<u>Modified Phase I and Phase II Environmental Site</u> <u>Assessment (ESA)</u>

US97: J St. Intersection (Madras South Y) Sec. The Dalles-California Highway, M.P. 92.78 to M.P. 96.30 Madras, Jefferson County

Key#: 15409

August 1, 2012

Oregon Department of Transportation

Region 4 Geo/Bridge/Env Unit Hazardous Materials 63034 O.B. Riley Rd. Bend, Oregon 97702 This Page Intentionally Left Blank

Executive Summary

ODOT Region 4 HazMat (R4 HazMat) performed a modified Phase I and II Environmental Site Assessment (ESA) for Tax Lot 11.13.11DD Lot 6901 for the US97: J Street Intersection (Madras South Y) Sec project. The project site is located at 837 SW Hwy 97 and supports two structures, a commercial building and a shop building. This ESA has identified the following as potential risks to the project:

- Florescent lamps that may contain mercury vapor are located inside the commercial building and on the exterior of the shop building. The florescent lamp ballasts may contain polychlorinated biphenyls (PCBs). A neon sign that is located on the east side of the shop building may also contain PCBs.
- Old electrical panels and meters that may contain asbestos are located in the shop building.
- The paint on the exterior of the shop building is suspected to be lead-based paint.
- Diesel- and residual-range organic hydrocarbon-contaminated soils are present below the concrete floor of the shop building in an apparent former hydraulic lift pit. Contamination appears to extend from just below the concrete shop floor to 11 feet below ground surface. The estimated amount of contaminated soil is 10 tons.

Based on the findings of this ESA, R4 HazMat recommends the following:

- The ODOT Right-of-Way unit will address the florescent/HID lamps and ballasts, PCBs, asbestos, and lead-based paint issues as part of the building demolition contract.
- The landowner should have the contaminated soil removed from the former hydraulic lift pit prior to ODOT acquisition of the property.
- If the landowner decides to not remove the contaminated soil, ODOT should have the construction contractor remove the contaminated soils during construction. The appraised value of the property should be adjusted to cover the costs that ODOT will incur to remove the contaminated soils. The estimated cost for removal and disposal of the contaminated soils is \$6,850.
- If the contaminated soil is removed during construction, special provisions will be required to address the excavation, handling, and disposal of the contaminated soil.
- Confirm the presence/absence of possible water well detected during the geophysical survey at the project site. If the presence of a water well is confirmed, the well should be abandoned in accordance with Oregon Water Resources Department regulations.

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1 Introduction

The Oregon Department of Transportation (ODOT) Region 4 HazMat unit (R4 HazMat) performed a modified Phase 1 and Phase II Environmental Site Assessment (ESA) for Tax Lot 11.13.11DD Lot 6901 for the following project:

US97: J Street Intersection (Madras South Y) Sec. The Dalles-California Highway, M.P. 92.78 to M.P. 96.30 Madras, Jefferson County Key #15409

This assessment is intended primarily as an approach to identifying potential sources of contamination that could impact the project site. Such impacts could affect worker safety, property value, and project costs. This assessment was performed according to generally accepted environmental procedures as outlined in the Hazardous Waste Guide for Project Development, by the American Association of State Highway and Transportation Officials (AASHTO) Special Committee on Environment, Archaeology and Historic Preservation and the American Society for Testing and Materials (ASTM) standard E 1527-00.

1.1 Project Site Description

The project site is located at 837 SW Hwy 97 in Madras. The Assessor's Map #11.13.11DD identifies the project site as Lot 6901. The project vicinity and site maps (Figures 1 and 2) and a copy of the Assessor's Map are attached in Appendix A. Proposed activities at the project site include the following:

- Purchase of Lot 6901 (project site) for new highway right-of-way (R/W).
- Demolition of the two buildings located on the project site.
- Construction of a new US97 (SW 5th St.) alignment through the project site.
- Trench excavations along the new alignment to install storm sewer pipe and inlets.

1.2 Physical Setting

According to the Culver Quadrangle USGS Topographic Map, the project site is at an elevation of 2,320 feet above sea level and the land slopes gently down to the north-northwest. The closest surface water body to the project site is Willow Creek, an annual stream located one mile to the north. Based on the local topography and proximity of surface water bodies, groundwater at the project site likely flows to the north-northwest. However, local subsurface geologic and manmade features can affect groundwater flow; therefore, this groundwater flow interpretation is only an estimate based on surface observations

R4 HazMat performed a query of Oregon Water Resources Department (OWRD) well logs in the Madras area to determine the depth of groundwater in the vicinity of the project site. A copy of the well log query is provided in Appendix B. Reported groundwater depths are typically 20 ft or more below ground surface (bgs). However,

groundwater depths as shallow as 12 feet bgs were reported in wells located approximately 0.9 miles east of the project site near Willow Creek. One well located approximately 0.4 miles to the south of the project site reported a groundwater level of 30 ft bgs. Wells located between 0.6 and 0.9 miles north of the project site reported groundwater levels ranging from 15-32 ft bgs.

2 Site Investigation

R4 HazMat performed a reconnaissance of the project site on May 10, 2012. Peter Carlson, owner of the project site, was present during the site visit. Reconnaissance activities consisted of viewing the property from adjacent roadways, systematically traversing the property and inspecting accessible interior areas of buildings located on the property. Visual reconnaissance of adjoining properties was limited to observation points within the project site and from ODOT and City of Madras right-of-way. Photographs documenting project site observations are included in Appendix C.

2.1 **Project Site Observations**

The approximately 0.7-acre project site is located in a commercial area and is primarily used for retail business. Improvements at the project site consist of a commercial building (Photo C-1) located on the west side of the property adjacent to US97 and a shop building located near the northeast corner of the property (Photo C-2). The commercial building is occupied by two businesses, (1) Miller's Discount Groceries (Photo C-3) and (2) Central Oregon Heating and Cooling (Photo C-4). Parking lots are present on the east and west sides of the commercial building.

Utilities observed at the project site include overhead electric lines and underground telephone, water, sewer and gas lines. The on-site buildings are apparently heated using natural gas.

2.2 Adjacent Properties

Adjacent property uses, described below, were identified by direct observation and record reviews.

- North of the project site: Martinas Market (839 SW Hwy 97)
- South of the project site: unnamed apparent truck repair facility (Photo C-5), formerly Wolfe Truck and Equipment¹ (916 SW Hwy 97)
- West of the project site: South Y Complex (commercial office building, 910 SW Hwy 97)
- East of the project site: automotive repair facility (Photo C-6) with no business name visible on the building or any signs (874 S. Adams Dr). This site was formerly operated as Jerry's Muffler Service¹.

