

Closure Site Assessment & Independent Remedial Action Report

Associated With Removal of Three UST's
At The Orchard Rite Ltd. Facility,
Yakima, WA

Prepared For:

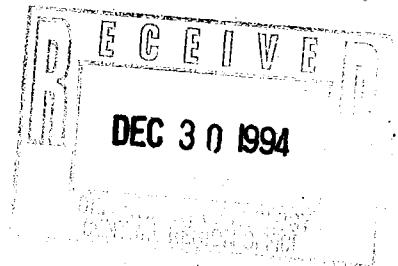
Orchard Rite Ltd.
P.O. Box 9308
Yakima, WA 98909

Prepared By:



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December, 1994



Executive Summary

On September 26 & 27, 1994, HMB Construction, Inc. (HMB) decommissioned and removed three (3) Underground Storage Tanks at the Orchard Rite Ltd. facility, located at 1702 Englewood Avenue, Yakima, WA. The tanks consisted of one (1) 10,000 gallon regular gasoline tank, one (1) 1,100 gallon unleaded gasoline tank and one (1) 1,00 gallon diesel tank. Sage Earth Sciences, Inc. (Sage) performed site assessment services during and after removal of the tanks and associated ancillary equipment. Sage used a Flame Ionization Detector (FID) and Thin Layer Chromatography (TLC) for field screening. Representative soil samples were submitted to Materials Testing & Consulting, Inc. (MTC), Burlington, WA for independent laboratory analysis.

The two (2) 1,100 gallon UST's were removed from within a single excavation. Field screening indicated the absence of petroleum impacted soils within this UST excavation and the resulting soil stockpile. Inspection of these tank found them to be in very good condition with no indication of leakage. Laboratory analysis of soil samples collected from within this multiple tank excavation, as well as the associated soil stockpile, found no detectable petroleum hydrocarbons.

Field screening indicated the presence of organic vapors beneath the original location of the fuel dispenser island. This dispenser island was located immediately west of the 10,000 gallon UST position. This UST was removed during impacted soil removal activities. Inspection of this tank found it to be in very good condition with no indication of leakage. HMB excavated approximately thirty-five (35) cubic yards of petroleum impacted soil and temporarily stockpiled it at the site. Apparently non-impacted soil was separated from apparently impacted soil. Laboratory analysis of soil samples collected from within the final remedial excavation found no detectable petroleum hydrocarbons or total lead. Analysis of soil samples collected from the apparently non-impacted soil stockpile found no detectable petroleum hydrocarbons or total lead. However, analysis of soil samples collected from the apparently impacted soil stockpile found concentrations which designate the stockpile as "Class 4 Soil" according the WSDOE "End Use Criteria for Petroleum Contaminated Soils". Orchard Rite Ltd. proposes to treat the impacted soil stockpile by the landfarming method at another Orchard Rite Ltd. property, located at 1615 West Ahtanum Road (parcel # 191206-23404), Yakima, WA.

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1.0 Introduction

1.1 Purpose

The purpose of this closure site assessment is to describe findings and actions taken associated with the removal of three (3) Underground Storage Tanks (UST's) and Petroleum Contaminated Soil (PCS) removal at the Orchard Rite LTD facility (the site), Yakima, 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

HMB Construction Inc. (HMB), Kennewick, WA, decommissioned and removed the UST system. Sage Earth Sciences, Inc. (Sage) provided closure site assessment services upon removal of the UST system. Upon discovery of petroleum impacted soil, HMB provided additional excavating services to remove impacted soil. Sage collected soil samples and submitted them to Materials Testing & Consulting (MTC), Burlington, WA, for independent laboratory analysis.

1.3 Site Location

The site is located at 1702 Englewood Avenue, Yakima, WA. It is situated within the NE 1/4 of the NE 1/4 of Section 23, Township 13 North, Range 18 East, Willamette Meridian. The site latitude is 46° 36', 25" and the longitude is 120° 31', 50". The location of the site is shown by Figure 1.

