shipping cooler packed with absorbent material and blue ice for shipment.

8. Secure the Chain-of-Custody form to the underside of the cooler lid in a sealable plastic bag with tape.

9. Upon completion of sampling activities, secure the lid of the cooler with strapping tape and affix custody seals across the lid/cooler interface. Place appropriate shipping waybills atop the cooler.

10. Ship the samples to the laboratory via commercial courier.

Appendix C

Field Screening with the Flame Ionization Detector

For semi-quantitative analysis of organic vapors, such as those found in gasoline, Sage uses a Heath Porta-FID Organic Vapor Detector. The headspace method is used to detect organic vapors emitted by soils contaminated by volatile petroleum products. The field screening methodology, using the headspace method, is described as follows:

1. Place a discrete soil sample into a clean one quart mason jar, filling the jar approximately 1/3 full.

2. Immediately place aluminum foil over the top of the jar and secure it with a ring to prevent loss of volatile compounds.

3. Place the sample in boiling water for ten (10) minutes. This causes the volatile compounds to be released from soil particles and collect in the space above the soil.

4. Remove the sample from the boiling water and insert the instrument probe through the aluminum foil.

5. Record the instrument response on the Daily Field Sampling Log.

Field Screening with Thin Layer Chromatography

For qualitative and semi-quantitative analysis of semi-volatile and non-volatile compounds such as those found in medium and high boiling (e.g. diesel, motor oil, grease) compounds, Sage uses Thin Layer Chromatography (TLC). The analysis allows comparison of samples collected in the field, to standards of known composition and concentration. The analysis methodology is described below.

1. Place approximately 5 grams of a discrete soil sample into a clean 40 ml. vial.

2. Add 5 ml. of nanograde hexane (a solvent) to the sample.

3. Place the lid on the vial and agitate the sample to mix the solvent with the soil.

4. Using a graduated syringe, remove 20 µl of the extract and elute the extract onto the TLC slide.

5. Decontaminate the syringe and elute appropriate Quality Assurance samples and standards onto the plate, decontaminating the syringe after each use.

6. Inspect the elute, under shortwave & longwave ultraviolet light, for compounds. If no compounds are observed, the compounds are either not present or are at undetectable concentrations.

7. If compounds are observed, place the base of the slide into hexane to initiate the chromatographic process. Stop the process before the solvent front encounters the top edge of the slide.

8. Inspect the slide under shortwave and longwave ultraviolet light and compare the sample to known standards (diesel, motor oil, grease).

9. Record the type of product observed and approximate concentration on the Field Sampling Log.

Appendix D

Daily Field Sampling Log

Project # NWP-0996
Date 8-14-96
Sampler RODNEY HEIT
Sheet 1 of 1

Ti :	Sample #	Location	Matrix	Staining	Odors	Depth	TOV	TLC	
8:25	NWP-0996-S1	NORTH ENDWALL UST EXCAVATION	SOIL	NONE	NONE	4'	N.D.	NA	
8	NWP-0996-S2	EAST SIDEWALL UST EXCAVATION	SOIL	NONE	NONE	4'	N.D.		
8:33	NWP-0996-S3	SOUTH ENDWALL UST EXCAVATION	SOIL	NONE	NONE	4'	N.D.		
8	NWP-0996-S4	WEST SIDEWALL UST EXCAVATION	SOIL	NONE	NONE	4'	>5,000 PPM		HOT ~
8:37	NWP-0996-S5	FLOOR UST EXCAVATION NEAR FILL	SOIL	NONE	SLIGHT GASOLINE	6.5"	N.D.		
8	NWP-0996-S6	BELOW PRODUCT LINE EAST	SOIL	NONE	NONE	2.3"	NA		
9	NWP-0996-SP7	STOCK PILE EAST & NORTH	SOIL	NONE	GAS	1'	NA		
9:45	NWP-0996-SP8	STOCKPILE NORTH & WEST	SOIL	NONE	GAS	2'	NA		
9	NWP-0996-SP9	STOCKPILE SOUTH OF WEST	SOIL	NONE	GAS	1'	990 PPM		HOT ~
10:00	NWP-0996-S10	FLOOR OF EXCAVATION Center	SOIL	NONE	SLIGHT GAS	10'	39PPM		
10	NWP-0996-S11	FLOOR NORTH WEST	SOIL	NONE	NONE	11.5"	N.D.		
10:30	NWP-0996-S12	FLOOR Central	SOIL	NONE	NONE	11.5"	4 PPM		
11	NWP-0996-S13	FLOOR SOUTH EAST	SOIL	NONE	NONE	11.5"	N.D.		
10:50	NWP-0996-S14	REM. EXC. NORTH SIDEWALL	SOIL	NONE	NONE	9'	N.D.		
11	NWP-0996-S15	REM. EXC. EAST SIDEWALL	SOIL	NONE	NONE	9'	N.D		
10:58	NWP-0996-S16	REM. EXC. SOUTH SIDEWALL	SOIL	NONE	NONE	9'	N.D.		
11:08	NWP-0996-S17	REM. EXC. WEST SIDEWALL	SOIL	NONE	NONE	9'	N.D.	▼	

SIZE OF TANK 47" x 73"

Ambient Vapors 4 Units /6
TLC Standards NA ~

✓S = Soil Sample
GW = Groundwater Sample
SW = Surface Water Sample
D = Duplicate Sample (10 % of samples/matrix)
TB = Travel Blank

Daily Field Sampling Log

Project # NWP-0996
Date 8-24-96
Sampler Rodney HEIT / DAVID GREEN
Sheet 1 of 1

Sample #	Location	Matrix	Staining	Odors	Depth	TOV	TLC
NWP-0996-S18	Below Pump Location	Soil	None	None	1'	NA	NA

Ambient Vapors 0 Units
TLC Standards 0 NA

✓ S = Soil Sample
GW = Groundwater Sample
SW = Surface Water Sample
D = Duplicate Sample (10 % of samples/matrix)
TB = Travel Blank

Daily Field Sampling Log

Project # NWP-0996
Date 9-23-96
Sampler Dave Green
Sheet ____ of ____

Sample #	Location	Matrix	Staining	Odors	Depth	TOV	TLC
NWP-0996-S19	Beneath Dispenser	Soil	None	None	2'		ND

Ambient Vapors ____ Units
TLC Standards _____
_____
_____

S = Soil Sample
GW = Groundwater Sample
SW = Surface Water Sample
D = Duplicate Sample (10 % of samples/matrix)
TB = Travel Blank

Appendix E

Analytical Methods

For independent laboratory analysis, Sage submitted representative soil and groundwater samples to:

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282

The analytical methods chosen for selected soil samples consist of:

- HCID (Hydrocarbon Identification),
- EPA Method 8015 (Gasoline Range Petroleum Hydrocarbons),
- EPA Method 8020 (Benzene, Toluene, Ethylbenzene and Xylenes),
- EPA Method 8015 Modified (Diesel and Motor Oil Range Petroleum Hydrocarbons),
- Method 6010/3050 (Total Lead).

Appendix F

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

August 22, 1996

Rodney Heit, Project Manager
Sage Earth Sciences, Inc.
601 Glenwood Drive
Zillah, WA 98953

Dear Mr. Heit:

Enclosed are the results from the testing of material submitted on August 15, 1996 from your NWP-0996, City of Roslyn project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson
Chemist

keh
Enclosures
SES0822R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 22, 1996
Date Received: August 15, 1996
Project: NWP-0996, City of Roslyn
Date Samples Extracted: August 15, 1996
Date Extracts Analyzed: August 15, 1996

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY WTPH-HCID

Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
Composite: NWP-0996-S1 & NWP-0996-S2	ND	ND	ND	86
Composite: NWP-0996-S3 & NWP-0996-S4	ND	ND	ND	85
NWP-0996-S6	ND	ND	ND	87
NWP-0996-S11	ND	ND	ND	87
NWP-0996-S12	ND	ND	ND	90
NWP-0996-S13	ND	ND	ND	86
Composite: NWP-0996-S14 & NWP-0996-S15	ND	ND	ND	87
Composite: NWP-0996-S16 & NWP-0996-S17	ND	ND	ND	98
Method Blank	ND	ND	ND	83

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 100 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 22, 1996
Date Received: August 15, 1996
Project: NWP-0996, City of Roslyn
Date Samples Extracted: August 16, 1996
Date Extracts Analyzed: August 16, 1996

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL LEAD USING METHOD 6010

Samples Processed Using Method 3050

Results Reported as µg/g (ppm)

Sample ID	Lead
NWP-0996-SP7	47
NWP-0996-SP8	38
NWP-0996-SP9	54
NWP-0996-S11	6
NWP-0996-S12	5
NWP-0996-S13	3
Method Blank	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 22, 1996
Date Received: August 15, 1996
Project: NWP-0996, City of Roslyn

QUALITY ASSURANCE RESULTS FOR TOTAL LEAD BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 71570 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Lead	ug/g (ppm)	2	2	0	0-20

Laboratory Code: 71570 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	ug/g (ppm)	100	2	93	89	50-150	4

Laboratory Code: 71597 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Lead	ug/g (ppm)	13	13	0	0-20