¹See the January 14, 2008 Hazardous Materials Corridor Study: US97 at "J" Street, prepared by GeoEngineers

2.3 Potential Sources of Hazardous Substances

Table 1 summarizes potential sources of hazardous substances that were observed at and adjacent to the project site. Potential sources identified are discussed in detail below:

Heating oil tanks	None Observed
Aboveground Storage Tanks (ASTs)	Yes
USTs, fill and vent pipes, fuel dispensers	Yes
Other hazardous substance containers	Yes
Hazardous waste generation	None Observed
Oil water separators, dry wells or floor/storm drains	None Observed
Septic systems	None Observed
Stains or odors	Yes
Stressed vegetation	Yes
Solid waste	Yes
Suspect asbestos-containing materials	Yes
Suspect lead-based paint	Yes
Potential PCB-containing equipment	Yes
Florescent or high intensity discharge (HID) lamps	Yes
Treated timbers	Yes
Water wells or monitoring wells	None Observed

 Table 1. Potential sources of contamination that were identified during on-site reconnaissance.

Aboveground Storage Tanks

An above-ground poly storage tank that apparently contained waste oil was observed on the former Jerry's Muffler property located adjacent east of the project site (Photo C-7). The outside of the AST appeared to be stained with oil and a wood pallet under the AST also appeared to be oil-stained. Soil contamination beneath the AST is suspected based on the staining observed on the outside of the AST. This AST is not considered to pose a risk to the project because it is located 80 ft from the project site and the quantity of released oil appears to be small.

Underground Storage Tanks, Pipes and Fuel Dispensers

USTs were observed at the active Shell service station (Madras J and L Truck Stop) located 0.07 miles south of the project site (Photo C-8). This facility is discussed in Sections 4.2.4 and 4.2.5.

Other Hazardous Substance Containers

Hazardous substance containers designed for consumer end use were observed in the portion of the commercial building that is occupied by Central Oregon Heating and Cooling (Photos C-9 and C-10). Examples of hazardous substances observed included pipe thread sealant, vacuum pump oil, and coil cleaner. All of these substances were stored in their original containers on sturdy shelves. The storage area was clean and

organized and no evidence of spills or leaks was observed. This site is not considered to pose a risk to the project.

Septic Systems

No septic systems were directly observed on the project site. However, Mr. Carlson indicated that a septic tank that was abandoned in place was present on the property (see Section 3.4).

Stains or Odors

Surface motor oil stains are suspected at the former Jerry's Muffler facility where several vehicles are frequently parked along the west property line with the project site (Photo C-6). Due to wet soil conditions during the project site reconnaissance, oil stains were difficult to identify.

Stressed Vegetation

Stressed vegetation was observed at the former Jerry's Muffler facility. Dead arborvitae trees were observed adjacent to the AST (Photo C-7) and along the east and west sides of this property. It is not known whether contaminants or lack of water caused the death of these trees.

Solid Waste

Solid waste was observed at the project site along the eastern property line (Photos C-11 to C-13). Most of this material was debris consisting of cardboard and plastic containers and other light materials that were apparently blown by wind into the property line fence. Miscellaneous automobile parts, tires, cardboard, and plastic materials were observed on the east side of the fence on the former Jerry's Muffler property.

Suspect Asbestos-Containing Materials

Old electrical panels and meters were observed in the shop building that may contain asbestos (Photos C-14 to C-17). No other suspected asbestos-containing materials were observed. ODOT Region 4 Right of Way (R4 R/W) will have an asbestos survey performed on all structures prior to demolition of the buildings.

Suspect Lead-Based Paint

Peeling/damaged paint was observed on the exterior of the shop building (Photo C-18). Since this building was constructed prior to 1978, it is suspected that this paint contains lead. ODOT Region 4 Right-of-Way (R4 R/W) will have a lead-based paint survey conducted prior to demolition.

Florescent or High Intensity Discharge Lamps

Florescent lights were observed inside the shop building and in both businesses in the commercial building (Photos C-21 and C-22). One high intensity discharge (HID) lamp was observed on the outside of the shop building (Photo C-23) and another HID lamp was observed on the treated utility pole that is located near the northwest corner of the project site (Photo C-24).

Florescent and HID lamps may contain mercury. R4 R/W will address the fluorescent and HID lamps associated with the buildings as part of the demolition contract. If the HID lamp on the treated utility pole requires removal or relocation, the owner of the HID lamp will need to be determined to address the removal or relocation.

Potential PCB-Containing Equipment

The florescent light ballasts that were observed in the commercial and shop buildings may contain polychlorinated biphenyls (PCBs).

An apparent former hydraulic lift pit was observed in the west bay of the shop building (Photo C-19). The evidence for the hydraulic lift includes a square concrete patch measuring approximately three by three feet with a linear concrete patch measuring approximately six inches wide leading from the square patch to the west wall. Releases of hydraulic fluid that may contain PCBs were suspected to have occurred in the soils underneath the shop building (See Section 6.0).

A neon sign that may have an internal transformer that contains PCBs was observed leaning up against the east side of the shop building (Photo C-20).

Treated Timbers

Creosote-treated timbers were observed at the former Jerry's Muffler Service property located adjacent east of the project site (Photo C-25). These timbers were located adjacent to the property line and were apparently used as parking barriers. These timbers are not considered to pose a risk to the project because they are not located within the project site.

Creosote-treated utility poles are present on and adjacent to the project site. If these poles require removal or relocation during construction, the utility company that is responsible for these poles will address the relocation or removal.

2.4 Interviews

On July 16, 2012, R4 HazMat attempted to contact Gerald Barker and Wesley Hudson, former owners of the project site to learn more about past uses. A voice message was left for Gerald Barker and the phone number for Wesley Hudson was reported as "disconnected and no longer in service". Mr. Barker had not returned the phone call as of the date of this report.

The current owner of the project site, Peter Carlson, was present and interviewed during the site reconnaissance by R4 HazMat (see Section 3.4).

3 Historic Records

3.1 Project Site Ownership

The ODOT Region 4 Right of Way unit obtained a chain of title for the project site from Amerititle. A summary of past ownership is presented in Table 2.