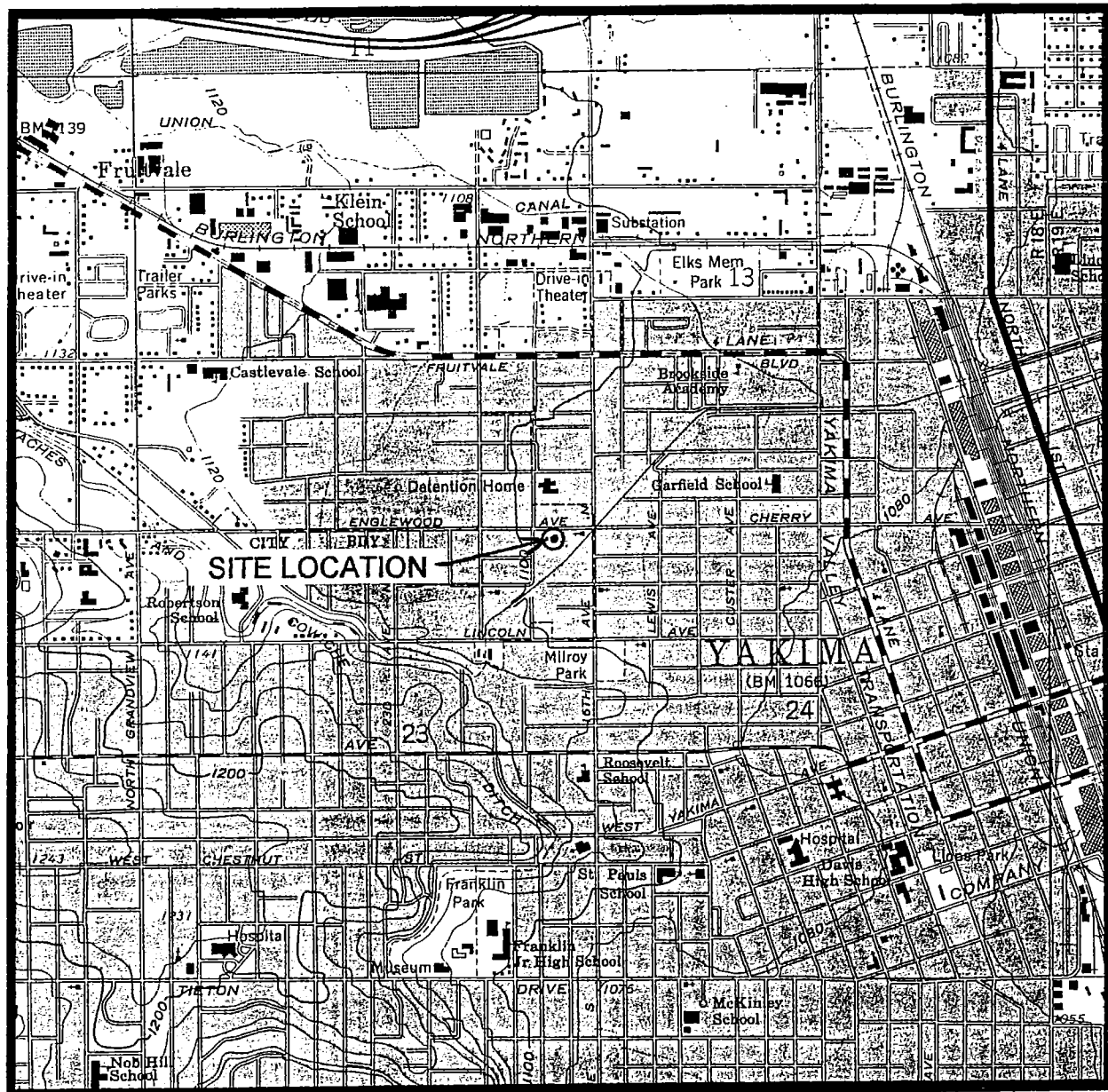
1.4 Site Description

The site is occupied by an orchard equipment manufacturing facility. Two buildings occupy the site as shown by Figure 2. The general topography of the site is flat-lying. The site authorized site contact is:

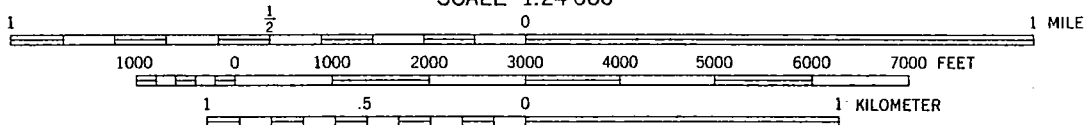
Mr. Jim Decoto
Orchard Rite LTD
1702 Englewood Avenue
Yakima, WA 98902
Phone (509) 248-8785

1.5 Adjacent Land Use

Englewood Avenue lies immediately north of the site as shown by Figure 2. A storage building is located north of Englewood Avenue. The Juvenile Justice facility is under construction west of the storage building. A car wash facility is located east of the storage building. A church is located east of the site. The area south of the site is residential. The property west of the site is occupied by a storage rental facility.



SCALE 1:24 000



CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



FOR SALE BY U. S. GEOLOGICAL SURVEY

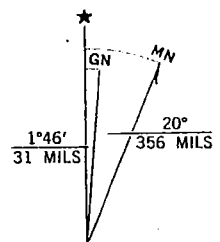


Figure 1. Site Location Map

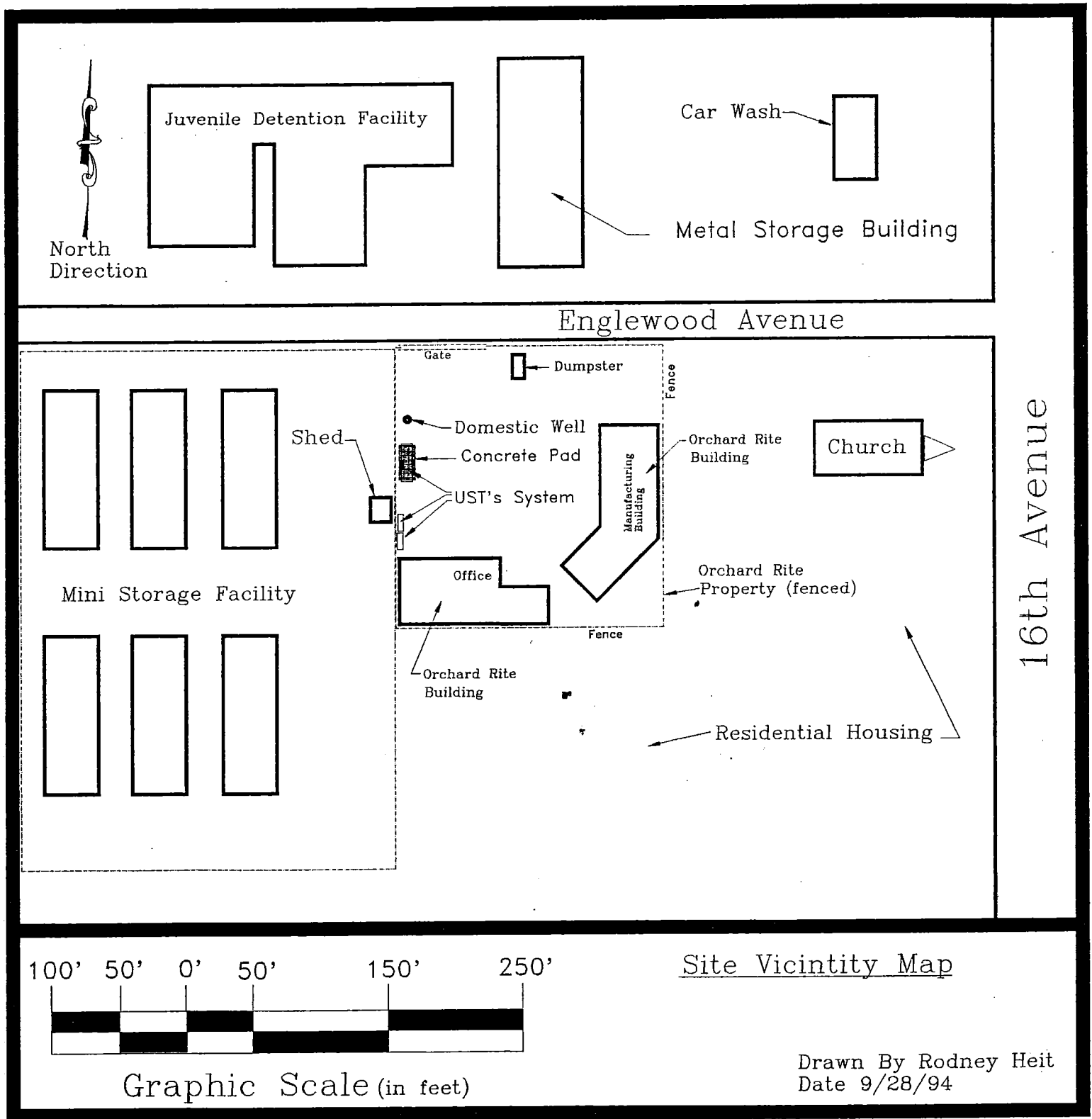


Figure 2. Site Vicinity Map

1.6 UST System Information

The WSDOE Site Identification Number is 010738. The tanks were installed by the previous land owner. The age of the UST system is unknown. Use of the tanks was discontinued in approximately 1989. Prior to this time, the tanks were used to refuel company vehicles and equipment. The UST system was situated at the western portion of the subject property as shown by Figure 3. The UST system consists of:

- ♦ one (1) 10,000 gallon regular gasoline tank (Tank #1),
- ♦ one (1) 1,100 gallon unleaded gasoline tank (Tank #2) and
- ♦ one (1) 1,100 gallon diesel tank (Tank #3).