Laboratory Code: 71597 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	ug/g (ppm)	100	13	96	91	50-150	5

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	ug/g (ppm)	100	101	101	80-120	0

FRIEDMAN & BRUYA, INC

ENVIRONMENTAL CHEMISTS

Date of Report: August 22, 1996
Date Received: August 15, 1996
Project: NWP-0996, City of Roslyn
Date Samples Extracted: August 19, 1996
Date Extracts Analyzed: August 19, 1996

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND GASOLINE USING EPA METHODS 8020 AND 8015

Results Reported as µg/g (ppm)

Sample #	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline	Surrogate % Recovery
NWP-0996-SP7	0.06	0.16	0.02	0.15	1	92
NWP-0996-SP8	0.6	3.2	5.9	30	710	96
NWP-0996-SP9	0.6	4.5	5.9	33	1,400	97
Method Blank	<0.02	<0.02	<0.02	<0.02	<1	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 22, 1996
Date Received: August 15, 1996
Project: NWP-0996, City of Roslyn

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND GASOLINE USING EPA METHODS 8020 AND 8015

Laboratory Code: 71582 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Benzene	µg/g (ppm)	0.06	0.06	0	0-20
Toluene	µg/g (ppm)	0.16	0.16	0	0-20
Ethylbenzene	µg/g (ppm)	0.02	0.03	40a	0-20
Xylenes	µg/g (ppm)	0.15	0.16	6	0-20
Gasoline	µg/g (ppm)	1	1	0	0-20

Laboratory Code: 71582 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Benzene	µg/g (ppm)	1	0.06	78	80	55-104	3
Toluene	µg/g (ppm)	1	0.16	80	84	50-114	5
Ethylbenzene	µg/g (ppm)	1	0.02	84	86	52-113	2
Xylenes	µg/g (ppm)	3	0.15	83	86	53-114	4

Laboratory Code: Spike Blank

Analyte	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Benzene	µg/g (ppm)	1	91	90	67-108	1
Toluene	µg/g (ppm)	1	93	94	66-110	1
Ethylbenzene	µg/g (ppm)	1	93	95	66-110	2
Xylenes	µg/g (ppm)	3	92	94	64-108	2
Gasoline	µg/g (ppm)	10	85	94	66-115	10

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

KNJ
8-15-96 10:50AM

SAGE
Earth Sciences, Inc
P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6100
Fax (509) 829-6443

CHAIN OF CUSTODY FORM

Project Name CITY OF ROSLYN
Project Number NWP-0996
Sampler Rodney Keit
Date 8-14-96 Time 7:00AM - 11:30AM
Destination FRIEDMAN & BRUYA INC

Sample Number	Matrix	Number of Containers	Container Size	HCID	WTPH-G	BTEX	TOTAL LEAD	Please Archive	Analyses Requested	Lab #
NWP-0996-S1	Soil	1	4oz	X					Please Composite S1 & S2	714
NWP-0996-S2	Soil	1	4oz	X						714
NWP-0996-S3	Soil	1	4oz	X					Please composite S3 & S4	715 78
NWP-0996-S4	Soil	1	4oz	X						715 79
NWP-0996-S5	Soil	1	4oz					X		715 80
NWP-0996-S6	Soil	1	4oz	X						715 81
NWP-0996-SP7	Soil	1	4oz		X	X	X			715 82
NWP-0996-SP8	Soil	1	4oz		X	X	X			715 83
NWP-0996-SP9	Soil	1	4oz		X	X	X			715 84
NWP-0996-S10	Soil	1	4oz					X		715 85
NWP-0996-S11	Soil	1	4oz	X			X			715 86
NWP-0996-S12	Soil	1	4oz	X			X			7
NWP-0996-S13	Soil	1	4oz	X			X			715 88
NWP-0996-S14	Soil	1	4oz	X					Please Composite S14 & S15	715 89
NWP-0996-S15	Soil	1	4oz	X						715 90

Relinquished by: Rodney L Keit	Received By: Melanie Kist
Date: 8-14-96	Date: 8/15/96
Firm: Sage Earth Sciences Inc.	Firm: Friedman + Bruya, Inc.
Time: 3:00pm	Time: 1030
Relinquished by:	Received By:
Date:	Date:
Firm:	Firm:
Time:	Time:

Container Condition: Good Violated Cool (4°C): Yes No Custody Seals: Intact Violated

KNJ 8.15.96 10:50 AM

SAGE
Earth Sciences, Inc.

P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

CHAIN-OF-CUSTODY FORM

Project Name CITY of Roslyn
Project Number NWP-0996
Sampler Rodney Heit
Date 8-14-96 Time 7:00Am - 11:30Am
Destination FRIEDMAN & BRUYA Inc.

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested													
				HCID	WTPH-G	BTEX	TOTAL LEAD										
NWP-0996-S16	Soil	1	4oz	X				>	Please Composite S16 & S17								H!
NWP-0996-S17	Soil	1	4oz	X													H.
									Thank you.								

Relinquished by: Rodney L Heit Date: 8-14-96 Firm: Sage Earth Sciences Inc Time: 3:00pm	Received By: Date: Firm: Time:
Relinquished by: Date: Firm: Time:	Received By: Date: Firm: Time:

Container Condition: Good Violated Cool (4°C): Yes No Custody Seals: Intact Violated

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

September 10, 1996

Rodney Heit, Project Manager
Sage Earth Sciences, Inc.
601 Glenwood Drive
Zillah, WA 98953

Dear Mr. Heit:

Enclosed is the amended report from the testing of material submitted on August 27, 1996 from your NWP-0996 City of Roslyn project. The report has been amended to correct a sample ID.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Bradley T. Benson
Chemist

keh
Enclosures
SES0903R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

AMENDED 09/10/96

Date of Report: September 3, 1996
Date Received: August 27, 1996
Project: NWP-0996 City of Roslyn
Date Samples Extracted: August 28, 1996
Date Extracts Analyzed: August 28, 1996

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR GASOLINE, DIESEL AND HEAVY OIL BY WTPH-HCID

Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
NWP-0996-S18	ND	D	D	90
Method Blank	ND	ND	ND	105

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 100 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

AMENDED 09/10/96

Date of Report: September 3, 1996
Date Received: August 27, 1996
Project: NWP-0996 City of Roslyn
Date Samples Extracted: August 29, 1996
Date Extracts Analyzed: August 30, 1996

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL BY GC/FID (Modified 8015)
Extended to Include Motor Oil Range Compounds
Results Reported as µg/g (ppm)

Sample ID	Diesel Extended	Surrogate (% Recovery)
NWP-0996-S18	660	85
Method Blank	<50	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: September 3, 1996
Date Received: August 27, 1996
Project: NWP-0996 City of Roslyn

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED BY GC/FID (Modified 8015)

Laboratory Code: 72027 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel Extended	ug/g (ppm)	<50	<50	nm	0-20

Laboratory Code: 72027 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Diesel Extended	ug/g (ppm)	500	<50	88	86	56-137	2

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Diesel Extended	ug/g (ppm)	500	89	83	60-137	7

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Sage Earth Sciences, Inc
P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