Past Owners	Date of Purchase
William and Pauline Steinke	March 1, 1910
Jesse Hobson	March 5, 1910
Northwest Townsite Company	January 30, 1911
Jane Y Richards	September 13, 1911
J W Wood	October 5, 1916
United Assets Company	February 14, 1920
Metropolitan Company	February 14, 1920
Jefferson County	June 29, 1927
Oregon State Highway Commission	December 15, 1939
Martin and Hettie Flood	January 16, 1946
Louis and Annabelle Kinkade	September 13, 1956
Langston D and Clarice A Fisher	October 26, 1961
Jessie M and Clifford E Yarnell	December 10, 1969
Frank, Owen, and Dean Larkin – Larkin Properties	April 12, 1977
Gerald Earnest Barker	May 24, 1978
David H and Carl H Martin and Ronald D Tanner	December 30, 1982
David A and Carl H Martin	June 19, 1986
David P and Kay L Rixe	June 1, 1988
Gerald Earnest Barker	May 17, 1990
Gerald Earnest and Lois E Barker	February 11, 1992
Wesley L and Janice I Hudson	August 22, 2001
Carlson Properties, LLC	July 26, 2005

 Table 2.
 Summary of past ownership for Tax Lot 11.13.11DD Lot 6901.

3.2 Environmental Liens

Environmental Liens are an encumbrance upon title to a property to secure the payment of damages or debt arising out of environmental response actions. No environmental liens or property use limitations were identified for the project site.

3.3 Local Government Records

The Jefferson County Assessor's Office provided one photo dated August (day unknown) 1995 and two photos dated December 8, 1988 of the project site (Appendix D, Photos D-1 to D-3). The Assessor's records did not contain any additional information regarding past uses.

No information on past uses of the project site was found in the August, 1995 photo. However, one of the December 8, 1988 photos showed that the commercial building was formerly a tire shop (M&M Tires). The tire shop had a "For Sale" sign on the front and appeared to be out of business.

3.4 Owner / Operator

R4 HazMat interviewed Peter Carlson, owner of the project site on May 10, 2012. Mr. Carlson indicated that, to his knowledge, there are no underground storage tanks (USTs), heating oil tanks (HOTs), oil water separators, dry wells or shop drains present on the project site. Mr. Carlson stated that the current commercial building was remodeled in

the 1980s and that this building was a tire shop prior to remodeling. After the tire shop, the building was operated as Wes' Floor Covering.

Mr. Carlson stated that an on-site septic tank was decommissioned in place and filled with inert materials in the middle 1990's when the property was placed on the City of Madras sewer system.

3.5 Historic Aerial Photographs

ODOT reviewed selected historic aerial photographs dated 1944, 1951, 1961, 1968, 1976, 1982, 1994, and 2005 that were obtained from the University of Oregon Map Library to clarify past land uses on the project site and adjacent properties. Land uses observed are described in Tables 2a and 2b and copies of the reviewed photographs are included in Appendix D.

Site #	Address/Location	1944	1951	1961	1968
1	837 SW Hwy 97	Vacant	Vacant	Commercial	Commercial
	(project site)			Building	and Shop
					Buildings
2	874 S Adams Dr.	Vacant	Vacant	Vacant	Vacant
3	916 SW Hwy 97	Vacant	Vacant	Vacant	Possible Truck
					Repair
4	992 SW Hwy 97	Vacant	Vacant	Vacant	Apparent
					Service Station
5	838 SW Hwy 97	Vacant	Vacant	Vacant	Apparent
					Service Station

Table 2a. Past land uses as determined by a review of historic aerial photographs from 1944 to 1968.

Table 2b. Past land uses as determined by a review of historic aerial photographs from 1976 to 2005.

Site #	Address/Location	1976	1982	1994	2005
1	837 SW Hwy 97	Commercial	Commercial	Commercial	Commercial
	(project site)	and Shop	and Shop	and Shop	and Shop
		Buildings	Buildings	Buildings	Buildings
2	874 S Adams Dr.	Vacant	Vacant	Apparent	Apparent
				Automotive	Automotive
				Repair	Repair
3	916 SW Hwy 97	Possible	Apparent	Apparent	Apparent
		Truck Repair	Truck Repair	Truck Repair	Truck Repair
4	992 SW Hwy 97	Apparent	Service	Service Station	Service Station
	-	Service	Station		
		Station			
5	838 SW Hwy 97	Apparent	Apparent	Apparent	Apparent
		Service	Service	Service Station	Service Station
		Station	Station		

3.6 Sanborn Fire Insurance Maps

No Sanborn Fire Insurance Maps are available for the project site.

3.7 Reverse Directories

R4 HazMat attempted to locate historical reverse directories at the Jefferson County Library on May 10, 2012 and found that no reverse directories are available.

3.8 Historic Summary

Based on the reviewed historic records, the project site was first developed between 1951 and 1961. The commercial building was constructed between 1951 and 1961 and the shop building was added between 1961 and 1968. Modifications to the commercial building occurred between 1968 and 1976 and between 1976 and 1982. In 1988, the project site was operated as a tire shop.

An apparent service station was constructed across US97 (west) from the project site between 1961 and 1968. This former service station is discussed in Section 4.2.4.

A possible truck repair facility and apparent service station were constructed across SE L St. (south) from the project site between 1961 and 1968. The truck repair facility is discussed in Section 2.2 and the service station is discussed in Sections 4.2.4 and 4.2.5.

An apparent automotive repair facility (former Jerry's Muffler) was constructed adjacent east of the project site between 1982 and 1994. This facility is discussed in Sections 2.2 and 2.3.

4 Environmental Records

ODOT reviewed available federal and State records for identified hazardous materials sites. The databases searched and the search radii used are listed in Table 3. Search radii are based on ASTM standards, unless otherwise indicated in the Sections below. Copies of the reviewed federal and state records are included in Appendix E.

Database Record	Search Radius (Miles)	Total Sites Found	On Project Site	On Adj. Property
Federal NPL	1.0	0	0	0
Federal CERCLIS	0.5	0	0	0
Federal RCRA Generators	Site and Adjacent	0	0	0
Federal RCRA TSD Facilities	0.5	0	0	0
Federal RCRA CORRACTS	1.0	0	0	0
Federal NRC	Site	0	0	0
State ECSI	0.5	2	0	0
OSFM Hazardous Substance Incidents	Site and Adjacent	0	0	0
Oregon Permitted Landfills	0.5	0	0	0
State LUSTs	0.25	4	0	2
State Listed USTs	Site and Adjacent	1	0	1

Table 3. Summary of Federal and State environmental records research findings.

4.1 Federal Databases

4.1.1 National Priority List (NPL)

NPL sites (also known as *Superfund* sites) have been determined by the U. S. Environmental Protection Agency (EPA) to present long-term threats to public health and the environment. There are no NPL sites listed within one mile of the project site.

4.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

CERCLIS is the official repository for federally-listed sites not included in the NPL. There are no CERCLIS sites listed within 0.5 miles of the project site.

4.1.3 Resource Conservation and Recovery Act (RCRA) Generators

RCRA generators are facilities that generate or store a defined amount of hazardous waste in any one calendar month and are subject to regulatory control. There are no RCRA generators listed within or adjacent to the project site.