The fuel dispensers were positioned at the western edge of Tank #1. Underground fuel lines led directly from each tank to the fuel dispenser island. Underground vent pipes led from the tanks to the northwest corner of the west building.

1.7 Soils Description

Soils encountered during excavation activities consisted of basaltic and andesitic boulders and cobbles (conglomerate) deposited by mainstream river currents. The matrix consisted of sandy gravel composed primarily of lithic fragments. This soil type extends to the floor of the final excavation which was established to a depth of approximately thirteen (13) feet below ground surface (BGS). The conglomerate is classified as "GP" according to the Unified Soil Classification System. Soils encountered within the excavation are described by the Soil Excavation Profile (Appendix A).

1.8 Hydrogeology

No hydrogeologic investigation was conducted during the investigation. Groundwater was not encountered during tank removal or remediation activities. Depth to groundwater at the site was not determined.

2.0 Field Activities

2.1 Closure Site Assessment & Remedial Activities

HMB provided tank decommissioning and removal services on September 26 & 27, 1994. Upon removal of the tanks, Rodney Heit, a site assessor registered with the WSDOE Underground Storage Tank Section, provided closure site assessment services. Soil samples were collected for field screening and independent laboratory analysis. Soil sampling methods are described in Appendix B. Soil sample descriptions are documented on the Daily Field Sampling Log (Appendix C). Field screening was accomplished using a Field Ionization Detector (FID) and Thin Layer Chromatography (TLC). Field screening methods are described in Appendix D. Findings of the closure site assessment are discussed below.

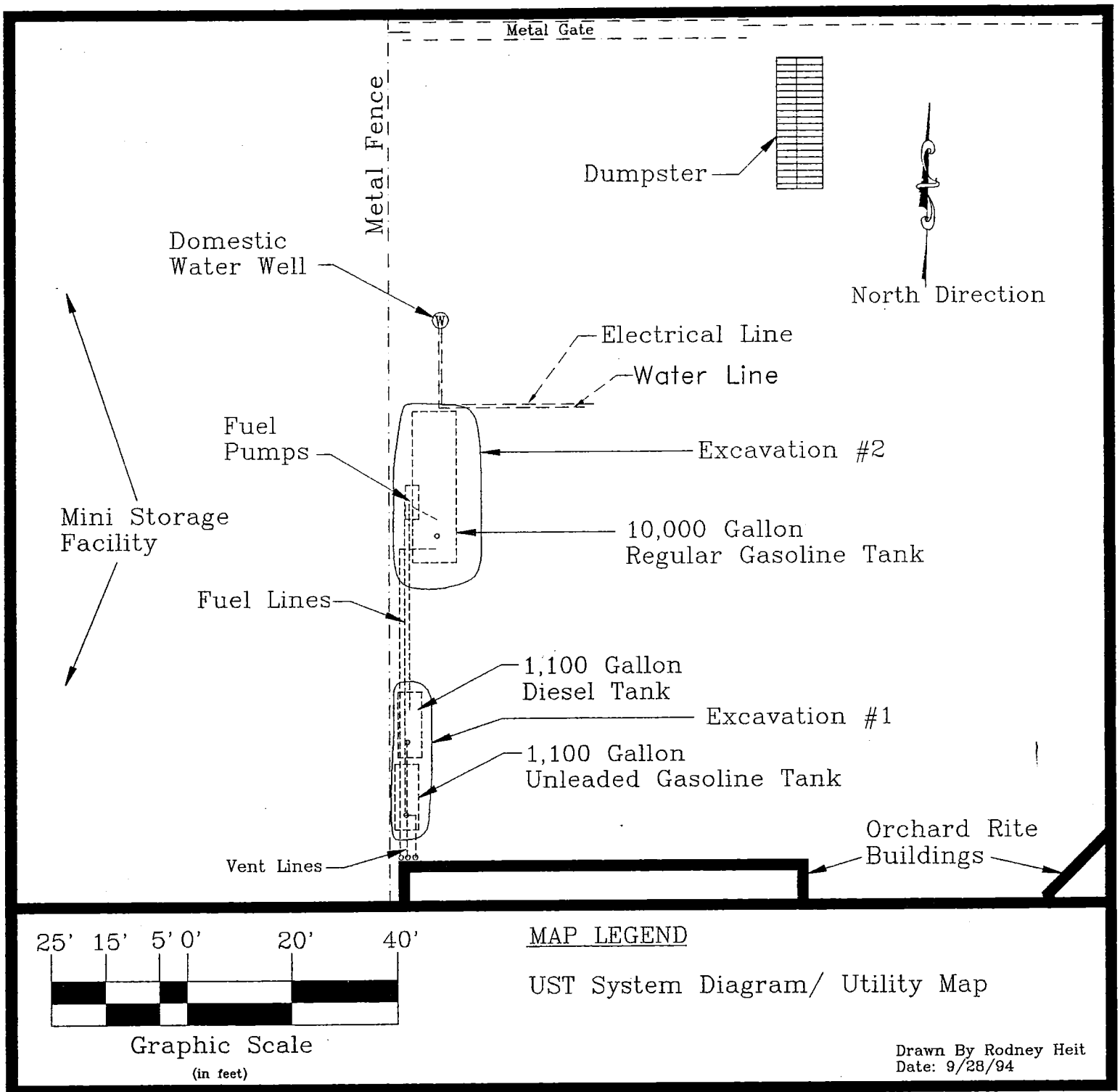


Figure 3. UST System Diagram

2.1.1 1,100 Gallon UST's

The 1,100 gallon unleaded gasoline tank (Tank #2) and the 1,100 gallon diesel tank (Tank #3) were removed from a single excavation. Sage performed a visual inspection of the tanks upon removal. The inspection found the tanks to be in very good condition with no indication of leakage. Inspection of soils exposed within the excavation, as well as soils excavated during the tank removal process, found no evidence of petroleum contamination.