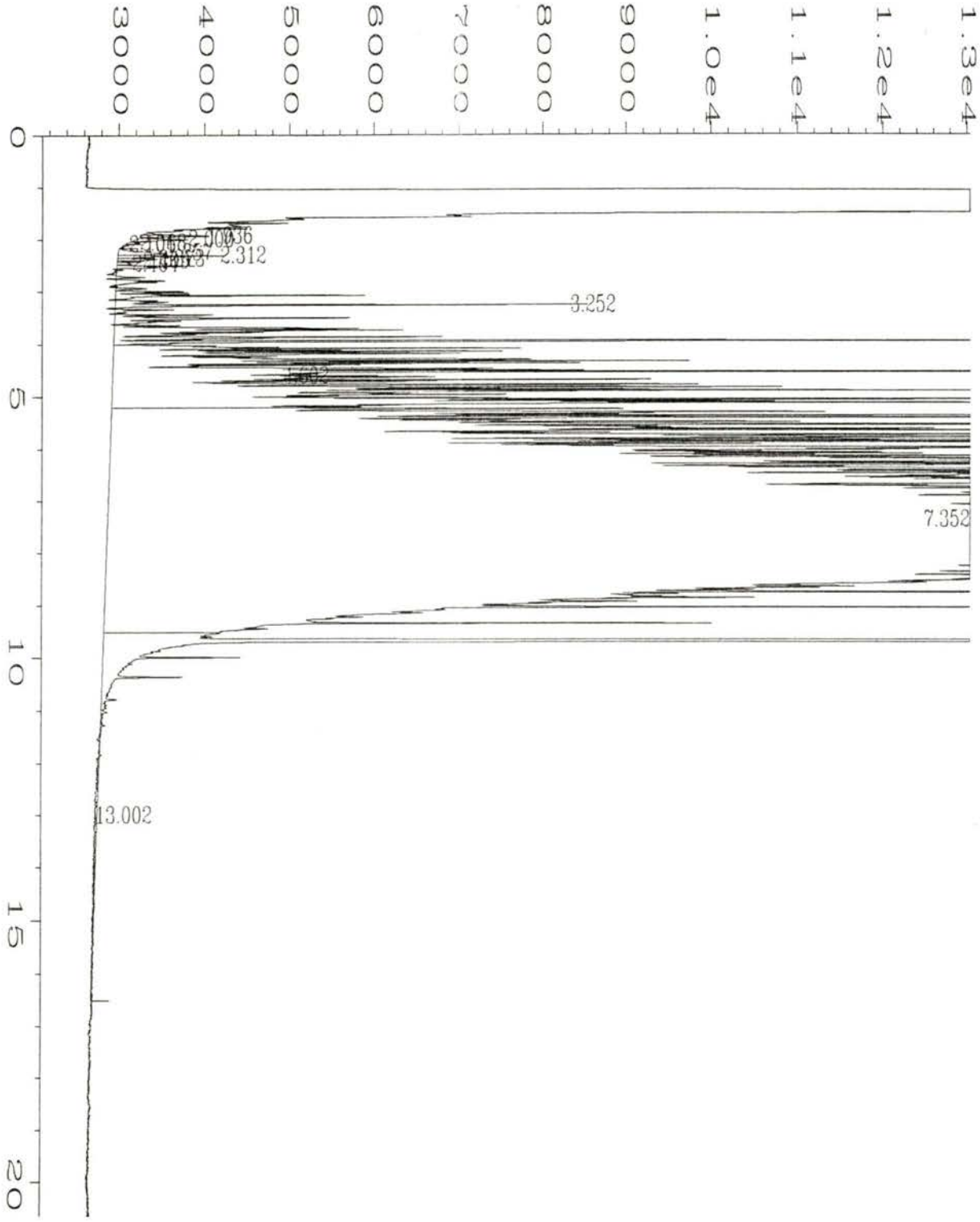
CHAIN OF CUSTODY FORM

Project Name OLD U&I PLANT
Project Number BWE-0196
Sampler Rodney Hart
Date 8-26-96 Time 10:00AM-3:00pm
Destination FRIEDMAN & BRUYA

Sample Number	Matrix	Number of Containers	Container Size	PCB AROCHLOR 1260		Analyses Requested 7201							BTEX	TPH
BWE-0196-S1	SOIL	1	4oz	X		7	2	0	1	4				
BWE-0196-S2	SOIL	1	4oz	X		7	2	0	1	5			8-27-96	
BWE-0196-S3	SOIL	1	4oz	X		7	2	0	1	6			14:20pm	
BWE-0196-S4	SOIL	1	4oz	X		7	2	0	1	7				

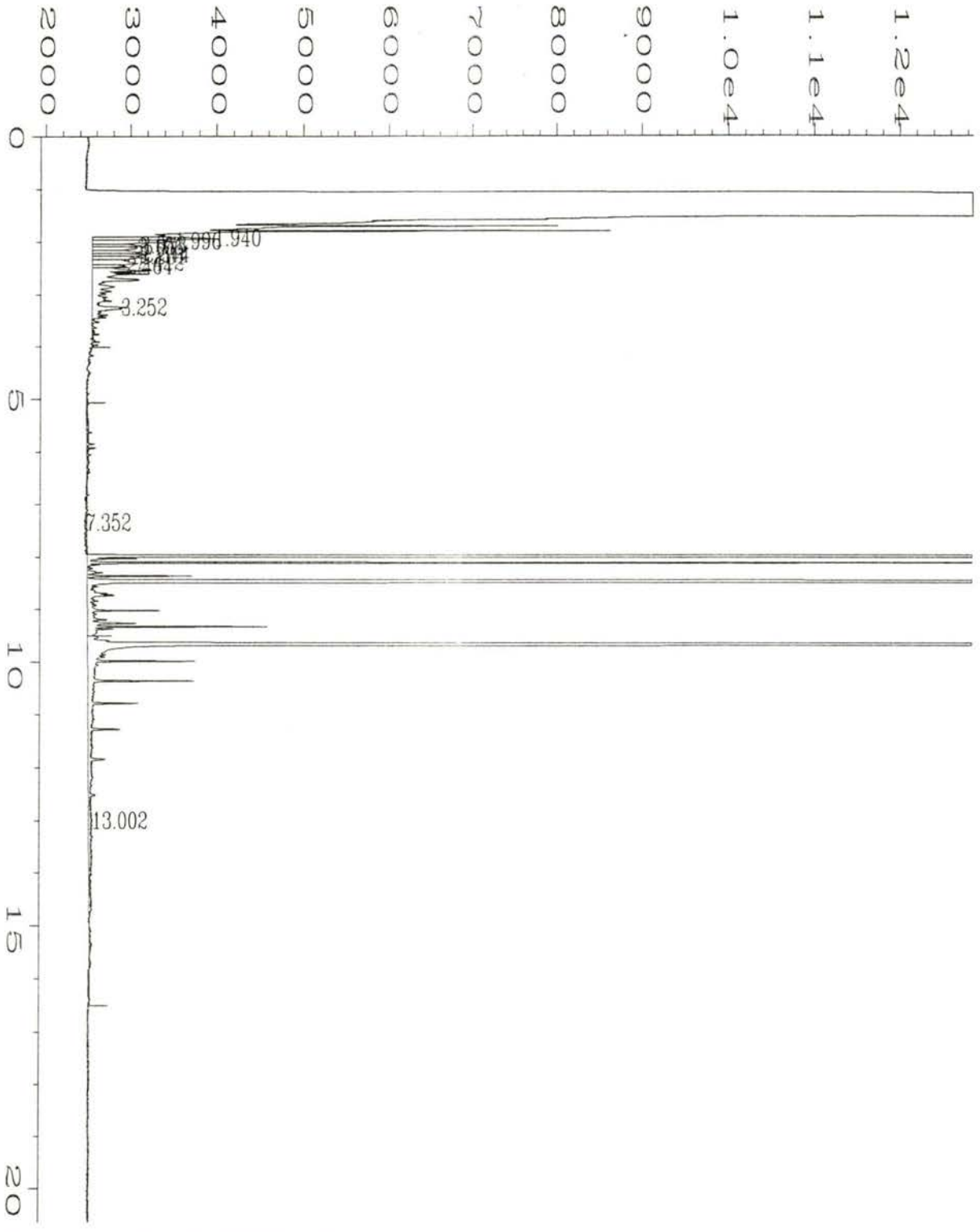
Relinquished by: Rodney Hart	Date: 8-26-96	Received By: John P. Wright	Date: 8-27-96
Firm: Sage Earth Sciences Inc.	Time: 3:00pm	Firm: Friedman + Bruya Inc	Time: 2:04pm
Relinquished by:	Date:	Received By:	Date:
Firm:	Time:	Firm:	Time:

Container Condition: Good Violated Cool (4°C): Yes No Custody Seals: Intact Violated



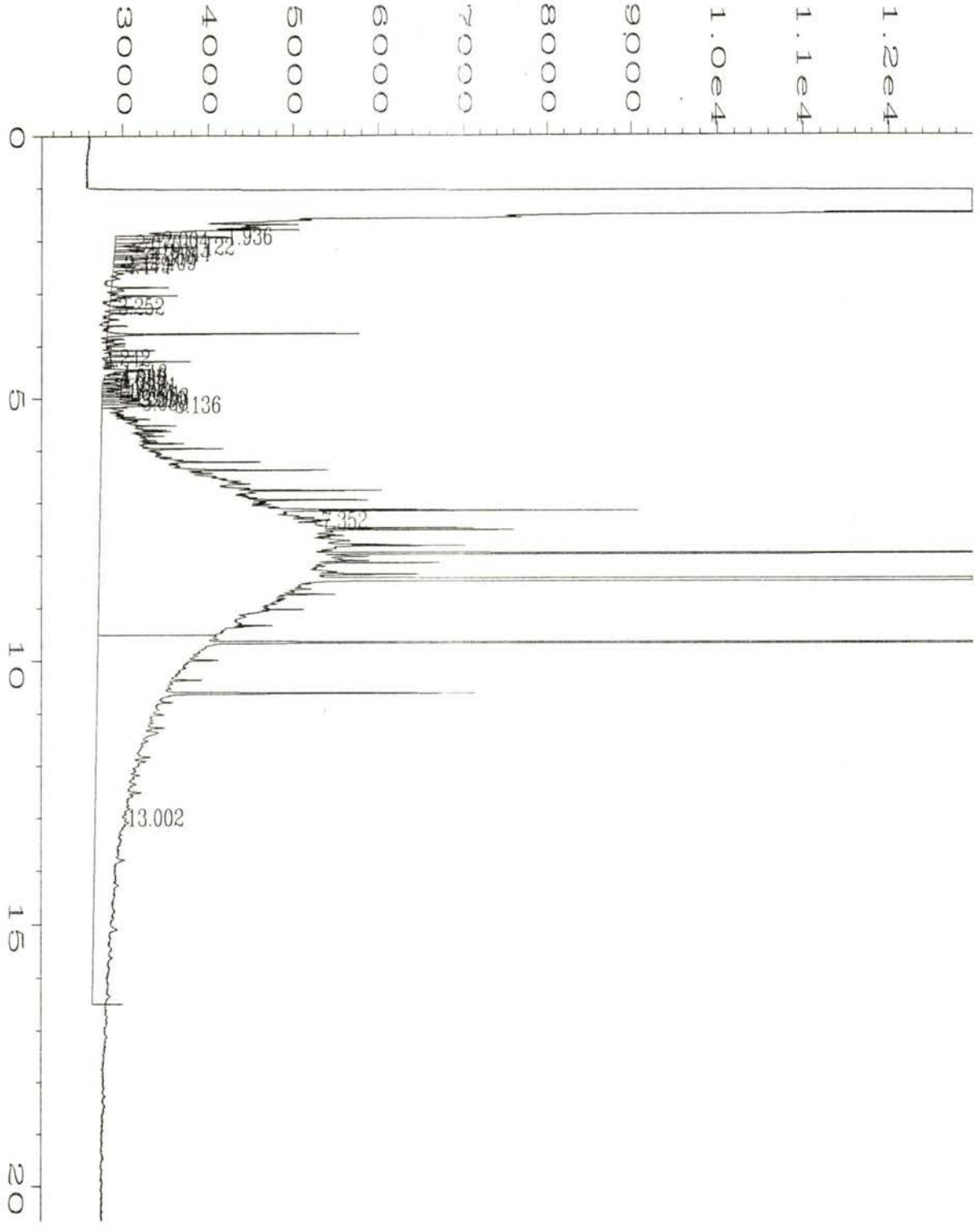
Data File Name : F:\HPCHEM\6\DATA\08-29-96\035F0901.D
Operator : SB
Instrument : GC #6
Sample Name : 500 PPM WADF
Run Time Bar Code:
Acquired on : 30 Aug 96 02:40 AM
Report Created on: 30 Aug 96 11:56 AM