4.1.4 RCRA Treatment Storage and Disposal Facilities (TSD)

TSD facilities are RCRA permitted facilities that treat, store or dispose of hazardous waste and are not currently subject to Corrective Action under RCRA. No TSD facilities are listed within 0.5 miles of the project site.

4.1.5 RCRA Corrective Action Sites (CORRACTS)

The RCRA CORRACTS list includes TSD facilities subject to corrective action under RCRA due to facility violations. There are no CORRACTS facilities listed within one mile of the project site.

4.1.6 National Response Center (NRC)

The NRC acts as a hazardous materials incident reporting center for the EPA and U.S. Coast Guard. No releases were found in the NRC database on or adjoining the project site.

4.2 State Databases

4.2.1 Environmental Cleanup Site Information (ECSI)

The Oregon Department of Environmental Quality (DEQ) ECSI list includes sites on the Confirmed Release List (CRL) and the CRL Inventory. DEQ lists two ECSI sites within 0.5 miles of the project site as shown in Table 4.

Site Name and Location	DEQ ID#	Distance (Miles)	Direction (N,S,W,E)	Regulatory Status
Madras Dry Cleaning and Laundry (former)	3171	0.16	SW	Suspect Site Requiring
1036 SW Hwy 97				Further Investigation
Les Schwab – Madras (former)	4617	0.4	SW	Suspect Site Requiring
1412 SW Hwy 97				Further Investigation

Table 4. DEQ-listed ECSI sites within 0.5 miles of the project corridor.

Madras Dry Cleaning and Laundry (former)

According to the ECSI report, the Madras Dry Cleaning and Laundry facility was added to the ECSI database for tracking purposes as a former dry cleaner. This site may have a cleaning machine that uses perchloroethylene. No releases have been reported. This facility is unlikely to pose a risk to the project because it is located 0.16 miles (more than 800 ft) from the project site.

Les Schwab – Madras (former)

According to the ECSI report, the Les Schwab – Madras facility is contaminated with diesel, oil, zinc and copper. The contamination at this site is not considered to pose a risk to the project because it is located 0.4 miles from the project site.

4.2.2 Oregon State Fire Marshal (OSFM) Hazardous Materials Incidents

There are no OSFM incidents listed within or adjacent to the project site.

4.2.3 Solid Waste Landfills

There are no DEQ-permitted landfills listed within 0.5 miles of the project site.

4.2.4 Leaking Underground Storage Tanks (LUSTs)

DEQ maintains the list of LUST facilities, which includes known sites where leaks in buried tanks have been reported. DEQ lists four LUST sites within 0.25 miles of the project site as summarized in Table 5.

Site Name and Location	DEQ ID#	Distance (Miles)	Direction (N,S,W,E)	Regulatory Status
South Side Texaco	16-98-	0.04	W	Cleanup
838 SW Hwy 97	0067			Completed
Western Auto	16-98-	0.21	Ν	Cleanup
717 SW 5 th St.	0079			Completed
Madras J & L Truck Stop	16-94-	0.07	S	Cleanup
992 SW Hwy 97	0027			Completed
Bob's Thrifty Gas	16-91-	0.17	S	Cleanup
1099 SW Hwy 97	0071			Completed

Table 5. DEQ-listed LUST sites located within 0.25 miles of the project site.

South Side Texaco

According to the LUST report, gasoline and diesel contamination was discovered during UST decommissioning. Cleanup was initiated on October 13, 1998 and completed by February 17, 1999. The "Texaco" sign for this facility is visible in Photo D-3.

According to the December 10, 1998 Site Closure report, 132.77 tons of contaminated soil was excavated and disposed of at Knott Landfill in Bend. Petroleum hydrocarbons were detected in two of the six soil confirmation samples that were collected from the UST excavation. Gasoline was detected in one soil sample at a concentration of 707 mg/kg and a combination of diesel and heavy oil was detected in another soil sample at a concentration of 405 mg/kg.

The South Side Texaco facility is not considered to pose a risk to the project because it is located 0.04 miles (200 ft) cross-gradient from the project site.

Western Auto

According to the LUST report, lubricant contamination was discovered during UST decommissioning at the former Western Auto facility (Photo C-26). Cleanup was initiated on November 17, 1998 and was completed on March 18, 2010.

According to the January 1, 1999 Site Closure Report, no observable contamination was present in the excavation after the USTs were removed. However, a laboratory analysis on one of the six analyzed confirmation soil samples detected heavy oil at 187 mg/kg. This concentration was below DEQ cleanup requirements so the UST excavation was backfilled.

The Western Auto facility is not considered to pose a risk to the project because this facility is located 0.21 miles down-gradient of the project site.

Madras J and L Truck Stop

According to the LUST report, diesel contaminated soil was discovered during UST decommissioning at the Madras J and L Truck Stop (Photo C-8). Cleanup was initiated on June 23, 1994 and completed by May 11, 1995.

According to the March 24, 1995 Underground Storage Tank Decommissioning Report prepared by Century West Engineering, diesel contamination as high as 570 mg/kg is present at a depth of two ft below ground surface adjacent to the US97 right-of-way. Residual petroleum contamination as high as 75 mg/kg is present in the former UST excavation located adjacent east of the restaurant/store.

The Madras & L truck stop is not considered to pose a risk to the project because of the low concentrations of known residual contamination and because it is located approximately 350 feet from the project site.

Bob's Thrifty Gas

According to the LUST report, gasoline-contaminated soil was discovered upon UST decommissioning. Cleanup was initiated on October 2, 1991 and completed by April 25, 1992. Any residual contamination that might be present is not considered to pose a risk to the project because this facility is located 0.17 miles (900 feet) from the project site.

4.2.5 Underground Storage Tanks (USTs)

There is one DEQ-permitted UST facility located adjacent to the project site as shown in Table 6. DEQ-permitted USTs are required to have double-walled tanks, double-walled piping and leak detection systems. Therefore, the active USTs listed in Table 6 are considered to pose a low risk to the project.

Facility Name and Location	DEQ ID#	Direction (N,S,W,E)	Tank Size, Content & Status
Madras J & L Truck Stop 992 SW Hwy 97	210	S	10,000 gallons, diesel 6,000 gallons, gasoline 12,000 gallons, gasoline 6,000 gallons, gasoline

 Table 6. DEQ-registered UST facilities located adjacent to the project corridor.

5 ISA Checklist

The AASHTO Initial Site Assessment Checklist is a record of the field inspection of present land uses, determining the potential for hazardous waste at a project site according to AASHTO guidelines. A copy of the ISA checklist for the project site is attached in Appendix F.