Sage collected six (6) soil samples from within the UST excavation for field screening and laboratory analyses. One (1) soil sample was collected from each sidewall of the excavation (OR-0194-S1 through OR-0194-S4). Sample OR-0194-S1 was collected from beneath fuel lines entering the UST excavation. Sample OR-0194-S5 was collected from beneath the gasoline tank and sample OR-0194-S6 was collected from beneath the diesel tank. Soil sampling locations are shown by Figure 4. Soil samples OR-0194-S1 through OR-0194-S6 were submitted to MTC for independent laboratory analysis. Adjacent sidewall samples were composited at the laboratory prior to analysis.

MTC analyses found no detectable petroleum hydrocarbons in soil samples collected from within this UST excavation or beneath fuel lines. In addition, analysis of a soil sample (OR-0194-S5) collected from beneath the gasoline tank, found no detectable total lead. The analytical results are attached as Appendix E.

The analytical results were compared to "Method A Cleanup Levels" (Cleanup Levels) of WAC 173-340-740 (Appendix F) to determine if remedial action was required. The comparison indicates that no remedial action is required associated with the use or removal of these tanks.

2.1.2 Dispenser Island & 10,000 Gallon UST

The fuel dispenser island was positioned immediately adjacent to, and above, the 10,000 gallon gasoline tank. Field screening indicated that petroleum impacted soil existed beneath this dispenser island. The release appears to have originated from the regular gasoline dispenser which is associated with the 10,000 gallon tank. The petroleum appeared to migrate downward from the island location, adjacent to the 10,000 gallon gasoline tank.

The 10,000 gallon UST was removed during impacted soil removal activities. A visual inspection of the tank found it to be in very good condition with very little corrosion. Sage found no evidence that this UST had leaked.

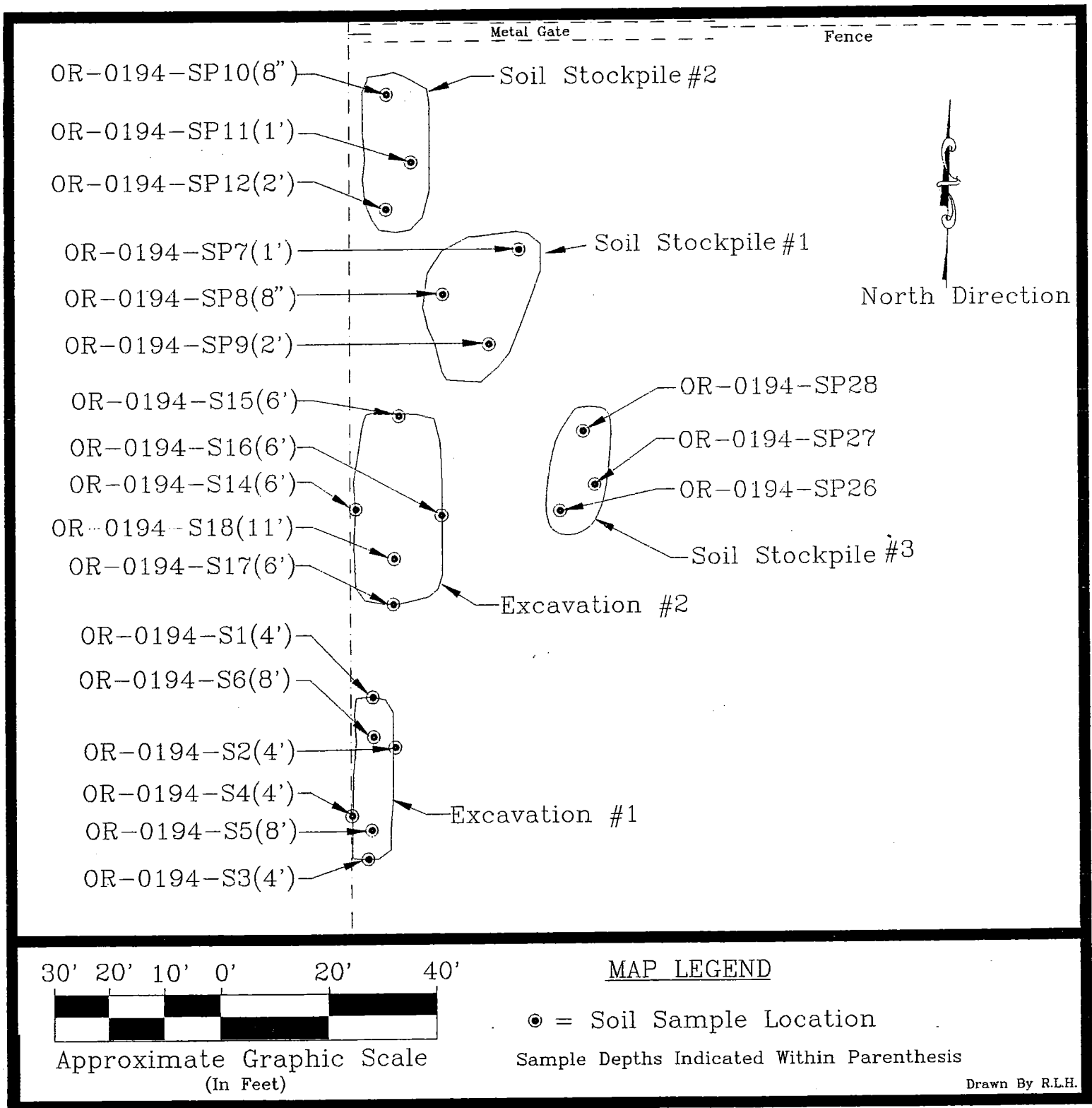


Figure 4. Soil Sampling Locations

Apparently impacted soil was excavated from beneath the fuel dispenser island. Apparently impacted soil was separated from apparently non-impacted soil during the tank removal process. Approximately thirty-five (35) cubic yards of apparently impacted soil was placed upon, and covered by, a plastic liner for temporary storage at the site.