Page Number : 1
Vial Number : 35
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : F:\HPCHEM\6\DATA\08-29-96\016F0701.D
Operator : SB
Instrument : GC #6
Sample Name : MK0829 MB06-525
Run Time Bar Code:
Acquired on : 29 Aug 96 08:47 PM
Report Created on: 30 Aug 96 11:38 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : F:\HPCHEM\6\DATA\08-29-96\027F0701.D
Operator : SB
Instrument : GC #6
Sample Name : 72013 1:10
Run Time Bar Code:
Acquired on : 30 Aug 96 01:46 AM
Report Created on: 30 Aug 96 11:38 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH

Earth Sciences, Inc.
P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

CHAIN OF CUSTODY FORM

Project Name CITY OF ROSLYN
Project Number NWP-0996
Sampler DAVID GREEN
Date 8-24-96 Time 2:30 —
Destination FRIEDMAN & BRUYA

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested: HCID	WTPH-G	BTEX	7	2	0	1	3	BTB	CO
NWP-0996-S10	SOIL	1	4oz	X			7	2	0	1	3	8-27-96 14:20	

Relinquished by: David Green — Date: 8-26-96
Firm: Sage Earth Sciences, Inc. — Time: 9:00 AM

Received By: John P Wright — Date: 8-27-96
Firm: Friedman + Bruya Inc — Time: 2:04pm

Relinquished by: — Date:
Firm: — Time:

Received By: — Date:
Firm: — Time:

Container Condition: Good Violated

Cool (4°C): Yes No

Custody Seals: Intact Violated

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

September 6, 1996

Rodney Heit, Project Manager
Sage Earth Sciences, Inc.
601 Glenwood Drive
Zillah, WA 98953

Dear Mr. Heit:

Enclosed are the results from the additional testing of material submitted on August 27, 1996 from your NWP-0996 City of Roslyn project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Bradley T. Benson
Chemist

keh
Enclosures
SES0906R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: September 6, 1996
Date Received: August 27, 1996
Project: NWP-0996 City of Roslyn
Date Samples Extracted: September 3, 1996
Date Extracts Analyzed: September 4, 1996

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR LEAD USING METHOD 6010
Results Reported as mg/kg (ppm)

Sample ID	Lead
NWP-0996-S18	830
Method Blank	<2

FRIEDMAN & BRUYA, INC

ENVIRONMENTAL CHEMISTS

Date of Report: September 6, 1996
Date Received: August 27, 1996
Project: NWP-0996 City of Roslyn

QUALITY ASSURANCE RESULTS FOR LEAD BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 72013 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Lead	mg/kg (ppm)	830	830	0	0-20

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	mg/kg (ppm)	100	104	107	80-120	3

Sage Earth Sciences, Inc
P.O. Box 624
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

Project Name CITY OF ROSLYN
Project Number NWP 0996
Sampler DAVID GREEN
Date 8-24-96 Time 2:30 —
Destination FRIEDMAN & BRUYA

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested: HCID	WTPH-G	BTEX	VOA	7	2	0	1	3	BTEX	TCLP
NWP-0996-S16	SOIL	1	4oz	X									8-27-96 14:20	

Relinquished by: David G — Date: 8-26-96
Firm: Sage Earth Sciences, Inc — Time: 9:00 AM

Received By: John P Wright — Date: 8-27-96
Firm: Friedman + Bruya Inc — Time: 2:04pm

Relinquished by — Date

Received By — Date — Time

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

September 27, 1996

Dave Green, Project Manager
Sage Earth Sciences, Inc.
601 Glenwood Drive
Zillah, WA 98953

Dear Mr. Green:

Enclosed are the results from the testing of material submitted on September 25, 1996 from your NWP-0996, City of Roslyn project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Beth Albertson for Brad Benson

Bradley T. Benson
Chemist

keh
Enclosures
SES0927R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: September 27, 1996
Date Received: September 25, 1996
Project: NWP-0996, City of Roslyn
Date Samples Extracted: September 25, 1996
Date Extracts Analyzed: September 25, 1996

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR GASOLINE, DIESEL AND HEAVY OIL BY WTPH-HCID

Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
NWP-0996-S19	ND	ND	ND	98
Method Blank	ND	ND	ND	100

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 100 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: September 27, 1996
Date Received: September 25, 1996
Project: NWP-0996, City of Roslyn
Date Samples Extracted: September 25, 1996
Date Extracts Analyzed: September 26, 1996

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR LEAD USING METHOD 6010

Samples Processed Using Method 3050

Results Reported as µg/g (ppm)

Sample ID	Lead
NWP-0996-S19	6
Method Blank	<2

FRIEDMAN & BRUYA, INC

ENVIRONMENTAL CHEMISTS

Date of Report: September 27, 1996
Date Received: September 25, 1996
Project: NWP-0996, City of Roslyn

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 73014 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Lead	ug/g (ppm)	23	22	4	0-20

Laboratory Code: 73014 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	ug/g (ppm)	100	23	88	89	50-150	1

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Lead	ug/g (ppm)	100	108	109	80-120	1

Earth Sciences, Inc

[illegible]
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

Project Name [illegible]
Project Number NWP-0996
Sampler Dave Grecn
Date 9-23-96 Time 1:00 PM
Destination FBI

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested: X HCID	Total Lead						73005			BTB 9-25-96	BO 9:20am
NWP-0996-519	Soil	1	4oz	X	X										

Relinquished by: Dave Dr — Date: 9-23-96
Firm: Sage Earth Sciences, Inc. — Time: 1:00 PM

Received By: John P. Wright — Date: 9-25-96
Firm: F+B Tne — Time: 9:12am

Relinquished by: — Date:
Firm: — Time:

Received By: — Date:
Firm: — Time:

Container Condition Good Violated — Cool (1°C) Yes No — Custody Seals: Intact Violated

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

September 25, 1996

Rodney Heit, Project Manager
Sage
PO Box 1644
601 Glenwood Drive
Zillah, WA 98953

RE: Sample disposal for samples received on July 19, 1996 from Project Dever & Sons Cardlock.

Dear Mr. Heit:

Enclosed is the original Chain of Custody form that accompanied samples sent to our laboratory for analysis. These forms are to accompany the samples at all times. Since these samples have now been disposed of or consumed during their analysis, we are returning them to you. We appreciate the opportunity to perform our testing service and hope you will consider the use of our laboratory in the future.

Sincerely,

FRIEDMAN & BRUYA, INC.

John P. Wright
Technical Expediter

keh
F&BI Sample Numbers 70902 to 70909

SAGE Earth Sciences, Inc.