6 Subsurface Investigations

Based on the Phase I activities described in Sections 1-5, R4 HazMat recommended Phase II subsurface sampling within the project site to determine the presence/absence of contamination at the following locations:

- Along the eastern property line where contamination that may have migrated offsite from the adjacent former Jerry's Muffler Service facility.
- Below the apparent former hydraulic lift pit that is located in the project site shop building where releases of hydraulic fluid may have occurred.

6.1 Geophysics Survey

GeoPotential out of Brightwood, Oregon conducted a geophysical survey at the project site on June 15, 2012 using a magnetometer, ground-penetrating radar, and other instrumentation (Photos C-27 and C-28). The purpose of the survey was to clear proposed boreholes for utilities and to locate potential unknown underground features such as USTs. A copy of the geophysical survey report is provided in Appendix G.

No anomalies characteristic of USTs were found. The survey data suggests that the concrete pad located in front of the east shop garage door and the concrete floor in the shop are reinforced with rebar.

A probable well was identified in the northeast corner of the project site.

6.2 Soil Borings

BB&A Environmental out of Coburg, Oregon, advanced nine borings at the project site with a push probe sampling system on June 25, 2012 (Figure 3, Photos C-29 and C-30). Four borings were advanced along the east property line of the project site and five borings were advanced inside the shop building in and adjacent to the former hydraulic lift pit and service line.

Soil samples were collected in five-foot long disposable plastic liners. R4 HazMat screened the soil samples for contamination by observing for staining, odor, and elevated photo-ionization detector (PID) readings. Soil samples were selected for lab analysis based on field screening and geologic indicators of where contamination may accumulate such as the soil/bedrock interface. R4 HazMat also logged the recovered soils using the Unified Soil Classification System (USCS).

The selected soil samples were placed in laboratory-prepared containers, labeled, placed in a cooler with ice, and shipped under chain-of-custody protocol to Environmental Sciences Corporation (ESC) for laboratory analysis. Appendix H contains the boring logs, including geologic descriptions and screening results. Figure 3 shows the boring locations.

6.3 Laboratory Analytical

On June 26, 2012, R4 HazMat submitted 16 soil samples from the push probe borings to ESC. All except two of the samples were analyzed for one or more of the following:

- Diesel Range Hydrocarbon Identification by NWTPH-Dx (Dx analysis includes residual-range organic hydrocarbons (RRO)).
- Volatile Organic Compounds (VOCs) by EPA Method 8260B
- Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082

The two samples that were not analyzed were held by the laboratory pending the analytical results of the other samples. Based on the analytical results (Section 6.4.2), the held samples were not analyzed.

6.4 Results

6.4.1 Geology and Hydrogeology

Based on samples recovered from the borings, the site geology is characterized by a silty sand soil overlying a moderately welded volcanic tuff. The soil thickness was found to be between 0.5 and two feet thick. The bottom of the welded tuff was not encountered in

any of the borings so this unit extends to a depth of at least 13 ft bgs based on the depth of the deepest boring. The boring through the center of the apparent former hydraulic lift pit encountered fill (silty SAND with Gravel) to a depth of eight feet bgs.

6.4.2 Analytical Results

Laboratory analyses detected diesel- and residual-range organic hydrocarbons and volatile organic hydrocarbons in soil samples that were collected in the boring that was advanced through the center of the apparent former hydraulic lift pit. No contamination was detected in any of the four borings that were advanced adjacent to the hydraulic lift pit concrete patch or in any of the four borings that were advanced along the east property line.

Based on these results, the soil contamination appears to extend from just below the concrete patch to approximately 11 feet bgs. The quantity of contaminated soil is estimated to be 10 tons. Table 7 summarizes the analytical results and the complete laboratory analytical report is included in Appendix I. Figure 3 also shows a summary of the analytical results.

		NWTPH-	Dx, mg/kg	VOCs by EPA Method 8260, mg/kg		SVOCs by EPA Method	PCBs by EPA Method
Sample ID	Date	Diesel Range	Residual Range Organics	Acetone	2-Butanone (MEK)	8270, mg/kg	8082, mg/kg
P12-01-1'	6/25/12	BDL<4.5	BDL<11				
P12-02-0.5'	6/25/12	BDL<4.7	BDL<12				
P12-03-0.5'	6/25/12	BDL<4.7	BDL<12				
P12-04-1'	6/25/12	BDL<4.8	BDL<12				
P12-05-0'-5'	6/25/12	31	320				
P12-05-7.5'	6/25/12	1,800	10,000			BDL	BDL
P12-05-9.5'	6/25/12	1,700	8,900			BDL	BDL
P12-05-10.5'	6/25/12			0.28	0.12		
P12-05-13'	6/25/12	BDL<4.8	BDL<12				
P12-06-8'	6/25/12	BDL<4.7	BDL<12				
P12-07-9'	6/25/12	BDL<4.7	BDL<12				
P12-08-1'-2'	6/25/12	BDL<4.6	BDL<12				
P12-08-10'	6/25/12	BDL<4.9	BDL<12				
P12-09-11'	6/25/12	BDL<4.7	BDL<12				
DEQ Generic	RBC for	4,600	11,000**	NE	NE	NA	NA
Construction V	Vorkers*						
DEQ Generic	RBC for	>Max	>Max**	NE	NE	NA	NA
Excavation Workers*							

Table 7. Laboratory Analytical Results Summary

Notes:

-- = Sample not analyzed for that constituent.

Yellow highlighted cells indicated detection of the constituent analyzed.

Only VOC compounds that were detected at or above laboratory detection limits in one or more samples are listed in the table.

*These RBCs are for soil ingestion, dermal contact and inhalation exposure pathways.

**This RBC is for Generic Mineral/Insulating oil. This is the closest substance to residual range organics that has an established RBC.

NE = DEQ RBC not established for that constituent.

NA = DEQ RBC not applicable because these constituents were not detected at or above the laboratory detection limits in any analyzed sample.

>Max = The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, this substance is deemed not to pose risks in this scenario.

6.4.3 DEQ Generic Risk-Based Concentrations (RBCs)

The proposed construction activities include the demolition and removal of the shop building and excavation of the underlying soils. Therefore, soil ingestion, dermal contact and inhalation are recognized exposure pathways and the receptors are construction and excavation workers. As shown in Table 7, none of the detected constituents exceeded any generic RBCs.