Upon completion of impacted soil removal activities, Sage collected five (5) soil samples (OR-0194-S14 through OR-0194-S18) from the remedial excavation. These soil sampling locations are shown by Figure 4. The soil samples were submitted to MTC for independent laboratory analysis. Adjacent sidewall samples (OR-0194-S14, S15 and OR-0194-S16, S17) were composited at the laboratory. MTC analyses found no petroleum hydrocarbons or lead in soil samples collected from the final remedial excavation. Comparison of the analytical results (Appendix E) with the Cleanup Levels (Appendix F) indicates that no additional remedial action is required at this location.

Upon completion of the UST removal project, Sage completed a copy of the Underground Storage Tank Site Check/Site Assessment Checklist and a copy of this checklist is attached as Appendix G.

2.1.3 Soil Stockpile #1

Soil stockpile #1 was generated during removal of the 10,000 gallon UST. It is composed of approximately fifteen (15) cubic yards of apparently non-impacted soil. Sage collected three (3) soil samples (OR-0194-SP7 through OR-0194-SP9) and submitted them to MTC for independent laboratory analysis. Analysis of these soil samples found no detectable petroleum hydrocarbons. This soil stockpile was used to backfill the remedial excavation in accordance with the WSDOE "End Use Criteria for Petroleum Contaminated Soils" (Appendix H).

2.1.4 Soil Stockpile #2

Soil stockpile #2 was generated during removal of the 10,000 gallon UST. It is composed of approximately thirty-five (35) cubic yards of apparently impacted soil. Sage collected three (3) soil samples (OR-0194-SP10 through OR-0194-SP12) and submitted them to MTC for independent laboratory analysis. Analysis of these soil samples found no detectable petroleum hydrocarbons in samples OR-0194-SP10 and OR-0194-SP11. However, analysis of sample OR-0194-SP12 found:

- ◆ gasoline at a concentration of 329 parts per million (ppm),
- ◆ benzene at a concentration of 717 parts per billion (ppb),
- ◆ toluene at a concentration of 849 ppb,
- ◆ ethylbenzene at a concentration of 981 ppb and
- ◆ xylenes at a concentration of 5,397 ppb.

Comparison of the analytical results (Appendix E) with the WSDOE "End Use Criteria for Petroleum Contaminated Soils" (Appendix H) indicates that Soil Stockpile #2 is designated as "Class 4 Soil". Orchard Rite, Ltd. transported the soil to another of their properties for treatment using the landfarming method. This property is located at 1615 West Ahtanum Road (Parcel # 191206-23404).

2.1.5 Soil Stockpile #3

Soil stockpile #3 was generated during removal of the two (2) 1,100 gallon UST's. It is composed of approximately thirty (30) cubic yards of apparently non-impacted soil. Sage collected three (3) soil samples (OR-0194-SP26 through OR-0194-SP28) and submitted them to MTC for independent laboratory analysis. Analysis of these soil samples found no detectable petroleum hydrocarbons or total lead. This soil stockpile was used to backfill the UST excavation in accordance with the WSDOE "End Use Criteria for Petroleum Contaminated Soils" (Appendix H).

3.0 Recommendations

Based upon the analytical results, Sage finds that no additional soil remediation is required at the UST removal locations. However, Sage recommends treatment of Soil Stockpile #2 to reduce gasoline and aromatic hydrocarbon (BTEX) concentrations. 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". If the landfarming method is chosen the following criteria should be met:

- ♦ Obtain approval from the Yakima Health District prior to treatment activities,
- ♦ Obtain approval from the Yakima County Clean Air Authority prior to treatment activities,
- ♦ 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 must be installed around the perimeter of the treatment area.
- ♦ Signage must be installed to prevent access by the general public. 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 collected after three (3) months of 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 three (3) UST's and contaminated soil removal project, this document does not imply that the property is free of other environmental constraints.

Appendix A

SOIL EXCAVATION PROFILE



Field Crew RODNEY HEIT

Project Name ORCHARD RITE

Project # OR-0194

Address 1702 ENGLEWOOD AVE

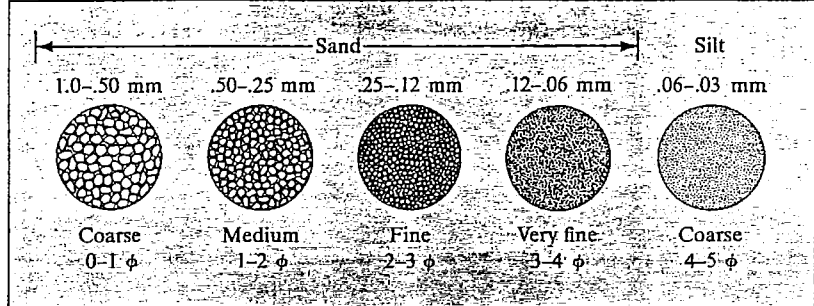
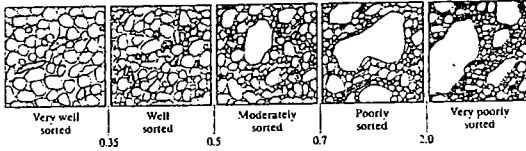
Date 9-27-94

Location N.E. 1/4 N.E. 1/4 Sec. 23 T. 13 N. R. 18 E., W.M. Elevation 1,100 (ft) Datum M.S.L.

Pit Dimensions SEE MAPS

Finish Depth 13'

Pit Orientation X2 (NORTH-SOUTH)



Additional Detrital Rock Classifications on Reverse

Description of Lithologies

Sample #	Matrix	Groundwater	Depth (13')	Graphic Log	Unified Soil Classification
			1		GP
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		

Sandy gravelly matrix with River boulders and cobbles (Conglomerate)

Interbedded silty sands SPARSE

Basaltic and andesitic boulder and cobbles up to 1.5 feet in diameter

EXCAVATION TERMINATED @ 13' BGS.