P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

CHAIN-OF-CUSTODY FORM

Project Name LEADONS SERVICE
Project Number LC-0996-2
Sampler Rodney Heit
Date 7-17-96 Time 4:00 pm-
Destination FRIEDMAN & BRUYA, INC

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested: WTPHG	WTPHD	418.1	8240	HCID	PLEASE ARCHIVE								
LC-0996-2-S90	SOIL	1	4oz						X	7	09	11			BTB	VPH
LC-0996-2-S91	SOIL	1	4oz						X	7	09	12			7-19-96	
LC-0996-2-S92	SOIL	1	4oz						X	7	09	13			4:25pm	
LC-0996-2-S93	SOIL	1	4oz						X	7	09	14				
LC-0996-2-S94	SOIL	1	4oz						X	7	09	15				
LC-0996-2-S95	SOIL	1	4oz						X	7	09	16				
LC-0996-2-S96	SOIL	1	4oz						X	7	09	17				
LC-0996-2-S97	SOIL	1	4oz						X	7	09	18				

Samples received 7-19-96 JPW

Relinquished by: Rodney Heit	Date: 7/17/96	Received By: John P. Whyte	Date: 7-19-96
Firm: Sage Earth Sciences Inc	Time: 5:00 pm	Firm: Friedman & Bruya Inc	Time: 4:00 pm
Relinquished by:	Date:	Received By:	Date:
Firm:	Time:	Firm:	Time:

Container Condition: Good Violated Cool (4°C): Yes No Custody Seals: Intact Violated

Appendix G

Method A Cleanup Levels - Soil [a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20.0 mg/kg [b]
Benzene	71-43-2	0.5 mg/kg [c]
Cadmium	7440-43-9	2.0 mg/kg [d]
Chromium	7440-47-3	100.0 mg/kg [e]
DDT	50-29-3	1.0 mg/kg [f]
Ethylbenzene	100-41-4	20.0 mg/kg [g]
Ethylene dibromide	106-93-4	0.001 mg/kg [h]
Lead	7439-92-1	250.0 mg/kg [i]
Lindane	58-89-9	1.0 mg/kg [j]
Methylene chloride	75-09-2	0.5 mg/kg [k]
Mercury (inorganic)	7439-97-6	1.0 mg/kg [l]
PAHs (carcinogenic)		1.0 mg/kg [m]
PCB Mixtures		1.0 mg/kg [n]
Tetrachloroethylene	127-18-4	0.5 mg/kg [o]
Toluene	108-88-3	40.0 mg/kg [p]
TPH (gasoline)		100.0 mg/kg [q]
TPH (diesel)		200.0 mg/kg [r]
TPH (other)		200.0 mg/kg [s]
1,1,1 Trichloroethane	71-55-6	20.0 mg/kg [t]
Trichloroethylene	79-01-5	0.5 mg/kg [u]
Xylenes	1330-20-7	20.0 mg/kg [v]

Appendix H

TABLE V. END USE CRITERIA FOR PETROLEUM-CONTAMINATED SOILS

Analyte	Analytical Method	Soil Class (ppm) 1	2	3	4
Heavy fuel hydrocarbons (C24-C30)	WTPH-418.1 mod.	<60	60-200	200-2000	>2000
Diesel (C12-C24)	WTPH-D	<25	25-200	200-600	>600
Gasoline (C6-C12)	WTPH-G	<5	5-100	100-250	>250
Benzene	8020	<0.005	0.005-0.5	≤0.5	>0.5
Ethylbenzene	8020	<0.005	0.005-20	≤20	>20
Toluene	8020	<0.005	0.005-40	≤40	>40
Xylenes (total)	8020	<0.005	0.005-20	≤20	>20

Treatment is recommended for all Class 3 and 4 soils.

NOTES:

Class 1 Soil Uses:

Any use which will not cause threat to human health or the environment.

Class 2 Soil Uses:

Backfill at the cleanup site
Fill in commercial or industrial areas
Cover or fill in permitted landfills
Road subgrade or other road construction fill
Fill in or near: wetlands, surface water, ground water, drinking water wells or utility trenches is NOT recommended. Use as residential topsoil is also NOT recommended.

Class 3 Soil Uses:

Treatment
Disposal at the original site (no solid waste diposal permit needed)
Road construction (no solid waste diposal permit needed)
Use or disposal in permitted, municipal landfills
Permitted as a new PCS landfill
(An evaluation should be made to ensure that disposal will not cause a threat to human health or the environment, e.g. use near water bodies)

Class 4 Soil Uses:

Treatment
Disposal in a permitted, municipal landfill
Permitted as a new PCS landfill

Appendix I

UNDERGROUND STORAGE TANK
Site Check / Site Assessment Checklist

FOR OFFICE USE ONLY
Site #: 1849
Owner #: 1274

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 ASSESSEMENT: 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): # 001849

Site/Business Name: CITY OF ROSLYN OLD CITY HALL LIBRARY BUILDING

Site Address: 13 SOUTH 1ST STREET (Street) Telephone: (509) 649 3105

ROSLYN (City) WA. (State) 98941-0451 (Zip Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
TANK # 1	550 gallon	Regular Leaded Gasoline

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 initialed 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.	RSH	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	RSH	
3. A summary of UST system data is provided. (see Section 3.1.)	RSH	
4. The soils characteristics at the UST site are described. (see Section 5.2)	RSH	
5. Is there any apparent groundwater in the tank excavation?		RSH
6. A brief description of the surrounding land use is provided. (see Section 3.1)	RSH	
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.	RSH	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	RSH	
- groundwater samples distinguished from soil samples (if applicable)	RSH	
- samples collected from stockpiled excavated soil	RSH	
- tank and piping locations and limits of excavation pit	RSH	
- adjacent structures and streets	RSH	
- approximate locations of any on-site and nearby utilities	RSH	
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)	RSH	
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.	RSH	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	RSH	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	RSH	

SITE ASSESSOR INFORMATION

RODNEY L HEIT — Person registered with Ecology

SAGE EARTH SCIENCES, INC. — Firm Affiliated with

Business Address: 601 Glenwood DRIVE — Street

P.O. BOX 1644

Telephone: (509) 829-6400

ZILLAH — City

WA. — State

98953 — Zip Code

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 173.360 WAC.

8/14/96 — Date

Rodney L Heit — Signature of Person Registered with Ecology

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK TEMPORARY/PERMANENT CLOSURE and SITE ASSESSMENT NOTICE

See back of form for instructions
Please ☑ the appropriate box(es)
Please type or print information

For Office Use Only
Owner #
Site #

☐ Temporary Tank Closure ☒ Permanent Tank Closure ☐ Change-In-Service ☒ Site Assessment/ Site Check

SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tanks are registered):
Site/Business Name: Roslyn old City Hall Building
Site Address: 201 S 1ST STREET (Street) Telephone: (509) 649-3105
Roslyn (City) NA. (State) 98941 (ZIP-Code)

TANK INFORMATION:

Tank ID	Closure Date	Tank Capacity	Substance Stored
1	8-14-96	550 gallon	Unleaded Gas

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.

UST SYSTEM OWNER/OPERATOR:

UST Owner/Operator: Robert J. Fischer / City of Roslyn
Owners Signature: Telephone: (509) 649-3105
Address: 201 So. 1st. (Street) Box 451 (P.O. Box)
Roslyn (City) WA (State) 98941 (ZIP-Code)

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Service Provider: NORTHWEST PETROLEUM EQUIPMENT License Number:
Licensed Supervisor: JAMES INGBERG Decommissioning License Number: IEC1ST 82846
Supervisors Signature:
Address: 265 Johnson Rd (Street) (P.O. Box)
SELAH (City) WA (State) 98942 (ZIP-Code)
Telephone: (509) 697-9002

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Name of Registered Site Assessor: Rodney J. Heit
Telephone: (509) 829-6400
Address: 601 Glenwood DRIVE (Street) 1644 (P.O. Box)
ZILLAH (City) WA (State) 98953 (ZIP-Code)

ECY 020-34

PLEASE READ CAREFUL

INSTRUCTIONS

Return this completed form to:

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

This form is to be completed by the Tank Owner and submitted to Ecology within 30 days of tank closure.

Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-in-Service require a site assessment be performed.

SITE INFORMATION:

Fill in the site information. Be sure to include the Ecology site ID number. This number may be found on the invoice or permit. Include a contact telephone number so any problems may be resolved quickly.

TANK INFORMATION:

List the tanks that were closed. Please use tank ID numbers and indicate the date of permanent closure. Be sure to attach your Underground Storage Tank Permits for any tanks that are now closed.

UST SYSTEM OWNER/OPERATOR:

Please fill in the owner's/operator's name, address, and telephone number. **Be sure to sign this form.**

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

List the closure company. Companies that provide UST services **MUST** be licensed by Ecology. Ask to see their supervisor's license. Make sure the licensed supervisor signs this form.

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Fill in the site assessor information for permanent closure or change-in-service. Mark the appropriate box showing whether contamination from the underground tank(s) was or is present at the site. A site check/site assessment **MUST** be conducted by a site assessor who is registered with Ecology.

If contamination at the site is found or suspected, the appropriate Ecology Regional Office must be notified within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days. If contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

Tanks exempt from notification requirements are:

Farm or residential tanks, 1100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.

Tanks used for storing heating oil that is used on the premises where the tank is located.

Tanks with a capacity of 110 gallons or less.

Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.

Emergency overflow tanks, catch basins, or sumps.

For more information call toll free in the state of Washington 1-800-826-7716 or (206) 438-7137

City of Roslyn
P. O. Box 451
Roslyn, Washington 98941 100 East Pennsylvania 509-649-3105

DEPT. OF ECOLOGY
Received
AUG 0 1 2001
CENTRAL REGION OFFICE

July 30, 2001
Dept. Of Ecology
Norm Heppner
Toxic Cleanup Program
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902

Dear Mr. Heppner:

In 1996 the City of Roslyn pulled its underground storage tank and placed the dirt 6 inches deep on black plastic behind our shop. In 2000, we received grant monies to replace sidewalks, and the contractor for that job used the area where the dirt was for his staging area. When he cleaned up his spoil pile, the dirt was scooped up and hauled away unbeknownst to us.