7 Conclusions

ODOT Region 4 HazMat (R4 HazMat) performed a modified Phase I and II Environmental Site Assessment (ESA) for Tax Lot 11.13.11DD Lot 6901 for the US97: J Street Intersection (Madras South Y) Sec project. The project site is located at 837 SW Hwy 97 and supports two structures, a commercial building and a shop building. This ESA has identified the following as potential risks to the project:

- Florescent lamps that may contain mercury vapor are located inside the commercial building and on the exterior of the shop building. The florescent lamp ballasts may contain polychlorinated biphenyls (PCBs). A neon sign that is located on the east side of the shop building may also contain PCBs.
- Old electrical panels and meters that may contain asbestos are located in the shop building.
- The paint on the exterior of the shop building is suspected to be lead-based paint.
- Diesel- and residual-range organic hydrocarbon-contaminated soils are present below the concrete floor of the shop building in an apparent former hydraulic lift pit. Contamination appears to extend from just below the concrete shop floor to 11 feet below ground surface. The estimated amount of contaminated soil is 10 tons.

Based on the findings of this ESA, R4 HazMat recommends the following:

- The ODOT Right-of-Way unit will address the florescent/HID lamps and ballasts, PCBs, asbestos, and lead-based paint issues as part of the building demolition contract.
- The landowner should have the contaminated soil removed from the former hydraulic lift pit prior to ODOT acquisition of the property.
- If the landowner decides to not remove the contaminated soil, ODOT should have the construction contractor remove the contaminated soils during construction. The appraised value of the property should be adjusted to cover the costs that

ODOT will incur to remove the contaminated soils. The estimated cost for removal and disposal of the contaminated soils is \$6,850.

- If the contaminated soil is removed during construction, special provisions will be required to address the excavation, handling, and disposal of the contaminated soil.
- Confirm the presence/absence of possible water well detected during the geophysical survey at the project site. If the presence of a water well is confirmed, the well should be abandoned in accordance with Oregon Water Resources Department regulations.

8 Limitations

This assessment was conducted according to AASHTO criteria and does not represent a standard American Society for Testing and Materials (ASTM) Phase I and II. It is for internal use only and may not be relied upon by any other entity without written permission from an authorized ODOT representative. This report is presented as current at the time of publication; it does not warranty against changes in land use or environmental conditions subsequent to its publication.

Performance of this assessment is intended to reduce but not eliminate uncertainty regarding the existence of environmental conditions. The AASHTO practice is intended primarily as an approach to identifying potential sources of contamination that could impact a project. Based on the AASHTO guide, this assessment constitutes appropriate inquiry into current and past uses of properties within the project corridor and is consistent with good commercial or customary practice. However, no environmental assessment can wholly eliminate uncertainty regarding the potential for environmental conditions in connection with a project.

9 Signatures of Environmental Professionals

Report preparation conducted by Ryan Franklin, R.G.

Date

Technical review conducted by Curtis Ehlers, C.E.G.

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Date

Corporate review conducted by Randall K. Davis, C.E.G.

Signature

Date

Oregon Registered Geologist Stamp

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Appendix A

Maps and Figures

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Map Produced: 01/26/2012





DISCLAIMER: This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.





OREGON DEPARTMENT OF TRANSPORTATION Figure 2. Project Site US97 @ J St. Intersection (Madras South Y) Sec. Key #15409 The Dalles - California Hwy Madras, Jefferson County



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OREGON DEPARTMENT OF TRANSPORTATION

Figure 3. Boring Locations and Analytical Results US97 @ J St. Intersection (Madras South Y) Sec. Key #15409 The Dalles - California Hwy Madras, Jefferson County

Note:

Dx = Diesel Range Hydrcarbons by NWTPH method RRO = Residual Range Hydrocarbons by NWTPH method VOCs = Volatile Organic Hydrocarbons by Method 8260 SVOCs = Semi-volatile Organic Hydrocarbons by Method 8270 PCBs = Polychlorinated Biphenyls by Method 8082 BDL = Below laboratory detection limits Det = Constituent detected at or above laboratory detection limits

Det = Constituent detected at or above laboratory detection limits

25 50 100 Feet

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Oregon Water Resources Department Well Log Query

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Townshin: 11 S. Range: 13 F. Sections: 11 12 13 14