Rodney Heit

SAGE Representative

9-27-94

Date

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 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

L

Project # OR-0194

Date 9-26-94

Sampler RODNEY HERT

Sheet 1 of 3

[illegible]

Ambient Vapors
TLC Standards

3 Units

Zooplankton Piesec

50 ppm Diesel

✓ S = Soil Sample

GW = Groundwater Sample

SW = Surface Water Sample

D = Duplicate Sample (10 % of samples/matrix)

TB = Travel Blank

Field Sampling Log

Project # OR-0194
 Date 9-28-94
 Sampler Rodney Heit
 Sheet 32 of 3

* LISTED ON 9/27/94

Sample #	Location	Matrix	Staining	Odors	Depth	TOV	TLC
OR-0194-SP10	STOCKPILE SAMPLE	SOIL	N. D. ON	NONE	8"	N.D.	N.D.
OR-0194-SP11	STOCKPILE SAMPLE	SOIL	NOT OBSV.	NONE	1'	N.D.	
OR-0194-SP12	STOCKPILE SAMPLE	SOIL	NOT OBSV.	NONE	2'	N.D.	
OR-0194-S13	WEST SIDE WALL DUPLICATE OF S14	SOIL	NOT OBSV.	NONE	6'	N.D.	
OR-0194-S14	WEST SIDE WALL 10,000 gal	SOIL			6'	N.D.	
OR-0194-S15	NORTH RADIANT " "	SOIL			6'	N.D.	
OR-0194-S16	EAST SIDE WALL " "	SOIL			6'	N.D.	
OR-0194-S17	SOUTH END WALL " "	SOIL			6'	N.D.	
OR-0194-S18	FLOOR OF 10,000	SOIL			11'	N.D.	
OR-0194-S19	Dispenser area N.E	SOIL			6'	N.D.	
OR-0194-S20	EAST SIDE WALL	SOIL			11'	N.D.	
OR-0194-S21	SOUTHEAST SIDE WALL	SOIL			8'	N.D.	
OR-0194-S22	SOUTH SIDE WALL	SOIL			6'	N.D.	
OR-0194-S23	SOUTH WEST SIDE WALL	SOIL			13'	N.D.	
OR-0194-S24	WEST FLOOR/SIDE WALL	SOIL			13'	N.D.	
OR-0194-S25	FLOOR	SOIL			12'	N.D.	
OR-0194-SP26	STOCKPILE BACK FILLED MATERIAL	SOIL			8"	N.D.	
OR-0194-SP27	STOCKPILE	SOIL			1'	N.D.	
OR-0194-SP28	STOCKPILE	SOIL			2'	N.D.	
OR-0194-TB29	TRAVEL BLANK	H ₂ O	N/A	N/A	N/A	N/A	N/A

Ambient Vapors
 TLC Standards

4 Units

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

Appendix D

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 compounds (e.g. diesel, waste oil, grease), 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 ml. 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 short-wave & long-wave ultraviolet light, for compounds. If no compounds are observed, the compounds are either not present or are at non-detectable 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 short-wave and long-wave ultraviolet light and compare the sample to known standards (diesel, waste oil, grease).
9. Record the type of product observed and approximate concentration on the Daily Field Sampling Log.

Appendix E

MTC

Analytical/Environmental Services

Materials Testing & Consulting, Inc

WSDOE Laboratory #C057

WSDOH Laboratory #046

P.O. Box 309

Mount Vernon, WA 98273

(206)757-1400 - FAX (206)757-1402

84
 Client: Sage Earth Sciences
 P.O. Box 1644
 Zillah, WA 98953

Report Date: 11/14/94
 Reference: 94-1838
 Date Analyzed: 10/2/94

Attn: Mr Dave Green

Project: Orchard Rite
 Date Sampled: 9/29/94

Data Report

Page: 1 of 2

Lab Number	Sample Description	ppm	ppb				Surrogate
		TPH	Benzene	Toluene	Ebenzene	Xylenes	% Recovery
84-94-04191.0S	OR-0194-S1,S2	nd	nd	nd	nd	nd	99
84-94-04192.0S	OR-0194-S3,S4	nd	nd	nd	nd	nd	104
84-94-04193.0S	OR-0194-S5	nd	nd	nd	nd	nd	100
84-94-04194.0S	OR-0194-S6	nd	nd	nd	nd	nd	98
84-94-04195.0S	OR-0194-SP7	nd	nd	nd	nd	nd	96
84-94-04196.0S	OR-0194-SP8	nd	nd	nd	nd	nd	103
84-94-04196.0S	MS OR-0194-SP8	137-G					100
84-94-04197.0S	OR-0194-SP9	nd	nd	nd	nd	nd	103
84-94-04198.0S	OR-0194-SP10	nd	nd	nd	nd	nd	104
84-94-04199.0S	OR-0194-SP11	nd	nd	nd	nd	nd	108
84-94-04199.0S	Lab Dup OR-0194-SP11	nd	nd	nd	nd	nd	115
84-94-04200.0S	OR-0194-SP12	329-G	717	849	981	5397	119
84-94-04201.0S	OR-0194-S13	nd	nd	nd	nd	nd	122
84-94-04202.0S	OR-0194-S14,S15	nd	nd	nd	nd	nd	117
84-94-04203.0S	OR-0194-S16,S17	nd	nd	nd	nd	nd	117
84-94-04204.0S	OR-0194-S18	nd	nd	nd	nd	nd	120
84-94-04205.0S	OR-0194-S19,S20	nd	nd	nd	nd	nd	113
Methods:							Method
WSDOE: WTPH-G/WTPH-D							Acceptance
G- Gasoline A-Aged D-Diesel		Soil/Water	Soil/Water	Soil/Water	Soil/Water	Soil/Water	Limits
Method Reporting Limit (MRL)**		10.0/0.10	100/1.0	100/1.0	100/1.0	100/1.0	Soil: 50-150
Maximum Contamination Levels		100/1	500/5	40000/40	20000/30	20000/20	H20: 50-150

Comments: * - indicates heavier hydrocarbons

** - A value of "<n" indicates elevated detection limits due to dilution or chromatographic interference

MS - Matrix Spike at 200 ppm Gasoline/Diesel

QC Review: 

MTC

Analytical/Environmental Services

Materials Testing & Consulting, Inc
 WSDOE Laboratory #C057
 WSDOH Laboratory #046

P.O. Box 309
 Mount Vernon, WA 98273
 (206)757-1400 - FAX (206)757-1402

84
 Client: Sage Earth Sciences
 P.O. Box 1644
 Zillah, WA 98953

Report Date: 11/14/94
 Reference: 94-1838
 Date Analyzed: 10/2/94

Attn: Mr Dave Green

Project: Orchard Rite
 Date Sampled: 9/29/94

Data Report

Page: 2 of 2

Lab Number	Sample Description	ppm	ppb				Surrogate
		TPH	Benzene	Toluene	Ebenzene	Xylenes	% Recovery
84-94-04206.0S	OR-0194-S21,S22	nd	nd	nd	nd	nd	105
84-94-04206.0S	Lab Dup OR-0194-S21,	nd	nd	nd	nd	nd	109
84-94-04207.0S	OR-0194-S23,S24	nd	nd	nd	nd	nd	91
84-94-04208.0S	OR-0194-S25	nd	nd	nd	nd	nd	90
84-94-04209.0S	OR-0194-SP26	nd	nd	nd	nd	nd	91
84-94-04210.0S	OR-0194-SP27,SP28	nd	nd	nd	nd	nd	100
Methods: WSDOE: WTPH-G/WTPH-D G- Gasoline A-Aged D-Diesel							Method
		Soil/Water	Soil/Water	Soil/Water	Soil/Water	Soil/Water	Acceptance
							Limits
Method Reporting Limit (MRL)**		10.0/0.10	100/1.0	100/1.0	100/1.0	100/1.0	Soil: 50-150
Maximum Contamination Levels		100/1	500/5	40000/40	20000/30	20000/20	H20: 50-150