Sincerely,

Robert J. Fischer
Street Superintendent

RJF:mf

Department Decision Recommendation

RE: LUST # 1849

Site: City of Roslyn City: Roslyn County: Kittitas

In keeping with the requirement of WAC 173-340-310 (4) I recommend that this site receive a No Further Action determination.

Supporting Criteria:

In 1996 the City of Roslyn had one 550-gallon that historically contained leaded gasoline removed. This tank was installed to replace another which was known to have leaked. During excavation activities petroleum odors were detected from the soils. Approximately six cubic yards of apparently impacted soil was transported to the City Yard and placed on a plastic liner for temporary storage. A visual inspection of the tank found it to be in good condition.

Sage Earth Sciences, Inc. collected four sidewall samples and one floor soil sample from the excavation; the sidewall samples were composited into two samples. The results indicated the presence of petroleum hydrocarbons in the floor sample and additional excavating was done; a second round of sampling was conducted. Seven additional samples were collected at depths of 9 and 11 feet below ground surface and submitted to a laboratory for chemical analysis. Hydrocarbon Identification analysis found no detectable petroleum hydrocarbons and total lead concentrations did not exceed 6 parts per million (ppm).

Sage also collected one soil sample from beneath the terminal end of the underground fuel line within an opening in a small concrete pad upon which the fuel dispenser was positioned. Laboratory analysis detected 660 ppm diesel-range hydrocarbons and 830 ppm total lead. After removing the concrete slab, another sample was collected from nearly the same location at two feet below ground surface. Petroleum hydrocarbons were not detected and lead was found at 6 ppm.

Soil samples collected from the stockpiled soil confirmed the presence of gasoline-range petroleum hydrocarbons, benzene, and xylenes at levels which exceed the MTCA cleanup standards.

In the Site Assessment report Sage recommends capping the small quantity of contaminated soil beneath the fuel line and landfarming the "Class 3" stockpiled soils, as this is what the City of Roslyn preferred. Sage stated that additional samples would need to be collected from the landfarmed soil to confirm that the remedial efforts were successful. However, because the soil contained lead, this was not an appropriate

measure. Since 1998 periodic communications between Ecology and the City of Roslyn have taken place in an effort to determine the final outcome of the contaminated soil. According to the City of Roslyn's Street Superintendent the stockpiled soil was removed from the site (destination unknown) and the sidewalk (near the excavation) was replaced. The location where the contaminated soil was found beneath the tank and fuel line has not been paved, however residual contamination in those areas was minimal.

Ecology's database for drinking water wells in the area indicate one well within ½ mile of the site; it has a static water level of 200 feet. Additionally, during excavation activities, groundwater was not encountered at any time indicating groundwater exceeded a depth of 11 1/2 feet. Contaminated soil was not detected at this depth.

Based on the information in the report, including a previous Ecology file review, I recommend this site receive a No Further Action determination. The contamination present at the site does not pose a threat to human health or the environment.

This Department Decision Recommendation should be reviewed and re-evaluated based on any new information about these sites.

Investigator(s) *Krystal Rodriguez* Krystal Rodriguez
Print and sign name(s)

DATE: 1/24/2006

Section Supervisor

DATE: 1-25-06

Cleanup Site Details

Cleanup Site ID: 10745

Cleanup Site ID: 10745 **Facility/Site ID:** 84595337 **UST ID:** 97725 Site Page | Site Documents | View Map

Cleanup Site Name: PLUM CREEK TIMBER YAKIMA MANAGEMENT UNIT OFFICE Glossary

Alternate Names: PLUM CREEK TIMBER YAKIMA MANAGEMENT UNIT OFFICE, PLUM CREEK TIMBER YAKIMA MGMT UNIT OFFIC

LOCATION

Address: PENNSYLVANIA AVE **City:** ROSLYN **Zip Code:** 98941 **County:** Kittitas

Latitude: 47.22427 **Longitude:** -120.99034 **WRIA:** 39 **Legislative District:** 13 **Congressional District:** 8 **TRS:** 20N 15E 17

DETAIL

Status: No Further Action **NFA Received?** Yes **Is PSI site?** No

Statute: MTCA **NFA Date:** 1/25/2006 **Current VCP?** No **Past VCP?** No

Site Rank: N/A **NFA Reason:** Historic LUST **Brownfield?** No

Site Manager: Central Region **Responsible Unit:** Central **Active Institutional Control?** No

CLEANUP UNITS

Cleanup Unit Name	Unit Type	Unit Status	Resp Unit	Unit Manager	Current Process
PLUM CREEK TIMBER YAKIMA MANAGEMENT UNIT OFFICE	Upland	No Further Action Required	CE	Central Region	Independent Action

ACTIVE INSTITUTIONAL CONTROLS

Instrument Type	Restriction Media	Restrictions/Requirements	Date	Recording Number	Recording County	Tax Parcel
There are no current Institutional Controls in effect for this site.						

AFFECTED MEDIA & CONTAMINANTS

	MEDIA					
Contaminant	**Soil**	**Groundwater**	**Surface Water**	**Sediment**	**Air**	**Bedrock**
Petroleum-Gasoline	C					

Key:
B - Below Cleanup Level
C - Confirmed Above Cleanup Level
RA - Remediated-Above
S - Suspected
R - Remediated
RB - Remediated-Below

SITE ACTIVITIES

Activity	Status	Start Date	End Date/ Completion Date
LUST - Notification	Completed		7/28/1989
LUST - Report Received	Completed		7/28/1989
LUST - Report Received	Completed		10/18/1989
Site Status Changed to NFA	Completed		1/25/2006

Dave
Reviewed
6/12/90
DG

PE)LEUM SERVICES UNLIM D, INC.
340-C Oregon Way
Longview, Washington 98632
(206) 423-2245

September 31, 1989

Plum Creek Timber
P.O. Box 51
Roslyn, Wa. 98941

Attention: Jim Thompson

Subject: Remidiation report for treatment of contaminated gasoline soils at the Roslyn tank removal site.

On August 9, 1989, Petroleum Services Unlimited Inc. transfered 20 cubic yards of gasoline contaminated soil to an area on Plum Creek Timber Company's property for proper soil areation procedures. The soil was placed on 4 m/l plastic and spread to approximately 1 to 2 feet in depth on a surface area of 30 by 50 feet.

The area was then burmed with plastic to prevent the "run-off" or "leaching" of contamination to the ground, also absorbent pads were placed on the "run-off" area to contain any sheen that might be produced by heavy rain falls. A 10 lb bag of fertilizer mix of nitrogen and phosphorous was applied to soil and tilled in by hand to speed the release of hydrocarbon volitals, helping reduce the total ppm on an accelerated rate.

A representative soil sample was then taken following the procedures of the Department of Ecology U.S.T. program. Testing to show total hydrocarbon extent using E.P.A. 418.1 method. Results of all samples taken are enclosed, and summarized to show that the soil at the Roslyn site is now clean,following the policies and procedures of the Washington State U.S.T. program.

Dave George of the Department of Ecology has been informed on treatment process steps and the current status of the site activity. The soil samples representing the condition of the excavated soils are enclosed, showing the decrease of total petroleum hydrocarbons to achieve a limit below 200 ppm as stated by the D.O.E. U.S.T. program.

Sample #1 taken on July 20th, 1989 represents the most contaminated soil in the amount of 2250 ppm.
(Note; the 20 yards of soil removed resulted from spillage and piping failure. The tank itself did not leak and upon inspection during removal demonstrated no signs of leakage.)

OCT 18 1989

PE[illegible]OLEUM SERVICES UNLIM[illegible]D, INC.
340-C Oregon Way
Longview, Washington 98632
(206) 423-2245

Sample #2 represents the "bottom of the hole sample" after excavation in the amount of 16 total ppm showing that the excavation hole is acceptable to state guidelines.

Sample #3 taken on August 10th, 1989 using the E.P.A. 418.1 test method resulted in a concentration of 1590 ppm.
(Note the reduction of 660 ppm. in 20 days.)

Sample #4 taken on September 15th, 1989 shows the soils now at 400 ppm of total hydrocarbons present.

Sample #5 taken on October 3, 1989 now represents the final sample taken. The total petroleum hydrocarbons are now non-detectable, which is acceptable following the Department of Ecology's guidelines of allowable limits for gasoline contaminated soils.

The soil will now be used as fill material at the clients property areas located on Pennsylvania St. at Roslyn, Wash.

The above stated is certified to the best of my abilities representing this site and the events that took place during remidiation.