1000131	np. 11 3, r	ang	Je. 15 L, Sections.	11,12,13,14																						
Well Log	T-R-S/ QQ-Q	Taxlot	Street of Well	Owner	Company	Special Standards	Well Type	First Water	Completed Depth	Static Nater Level	Yield	Completed Date	Received Date	Bonded Constructor	Startcard	Well Id #	New	Deepen	Alteration	Conversion	Irrigation	Community	Industrial	Injection	Dewatering	Piezometer
JEFF_110	11.00S-13.00E-13 NW-SW	1300		BUSH, MIKE 371 SE DEMICK LANE MADRAS OR 97741			w	404.00	470.00	348.0	2.0	08/01/1992	09/04/1992	BUCKNER, ROBERT	41950		V	T	Π			T				
JEFF_437	11.00S-13.00E-11		212 SECOND ST W	LANDLES, MR JIM MADRAS OR 97741			w		77.00	40.0	10.0	06/26/1959	06/29/1959	KOWALESKI, LAWRENCE			1			V						
JEFF_438	11.00S-13.00E-11 SW-SE			ALLEN, LEROY RT 1 BOX 14 MADRAS OR 97741			w		410.00	305.0	12.0	09/19/1978	10/11/1978	KOWALESKI, LAWRENCE				1			1					
JEFF 439	11.00S-13.00E-11 SW-SE			ALLEN, LEROY RT 1 BOX 14 MADRAS OR 97741			w	162.00	300.00			11/11/1977	12/14/1977	KOWALESKI, LAWRENCE			1				1					
JEFF_440	11.00S-13.00E-12			HOSMAN, JAMES 815 11TH ST MADRAS OR 97741			w		49.00	20.0	20.0	08/13/1966	08/16/1966	KOWALESKI, LAWRENCE			V				٧					
JEFF 441	11.00S-13.00E-12			HERRINGSHAW, JOHN MADRAS OR 97741			w		91.00	68.0	10.0	12/12/1959	03/02/1960	KOWALESKI, LAWRENCE			V			V						
JEFF 442	11.00S-13.00E-12			QINSK, ROBERT W 557 10TH MADRAS OR 97741			w		52.00	30.0	10.0	05/05/1959	05/11/1959	KOWALESKI, LAWRENCE			۹.			V						
JEFF_443	11.00S-13.00E-12 -			CHESTNUT, FLOYD T BOX 266 MADRAS OR 97741			w		66.00	49.0	7.0	04/30/1959	05/11/1959	KOWALESKI, LAWRENCE			V			V						
JEFF 444	11.00S-13.00E-12 -			KENDALL, ALLEN 1038 T C ST MADRAS OR 97741			w		52.00	14.0	10.0	05/14/1962	06/04/1962	KOWALESKI, LAWRENCE			V			~						
JEFF_445	11.00S-13.00E-12 -			MEHLENBECK, JAMES 819 EAST D ST MADRAS OR 97741			w		52.00	14.0	14.0	03/07/1959	04/14/1959	ABRAMS, BERT			V			1						
JEFF_446	11.00S-13.00E-12 NW-NE			BUCK, KENNETH R BOX 497 MADRAS OR 97741			w	25.00	390.00	225.0	17.0	07/10/1974	07/16/1974	CRAWFORD, DALE CRAWFORD WELL DRILLING			V			V						
JEFF_447	11.00S-13.00E-12 NE-SE			HOSMAN, JAMES 1015 11TH ST MADRAS OR 97741			w		49.00	20.0	10.0	05/11/1970	06/17/1970	LINN, DELBERT R					V		V					
JEFF_448	11.00S-13.00E-12 SW-SE			WALROD, BILL G PO BOX 496 MADRAS OR 97741			w		60.00	32.0	4.0	11/18/1969	11/28/1969	ABRAMS, BERT			V			1						
JEFF_449	11.00S-13.00E-12 -SE		707 D ST	GARD, BERN MADRAS OR 97741			w	18.00	38.00	15.0	30.0	03/31/1957	04/10/1957	ABRAMS, BERT			1			~						
JEFF_450	11.00S-13.00E-12 SW-NW				CITY OF MADRAS MADRAS OR 97741		w		520.00	200.0		05/31/1948	12/31/1948	MATHER & SONS			1									
JEFF_451	11.00S-13.00E-12 SE-NE			GRANT, A W GRIZZLEY RD MADRAS OR 97741			w		90.00	58.0	20.0	05/17/1968	06/27/1968	CRAWFORD, DALE			1				V					
JEFF_452	11.00S-13.00E-12 SE-NE			HERBSTER, CON MADRAS OR 97741			w		115.00	86.0	7.0	04/15/1961	04/18/1961	KOWALESKI, LAWRENCE			1			V						
JEFF_453	11.00S-13.00E-12 NE-SE			WALPORT, A E MADRAS OR 97741			w		73.00	41.0	7.0	09/05/1962	09/11/1962	ABRAMS, BERT			1			1						
JEFF_454	11.00S-13.00E-12 NE-SE			MCINTOSH, DELMAR PO BOX 432 MADRAS OR 97741			w		68.00	42.0	2.0	07/11/1962	07/30/1962	ABRAMS, BERT			*			V						
JEFF_455	11.00S-13.00E-12 NE-SE			HILLIS, HOWARD MADRAS OR 97741			w	58.00	85.00	55.0	5.0	04/16/1956	06/15/1956	ABRAMS, BERT			1			V						
JEFF_456	11.00S-13.00E-12 SW-SE			LOGUE JR, CLAYTON G BOX 460 MADRAS OR 97741			w		106.00	80.0	15.0	04/13/1963	05/10/1963	ABRAMS, BERT			v			1						
JEFF_457	11.00S-13.00E-13 NE-NE				MADRAS CATTLE FEEDERS MADRAS OR 97741		w		0.00	62.0	6.0	06/21/1968	07/01/1968	ABRAMS, BERT			× ×	1								
JEFF_825	11.00S-13.00E-12 -NW			OR			w		627.00	345.0	ė	12/31/1955	12/31/1955				1									
JEFF_868	11.00S-13.00E-11 NE-NE		15 NE 5TH ST, MADRAS		LEATHERS OIL CO. 22300 SE STARK ST GRESHAM OR 97030		м	26.00	40.00	26.0		05/02/1994	06/03/1994	CRISMAN, RANDY L	64740		~									
JEFF_870	11.00S-13.00E-11 NE-NE		15 NE 5TH ST, MADRAS		LEATHERS OIL CO. 22300 SE STARK ST GRESHAM OR 97030		м	28.00	40.00	27.5		05/02/1994	06/03/1994	CRISMAN, RANDY L	66201		٧									
JEFF_903	11.00S-13.00E-11 NE-NE		15 NE 5TH ST, MADRAS	_	LEATHERS OIL CO. 22300 SE STARK ST GRESHAM OR 97030		м	32.00	40.00	32.0		09/28/1994	11/04/1994	CRISMAN, RANDY L	71183		٧									
JEFF_905	11.00S-13.00E-11 NE-NE		15 NE 5TH ST, MADRAS		LEATHERS OIL CO. 22300 SE STARK ST GRESHAM OR 97030		м	32.00	40.00	32.0		09/28/1994	11/04/1994	CRISMAN, RANDY L	71185		V									
JEFF_907	11.00S-13.00E-11 NE-NE		15 NE 5TH ST, MADRAS		LEATHERS OIL 22300 SE STARK ST GRESHAM OR 97030		м	32.00	40.00	32.0		09/29/1994	11/04/1994	CRISMAN, RANDY L	72678		٧									
JEFF_50021	11.00S-13.00E-11 NE-NE		12 SW 5TH ST		WEST ONE BANK 12 SW 5TH ST MADRAS OR 97741		G		25.00			02/22/1996	03/01/1996				×.									
JEFF_50022	11.00S-13.00E-11 NE-NE	500	12 SW 5TH ST		WEST ONE BANK 12 SW 5TH ST MADRAS OR 97741		G		25.00			02/22/1996	03/01/1996				٧									