Comments: * - Indicates heavier hydrocarbons

** - A value of "<n" indicates elevated detection limits due to dilution or chromatographic interference

MS - Matrix Spike at 200 ppm Gasoline/Diesel



QC Review: 

MTC**Analytical/Environmental Services**

Materials Testing & Consulting, Inc
WSDOE Laboratory #C057
WSDOH Laboratory #046

P.O. Box 309
Mount Vernon, WA 98273
(206)757-1400 - FAX (206)757-1402

Client: Sage Earth Sciences
P.O. Box 1644
Zillah, WA 98953

Date: 10/25/94
Reference: 94-1838

Attn:

Project: Orchard Rite

Data Report

Lab Number	Sample Description					
		Pb	Units			
84-94-04193.1S	OR-0194-S5	<25	mg/Kg			
84-94-04198.1S	OR-0194-SP10	<25	mg/Kg			
84-94-04199.1S	OR-0194-SP11	<25	mg/Kg			
84-94-04200.1S	OR-0194-SP12	<25	mg/Kg			
84-94-04202.1S	OR-0194-S14,S15	<25	mg/Kg			
84-94-04203.1S	OR-0194-S16,S17	<25	mg/Kg			
84-94-04204.1S	OR-0194-S18	<25	mg/Kg			
84-94-04205.1S	OR-0194-S19,S20	<25	mg/Kg			
84-94-04206.1S	OR-0194-S21,S22	<25	mg/Kg			
84-94-04207.1S	OR-0194-S23,S24	<25	mg/Kg			
84-94-04208.1S	OR-0194-S25	<25	mg/Kg			
84-94-04209.1S	OR-0194-SP26	<25	mg/Kg			
84-94-04210.1S	OR-0194-SP27,SP28	<25	mg/Kg			
	Method Blank	<.5 0	mg/L			
	Method QC 5.00 ppm	4.94	mg/L			
		Soil				
	Method Reporting Limit (MRL)	25				
	Maximum Contamination Limit (MCL)	250				


Mary Price
Chemist



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

CHAIN-OF-CUSTODY FORM
Project Name ORCHARD RITE
Project Number OR-0194
Sampler ROONEY HEIT
Date 9-29-94 Time 3:00 pm
Destination MATERIALS TESTING & CONSULTING

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested					PLEASE RECHECK
				HClO	WTR DSG	8020	TOTAL LEAD	602	
OR-0194-S1	SOIL	1	4oz	X	X	X			PLEASE COMPOSITE SAMPLES
OR-0194-S2	SOIL	1	4oz	X	X	X			51 - S2
OR-0194-S3	SOIL	1	4oz	X	X	X			PLEASE COMPOSITE SAMPLES
OR-0194-S4	SOIL	1	4oz	X	X	X			53 - S4
OR-0194-S5	SOIL	1	4oz	X	X	X			
OR-0194-S6	SOIL	1	4oz	X	X	X			
OR-0194-SP7	SOIL	1	4oz	X	X	X			
OR-0194-SP8	SOIL	1	4oz	X	X	X			
OR-0194-SP9	SOIL	1	4oz	X	X	X			
OR-0194-SP10	SOIL	1	4oz	X	X	X	X		
OR-0194-SP11	SOIL	1	4oz	X	X	X	X		
OR-0194-SP12	SOIL	1	4oz	X	X	X	X		
OR-0194-S13	SOIL	1	4oz	X	X	X			
OR-0194-S14	SOIL	1	4oz	X	X	X	X		
OR-0194-S15	SOIL	1	4oz	X	X	X	X		PLEASE COMPOSITE SAMPLES

Relinquished by: <u>Rooney Heit</u>	Received By: <u>J McAdams</u>	Date: <u>9/30/94</u>
Firm: <u>Sage Earth Sciences Inc.</u>	Firm: <u>UTC</u>	Time: <u>9 a.m.</u>
Relinquished by:	Received By:	Date:
Firm:	Firm:	Time:

Container Condition: Good	Violated	Cool (4°C): Yes	No	Custody Seals: <u>Intact</u>	Violated
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P.O. Box 1644
601 Glenwood Drive
Zillah, WA 98953
Phone (509) 829-6400
Fax (509) 829-6443

CHAIN-OF-CUSTODY FORM
Project Name ORCHARD RITE
Project Number OR-0194
Sampler ROONEY HEIT
Date 9-29-94 Time 3:00 PM
Destination MATERIALS TESTING & CONSULTING

Sample Number	Matrix	Number of Containers	Container Size	Analyses Requested					
				HClO	WTPH OEG	8020	TOTAL LEAD	602	PLEASE ARCHIVE
OR-0194-S16	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-S17	SOIL	1	4oz	X	X	X	X	>	S16 & S17
OR-0194-S18	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-S19	SOIL	1	4oz	X	X	X	X	>	S19 & S20
OR-0194-S20	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-S21	SOIL	1	4oz	X	X	X	X	>	S21 & S22
OR-0194-S22	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-S23	SOIL	1	4oz	X	X	X	X	>	S23 & S24
OR-0194-S24	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-S25	SOIL	1	4oz	X	X	X	X	>	SP27 & SP28
OR-0194-SP26	SOIL	1	4oz	X	X	X	X	>	PLEASE COMPOSITE SAMPLES
OR-0194-SP27	SOIL	1	4oz	X	X	X	X	>	SP27 & SP28
OR-0194-SP28	SOIL	1	4oz	X	X	X	X	>	
OR-0194-TB29	H ₂ O	1	40ML	X	X			X	

Relinquished by: <u>Rooney Heit</u>	Date: <u>9-29-94</u>	Received By: <u>J McAdams</u>	Date: <u>9/30/94</u>
Firm: <u>Sage Earth Sciences Inc.</u>	Time: <u>3:00pm</u>	Firm: <u>UTC</u>	Time: <u>9 a.m.</u>
Relinquished by:	Date:	Received By:	Date:
Firm:	Time:	Firm:	Time:
Container Condition: Good	Violated	Cool (4°C): Yes	No
		Custody Seals: <u>Intact</u>	Violated