Thank-you,

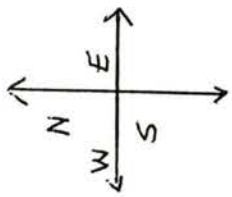
Jeff Wilson

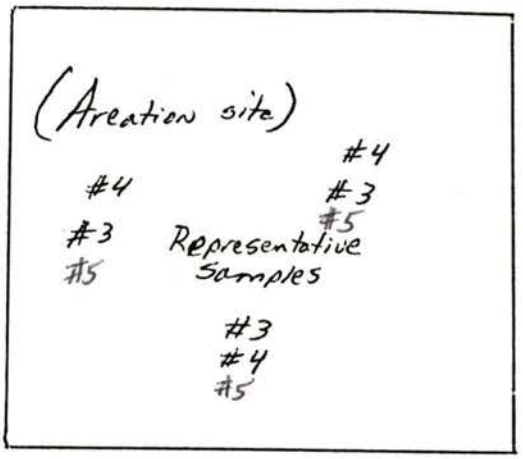
Jeff Wilson
Petroleum Services Unlimited

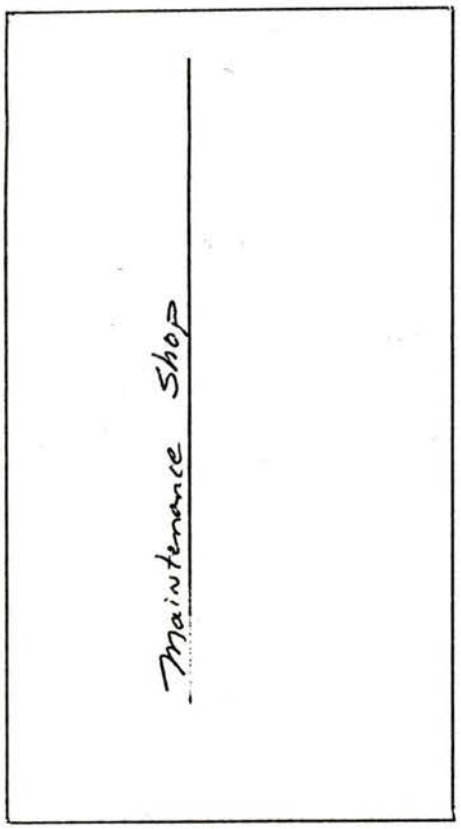
CC: Dave George-Department of Ecology
801 Summit View Suite #1
Yakima, Wa. 98902

Plum Creek Timber Co.
Roslyn, WA.

Sample location and soil areation site shown;







Note; Drawing not to scale; all figures are approximate - Illustrative purpose only.

Tank removal site →

Sample #1

Sample #2

(excavated soil removed)

—Laboratory Services—
•Analytical Chemistry
—Environmental Testing
—Process/Product Analysis
—Industrial Hygiene
•QA/QC & Data Interpretation

Columbia Analytical Services, Inc.
1152 3rd Avenue • Longview, WA 98632

Chain of Custody / Laboratory Analysis Request

DATE 10-3-89 PAGE 1 OF 1

PROJECT Plum Creek Roslyn #
CLIENT INFO. CONTACT Petroleum Services
ADDRESS 340 Oregon way #C
TELEPHONE# 423-2245
SAMPLERS NAME Jeff Wilson PHONE# 423-6316
SAMPLERS SIGNATURE Jeff Wilson

SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE
1. #5 Final	10-3	10:00		
2.				
3.				
4.				
5.				
6.				
7.				
8.				

ANALYSIS REQUESTED	GENERAL CHEMISTRY (Specify)	OTHER (Specify)	NUMBER OF CONTAINERS
BASE/NEU/ACID ORGAN. GC/MS/625/8270			
VOLATILE ORGANICS GC/MS/624/8240			
HALOGENATED VOLATILE ORGANICS 601/8010			
PHENOLICS 604/8040			
POLYNUCLEAR AROMATIC 610/8310			
TOTAL ORGANIC CARBON (TOC) 415/9060			
TOTAL ORGANIC HALIDE (TOX) 9020			
EP TOX/TCLP METALS (Circle One)			
METALS (TOTAL) (See Special Inst.)			
TCLP ORGANICS			
pH, COND ALK			
NO_3/NO_2, Cl SO_4			
Ca, Mg, Na, K			
TPH	X		

Relinquished By	Relinquished By	Relinquished By
Jeff Wilson	Signature	Signature
Jeff Wilson	Printed Name	Printed Name
Printed Name CCS	Firm	Firm
Firm CCS	Date/Time	Date/Time
Date/Time		
Received By Ruth Allison	**Received By**	**Received By**
Signature Ruth Allison	Signature	Signature
Printed Name CAS	Printed Name	Printed Name
Firm 10/4/89 4:00pm	Firm	Firm
Date/Time	Date/Time	Date/Time

PROJECT INFORMATION	SAMPLE RECEIPT
Shipping I.D. No.	Total No. of Containers
VIA	Chain of Custody Seals
Project	Received in good condition
	LAB NO.

SPECIAL INSTRUCTIONS/COMMENTS

SEA-400-05

—Laboratory Services—
- Analytical Chemistry
  - —Environmental Testing
  - —Process/Product Analysis
  - —Industrial Hygiene
- QA/QC & Data Interpretation

Columbia Analytical Services, Inc.
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CAS 04
2088

Chain of Custody / Laboratory Analysis Request

DATE 9-11-89 PAGE 1 OF 1

SUBJECT: Plum Creek Timber # Roslyn
CLIENT INFO. CONTACT: Petroleum Services
ADDRESS: 340 oregon way #C
TELEPHONE#: 423-6316
SAMPLERS NAME: Jeff Wilson PHONE# 423-6316
SAMPLERS SIGNATURE: Jeff Wilson

SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE
1. #4 Final	9-10	8:00		
2.				
3.				
4.				
5.				
6.				
7.				
8.				

ANALYSIS REQUESTED

BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	HALOGENATED VOLATILE ORGANICS 601/8010	PHENOLICS 604/8040	POLYNUCLEAR AROMATIC 610/8310	TOTAL ORGANIC CARBON (TOC) 415/9060	TOTAL ORGANIC HALIDE (TOX) 9020	EP TOX/TCLP METALS (Circle One)	METALS (TOTAL) (See Special Inst.)	TCLP ORGANICS	GENERAL CHEMISTRY (Specify) pH, COND ALK	NO_3/NO_2, Cl SO_4	Ca, Mg, Na, K	TPH	OTHER (Specify)					NUMBER OF CONTAINERS
													X						

Relinquished By	Relinquished By	Relinquished By	PROJECT INFORMATION	SAMPLE RECEIPT
Jeff Wilson				
Signature: Jeff Wilson	Signature	Signature	Shipping I.D. No.	Total No. of Containers
Printed Name: CCS	Printed Name	Printed Name	VIA	Chain of Custody Seals
Firm: CCS	Firm	Firm		Received in good condition
Date/Time	Date/Time	Date/Time	Project	LAB NO.
Received By: Fran Adair	Received By	Received By	SPECIAL INSTRUCTIONS/COMMENTS	
Signature: FRAN ADAIR	Signature	Signature		
Printed Name: CAS	Printed Name	Printed Name		
Firm: 9/11/89 9:00	Firm	Firm		
Date/Time	Date/Time	Date/Time		

SEA-400-05

—Laboratory Services—
- Analytical Chemistry
  - —Environmental Testing
  - —Process/Product Analysis
  - —Industrial Hygiene
- QA/QC & Data Interpretation

Columbia Analytical Services, Inc.
1152 3rd Avenue • Longview, WA 98632

891760

Chain of Custody / Laboratory Analysis Request

DATE 8/9/89 PAGE 1 OF 1

PROJECT Plum Creek - Roslyn
CLIENT INFO. CONTACT Petroleum Services
ADDRESS 340 Oregon Way #C
TELEPHONE# 423-2245
SAMPLERS NAME Jeff Wilson PHONE# 423-6316
SAMPLERS SIGNATURE Jeff Wilson

SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE	BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	HALOGENATED VOLATILE ORGANICS 601/8010	PHENOLICS 604/8040	POLYNUCLEAR AROMATIC 610/8310	TOTAL ORGANIC CARBON (TOC) 415/9060	TOTAL ORGANIC HALIDE (TOX) 9020	EP TOX/TCLP METALS (Circle One)	METALS (TOTAL) (See Special Inst.)	TCLP ORGANICS	pH, COND ALK	NO_3/NO_2, Cl SO_4	Ca, Mg, Na, K	X TPH						NUMBER OF CONTAINERS
1. #3 Gas	8-9	4:00																X						
2.																								
3.																								
4.																								
5.																								
6.																								
7.																								
8.																								