Appendix F

Method A Cleanup Levels - Soil *

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 G



UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

For Office Use Only	
Owner #	4001178
Site #	010738

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with Ecology. **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
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): # 010738

Site/Business Name: ORCHARD RITE (used to be HILLS Construction)

Site Address: 1702 ENGLEWOOD Street Telephone: (509) 248-8785
YAKIMA WA 98902
City State ZIP-Code

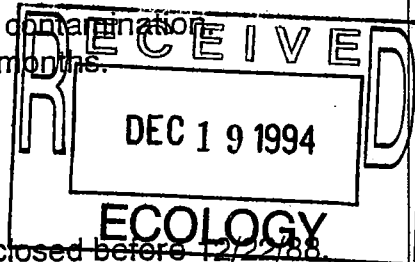
TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
TANK #1	10,000 GALLON	REGULAR/UNLEADED GASOLINE
TANK #2	1,100 GALLON	REGULAR/UNLEADED GASOLINE
TANK #3	1,100 GALLON	DIESEL FUEL

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-place.
- ☐ 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.	RS#	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	RS#	
3. A summary of UST system data is provided. (see Section 3.1)	RS#	
4. The soils characteristics at the UST site are described. (see Section 5.2)	RS#	
5. Is there any apparent groundwater in the tank excavation?		RS#
6. A brief description of the surrounding land use is provided. (see Section 3.1)	RS#	
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.	RS#	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	RS#	
- groundwater samples distinguished from soil samples (if applicable)	RS#	
- samples collected from stockpiled excavated soil	RS#	
- tank and piping locations and limits of excavation pit	RS#	
- adjacent structures and streets	RS#	
- approximate locations of any on-site and nearby utilities	RS#	
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)	RS#	
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.	RS#	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	RS#	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has not occurred.		RS#

SITE ASSESSOR INFORMATION

RODNEY L HEIT Sage Earth Sciences Inc.
 Person registered with Ecology Firm Affiliated with
 Business Address: P.O. Box 1644 Telephone: (509) 829-6400
ZIPAH WA. 98953
Street City State 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.

10-20-94

Date

Rodney L Heit
Signature of Person Registered with Ecology

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	200-500	>500
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 disposal permit needed)

Road construction (no solid waste disposal 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



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

☐ Temporary
Tank Closure

☒ Permanent
Tank Closure

☐ Change-In-
Service

☐ Site Assessment/
Site Check

Office Use Only
Owner # 40003188
Site # 010738

SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tanks are registered): 010738 010738
Site/Business Name: ORCHARD Rite
Site Address: 1702 ENGLEWOOD AVENUE Telephone: (509) 248-8785
YAKIMA, WA. 98902
City State ZIP-Code

TANK INFORMATION:

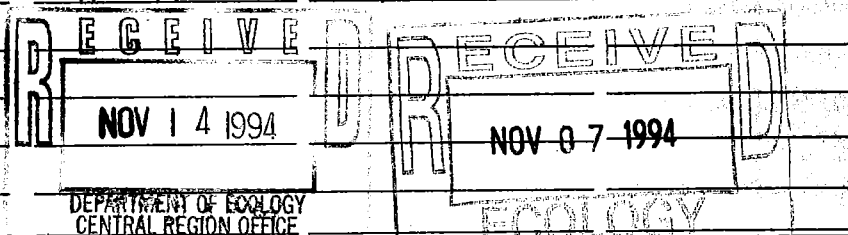
Tank ID	Closure Date	Tank Capacity	Substance Stored
<u>3</u>	<u>9/28/94</u>	<u>1100 GAL</u>	<u>DIESEL</u>
<u>2</u>	<u>9/28/94</u>	<u>1100 GAL</u>	<u>PREMIUM</u>
<u>1</u>	<u>9/28/94</u>	<u>10,000 GAL</u>	<u>REGULAR</u>

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: ORCHARD Rite Jim Chalos
Owners Signature: [Signature] Telephone: (509) 248-8785
Address: 1702 ENGLEWOOD AVENUE P.O. Box
YAKIMA, WA. 98902 City State ZIP-Code

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Service Provider: HMB Construction, Inc. License Number: 5002376
Licensed Supervisor: DARYL D. BURWETT Decommissioning License Number: W002039
Supervisors Signature: [Signature]
Address: P.O. Box 6308 P.O. Box
Kennewick, WA 99336 City State ZIP-Code
Telephone: (509) 582-9653

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Name of Registered Site Assessor: SAGE EARTH Sciences, Inc.
Telephone: (509) 829-6400
Address: 802 Cherryhill Lane P.O. Box
Zillah, WA. 98953 City State ZIP-Code



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 JS
Owner # U0003188
Site # 010738

SITE INFORMATION

SEP 22 1994

Site ID Number (on invoice or available from Ecology if the tank is registered): 010738
Site/Business Name: Orchard Rite
Site Address: 1702 Englewood Avenue
Yakima, Wa. 98902
Owner/Operator Telephone: (509) 248-8785
City State ZIP Code

TANK INFORMATION

TANKS TO BE CLOSED

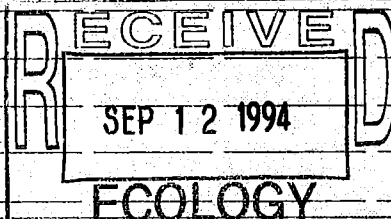
This section to be filled out ONLY if tanks are being removed

Tank ID	Projected Closure Date	Tank Capacity	Substance Stored	Date tank last used	Is there product in the tank? (yes/no)	If no, date tank was pumped
3	9/94	500	Diesel	5+ years date unknown	No	5 yrs + date unknown
2	↓	1000	Premium	"	No	5 yrs + date unknown
1	↓	8000	Regular	"	No	5 yrs + date unknown

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: _____ Contact Name: _____
Telephone: (____) _____
Address: _____
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: HMB Construction, Inc.
Contact Name: Daryl D. Burnett
Telephone: (509) 582-9653
Address: 100 W. Canal Dr.
Kennewick, Wa 99336
City State ZIP Code

This form will be returned to this address

UST OWNER/OPERATOR Orchard Rite Attn: Jim
MAILING ADDRESS 1702 Englewood Avenue
Yakima, Wa 98902
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