Relinquished By	Relinquished By	Relinquished By	PROJECT INFORMATION	SAMPLE RECEIPT
Jeff Wilson				
Signature Jeff Wilson	Signature	Signature	Shipping I.D. No.	Total No. of Containers
Printed Name PSU	Printed Name	Printed Name	VIA	Chain of Custody Seals
Firm PSU	Firm	Firm		Received in good condition
Date/Time	Date/Time	Date/Time	Project	LAB NO.
Received By	**Received By**	**Received By**	**SPECIAL INSTRUCTIONS/COMMENTS**	
Ruth Allison				
Signature Ruth Allison	Signature	Signature		
Printed Name CAS	Printed Name	Printed Name		
Firm 8/9/89 4:00	Firm	Firm		
Date/Time	Date/Time	Date/Time		

SEA-400-05

•Analytical Chemistry
—Environmental Testing
—Process/Product Analysis
—Industrial Hygiene
•QA/QC & Data Interpretation

Chain of Custody / Laboratory Analysis Request

CAS 17800

Columbia Analytical Services, Inc.
1152 3rd Avenue • Longview, WA 98632

DATE 7-24-89 PAGE ____ OF ____

PROJECT Plum Creek #
CLIENT INFO. CONTACT Petroleum Services
ADDRESS 340 Oregon way #C Long.
TELEPHONE# 206-423-6316
SAMPLERS NAME Jeff Wilson PHONE# 423-6316
SAMPLERS SIGNATURE Jeff Wilson

SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE	BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	HALOGENATED VOLATILE ORGANICS 601/8010	PHENOLICS 604/8040	POLYNUCLEAR AROMATIC 610/8310	TOTAL ORGANIC CARBON (TOC) 415/9060	TOTAL ORGANIC HALIDE (TOX) 9020	EP TOX/TCLP METALS (Circle One)	METALS (TOTAL) (See Special Inst.)	TCLP ORGANICS	pH, COND ALK	NO_3/NO_2, Cl SO_4	Ca, Mg, Na, K	TPH (BTEX)						NUMBER OF CONTAINERS
1. #1 Gas. Soil	7/21	10:00AM																X						
2. #2. Gas Soil	7/21	10:00AM																X		•				
3.																								
4.																								
5.																								
6.																								
7.																								
8.																								

Relinquished By	Relinquished By	Relinquished By	PROJECT INFORMATION	SAMPLE RECEIPT
Signature Jeff Wilson	Signature	Signature	Shipping I.D. No.	Total No. of Containers
Printed Name	Printed Name	Printed Name	VIA	Chain of Custody Seals
Firm Petroleum Serv.	Firm	Firm	Project	Received in good condition
Date/Time	Date/Time	Date/Time		LAB NO.
Received By Fran Adair	**Received By**	**Received By**	**SPECIAL INSTRUCTIONS/COMMENTS**	
Signature Fran Adair	Signature	Signature		
Printed Name CAS	Printed Name	Printed Name		
Firm 7/24/89 10:00	Firm	Firm		
Date/Time	Date/Time	Date/Time		

SEA-400-05

CAS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT: Petroleum Services Unlimited, Inc.
SUBMITTED BY: John Jabusch
PROJECT: Plum Creek Roslyn
SAMPLE DESCRIPTION: Soil

DATE RECEIVED: 10/04/89
DATE EXTRACTED: 10/05/89
DATE ANALYZED: 10/09/89
WORK ORDER #: 892338

Hydrocarbon Scan
EPA Methods 3550/Modified 8015
mg/Kg (ppm)
Dry Weight Basis

Sample Name	Lab Code	MRL	Diesel	Jet Fuel	Gasoline	Kerosene	Mineral Spirits	Heavy Oil
#5 Final Gas	2338-1	10	ND	ND	ND	ND	ND	ND

ND means None Detected at or above the MRL
MRL means Method Reporting Limit

Approved by Dave Shelman Date 10/12/89

1317 South 13th Street • P.O. Box 479 • Kelso, WA 98626 • (206) 577-7222 • Fax (206) 636-1068

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT: Petroleum Services Unlimited, Inc.
SUBMITTED BY: John Jabusch
PROJECT: Plum Creek Timber
SAMPLE DESCRIPTION: Soil

DATE RECEIVED: 09/11/89
DATE EXTRACTED: 09/11/89
DATE ANALYZED: 09/13/89
WORK ORDER #: 892088

Hydrocarbon Scan
EPA Methods 3550/Modified 8015
mg/Kg (ppm)
Dry Weight Basis

Sample Name	Lab Code	MRL	Diesel	Jet Fuel	Gasoline	Kerosene	Mineral Spirits
#4 Final Gas	2088-1	10	ND	ND	400*	ND	ND
Method Blank	2088-MB	10	ND	ND	ND	ND	ND

NOTE: Heavy oil also present.

* Weathered gasoline.
ND means None Detected at or above the MRL
MRL means Method Reporting Limit

Approved by Colin Elliott Date 9/14/89

CAS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT: Petroleum Services Unlimited, Inc.
SUBMITTED BY: John Jabusch
PROJECT: Plum Creek-Roslyn
SAMPLE DESCRIPTION: Soil

DATE RECEIVED: 08/09/89
DATE EXTRACTED: 08/10/89
DATE ANALYZED: 08/11/89
WORK ORDER #: 891760

Hydrocarbon Scan
EPA Methods 3550/Modified 8015
mg/Kg (ppm)
Dry Weight Basis

Sample Name	Lab Code	MRL	Diesel	Jet Fuel	Gasoline	Kerosene	Mineral Spirits
#3 Gas	1760-1	10	760	ND	1590*	ND	ND

* Highly weathered

ND means None Detected at or above the MRL
MRL means Method Reporting Limit

Approved by Colin Elliott Date 8/14/89

CAS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT:	Petroleum Services Unlimited, Inc.	DATE RECEIVED:	07/24/89
SUBMITTED BY:	John Jabusch	DATE EXTRACTED:	07/24/89
PROJECT:	Plum Creek/Roslyn, WA	DATE ANALYZED:	07/25/89
SAMPLE DESCRIPTION:	Soil	WORK ORDER #:	891580

BTEX Analyses
EPA Method 8020
mg/Kg (ppm) Dry Weight basis

Sample Name:		#1 Gas Soil	#2	Method Blank
Lab Code:		1580-1	1580-2	1580-MB
	MRL			
Benzene	0.05	13.7	1.12	ND
Toluene	0.05	154	1.00	ND
Ethyl Benzene	0.05	45.5	0.57	ND
Total Xylenes	0.05	376	2.57	ND

ND means None Detected at or above the MRL
MRL means Method Reporting Limit

Approved by Colin Ellicott Date 8/1/89

CAS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT:	Petroleum Services Unlimited, Inc.	DATE RECEIVED:	07/24/89
SUBMITTED BY:	John Jabusch	DATE EXTRACTED:	07/24/89
PROJECT:	Plum Creek/Roslyn, WA	DATE ANALYZED:	07/26/89
SAMPLE DESCRIPTION:	Soil	WORK ORDER #:	891580

Hydrocarbon Scan
EPA Methods 3540/Modified 8015
mg/Kg (ppm)
Dry Weight Basis

Sample Name	Lab Code	MRL	Gasoline
#1 Gas Soil	1580-1	5	2250
#2	1580-2*	5	16

* Diesel components also present

ND means None Detected at or above the MRL
MRL means Method Reporting Limit

Approved by Colin Elliott Date 8/1/89

1152 3rd Avenue • Longview, WA 98632 • (206) 577-7222

Department Decision Recommendation

RE: LUST #97725

Site: Yakima Management Unit Office (Plum Creek Timber Yakima Unit)
City: Roslyn County: Kittitas

In keeping with the requirement of WAC 173-340-310 (4) I recommend that this site receive a No Further Action determination because a release of a hazardous substance has occurred, but in the department's judgment, does not pose a threat to human health or the environment.

Supporting Criteria:

In 1989 Petroleum Services Unlimited removed a 2000-gallon gasoline tank at Plum Creek Timber Company's Roslyn facility. Upon removal, contaminated soil was discovered around the tank. The release appeared to be a result of overfills and pipe failure and the tank appeared to be in good condition. Groundwater was not encountered.

Twenty cubic yards of contaminated soil was placed on plastic and spread to approximately 1-2 feet deep and covering a surface area of 30' x 50'.

The following samples were collected over the course of three months of landfarming/aerating. The results are presented in parts per million. According to a site map drawn by Jeff Wilson (Petroleum Services Unlimited) samples #3, #4, and #5 consisted of three composited soil samples.

Sample ID	Date	Gasoline	Benzene	Diesel	Ethylbenzene	Xylenes	Toluene
#1 - stockpile	7/20/89	2250	13.7	NA	45.5	376	154
#2 – pit bottom	7/20/89	16	1.12	NA	0.57	2.57	1.00
#3 - stockpile	8/10/89	1590		760			
#4 - stockpile	9/15/89	400		ND			
#5 - stockpile	10/3/89	ND		ND			

Based on the results of Sample #5, the soil was used as fill material at the clients property areas on Pennsylvania Avenue, Roslyn; the exact location is unknown.

According to Ecology's Well Log database, there are no nearby drinking water wells. The nearest downgradient creek is more than a half-mile away.

Based on the information in the file, I recommend this site receive a No Further Action determination. A release has occurred but in my opinion it does not pose a threat to human health or the environment and, for 1989, it appears that Plum Creek did attempt

to do what was required by Ecology. Additionally, it is likely that any residual soil contamination has been remediated to below cleanup levels by this time.

This Department Decision Recommendation should be reviewed and re-evaluated based on any new information about these sites.

Investigator(s) Krystal Rodriguez Krystal Rodriguez
Print and sign name(s)

DATE: January 25, 2006

Donald W Abbott
Section Supervisor

DATE: 1/25/06