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Well Query Report

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JEFF_50023	11.00S-13.00E-11 NE-NE		12 SW 5TH ST		WEST ONE BANK 12 SW 5TH ST MADRAS OR 97741	G	25.00		02/22/1996	03/01/1996				~					
JEFF_50099	11.00S-13.00E-11 NW-NW	10000	15 NE 5TH AVE		LEATHERS MADRAS CO. 15 NE 5TH AVE MADRAS OR 97741	м 301.0	40.00	30.0	03/25/1996	08/26/1996	NIERMEYER, MICHAEL BRUCE CASCADE DRILLING INC.	87502	4401	V					\square
JEFF_50100	11.00S-13.00E-11 NW-NW	10000	15 NE 5TH AVE		LEATHERS MADRAS CO. 15 NE 5TH AVE MADRAS OR 97741	M 321.0	40.00	32.0	03/25/1996	08/26/1996	NIERMEYER, MICHAEL BRUCE CASCADE DRILLING INC.	87501		V					
JEFF 50216	11.00S-13.00E-11 SE-SW	7400	915 SW HWY 97		ARROW RENTALS 915 SW HWY 97 MADRAS OR 97741	G	0.00		06/05/1997	07/07/1997				V	~				
JEFF 50256	11.00S-13.00E-11 NW-NW	10000	15 NE 5TH ST, MADRAS	LEATHERS, BRENT	LEATHERS OIL CO. 22300 SE STARK GRESHAM OR 97030	м 32.0	0 45.00	32.0	12/03/1997	01/02/1998	NIERMEYER, MICHAEL BRUCE CASCADE DRILLING INC.	105507	17236	× 1					
JEFF_50308	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	30.00	27.0	06/15/1998	08/10/1998				V	v				
JEFF 50309	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	25.00	23.0	06/15/1998	08/10/1998				V	v				
JEFF_50310	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	25.00	23.0	06/15/1998	08/10/1998				V	v				
JEFF_50311	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	27.00	25.0	06/15/1998	08/10/1998				V	~				
JEFF_50312	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	27.00	25.0	06/15/1998	08/10/1998				V	Ń				
JEFF_50313	11.00S-13.00E-11 SE-SE	1700	14 NW 5TH STREET	CONROY, LEONARD	MILDRED CONROY 14 NW 5TH STREET MADRAS OR 97741	G	28.00	25.0	06/16/1998	08/10/1998				٧	v				
JEFF_50317	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				×					
JEFF_50318	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				×					
JEFF_50319	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				٧					
JEFF_50320	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	17.00		12/12/1997	08/24/1998				٧					
JEFF_50321	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				٧					
JEFF_50322	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				۷					
JEFF_50323	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				۷					
JEFF_50324	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				٧					
JEFF_50325	11.00S-13.00E-11 NE-NE	7200	145 4TH ST, MADRAS		B P OIL CO. 200 PUBLIC SQUARE CLEVELAND OH 44114	G	13.00		12/12/1997	08/24/1998				۷					
JEFF_50575	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B ST MADRAS OR 97741	M 12.0	20.00	12.0	08/03/1999	09/01/1999	MCINNIS, GREG GEO TECH EXPLORATIONS INC.	124555	33587	V					
JEFF_50576	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B ST MADRAS OR 97741	M 12.0	30.00	12.0	08/03/1999	09/01/1999	MCINNIS, GREG GEO TECH EXPLORATIONS INC.	124556	33588	3 V					
JEFF_50578	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B ST MADRAS OR 97741	M 12.0	35.00	12.0	08/03/1999	09/01/1999	MCINNIS, GREG GEO TECH EXPLORATIONS INC.	124557	33589	a v					
JEFF_50579	11.00S-13.00E-12 SE-SE		850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B STREET MADRAS OR 97741	G	15.00		08/03/1999	09/01/1999				٧	1				
JEFF_50580	11.00S-13.00E-12 SE-SE		850 SE GRIDLEY ROAD		CITY OF MADRAS PUBLIC WORKS 216 NW B STREET MADRAS OR 97741	G	35.00		08/03/1999	09/01/1999				۷	1	Ц			
JEFF_50581	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B STREET MADRAS OR 97741	G	25.00		08/03/1999	09/01/1999				٨	1	Ц			
JEFF 50582	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B STREET MADRAS OR 97741	G	35.00		08/03/1999	09/01/1999				V	V				
JEFF_50584	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIDLEY RD		CITY OF MADRAS PUBLIC WORKS 216 NW B STREET MADRAS OR 97741	G	15.00		08/03/1999	09/01/1999				۷	V				
JEFF_50635	11.00S-13.00E-13	300	SW BARD LANE; 8 ADAMS DR		CITY OF MADRAS 71 SE D ST MADRAS OR 97741	G	0.00	30.0	04/25/2000	05/02/2000				1	*				
JEFF_50647	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIZZLEY RD		CITY OF MADRAS; PUBLIC WORKS DEPARTMENT 216 NW B ST MADRAS OR 97741	м	0.00		05/31/2000	06/26/2000	BUCKNER, ROBERT D WESTERN WATER DEVELOPMENT CORP	131162	2		V				
JEFF_50648	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIZZLEY RD		CITY OF MADRAS; PUBLIC WORKS DEPARTMENT 216 NW B ST MADRAS OR 97741	м	0.00		05/31/2000	06/26/2000	BUCKNER, ROBERT D WESTERN WATER DEVELOPMENT CORP	131163	3		V				

Well Query Report

JEFF_50649	11.00S-13.00E-12 SE-SE		NEAR 850 SE GRIZZLEY RD		CITY OF MADRAS; PUBLIC WORKS DEPARTMENT 216 NW B ST MADRAS OR 97741	м	0	0.00		05/31/200	06/26/2000	BUCKNER, ROBERT D WESTERN WATER DEVELOPMENT CORP	131164						
JEFF_50656	11.00S-13.00E-12 -NW	8602	470 S 10TH, MADRAS	FIGURROA, PEDRO	J B BUILDERS (C/O) PO BOX 8182 BEND OR 97708	w	0	0.00		07/27/200	07/31/2000	AIKEN, WILLIAM D AIKEN WELL DRILLING	133415		`				
JEFF_50754	11.00S-13.00E-12 NE-SW	100	375 SE BUFF ST		BUFF SCHOOL 375 SE BUFF ST MADRAS OR 97741	G	0	0.00		04/19/200	2 05/15/2002				~ `				
JEFF_50755	11.00S-13.00E-12 NE-SW	100	375 SE BUFF ST		BUFF SCHOOL 375 SE BUFF ST MADRAS OR 97741	G	0	0.00		04/19/200	05/15/2002				1				
JEFF 50756	11.00S-13.00E-12 NE-SW	100	375 SE BUFF ST		BUFF SCHOOL 375 SE BUFF ST MADRAS OR 97741	G	0	0.00		04/19/200	05/15/2002				~ ~				
JEFF 50757	11.00S-13.00E-12 SE-NW	100	390 SE 10TH ST		MADRAS HIGH SCHOOL 390 SE 10TH ST MADRAS OR 97741	G	0	0.00		04/19/200	05/15/2002				~ ~				
JEFF 50758	11.00S-13.00E-12 SE-NW	100	390 SE 10TH ST		MADRAS HIGH SCHOOL 390 SE 10TH ST MADRAS OR 97741	G	0	0.00		04/19/200	05/15/2002				~ `				
JEFF_50869	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 131 MADRAS OR 97741		G	o	0.00		03/09/200	04/07/2004				~ `				
JEFF 50870	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	0	0.00		03/09/200	04/07/2004				1				
JEFF_50871	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	0	0.00		03/09/200	04/07/2004				1				
JEFF_50872	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	0	0.00		03/09/200	4 04/07/2004				1	-			
JEFF_50873	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	0	0.00		03/09/200	4 04/07/2004				1				
JEFF_50874	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	o	0.00		03/09/200	04/07/2004				1				
JEFF_50875	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	o	0.00		03/09/200	4 04/07/2004				1	0			
JEFF_50876	11.00S-13.00E-11 NW-NW	100	178 SW 4TH ST	GOLD, JOHN PO BOX 1313 MADRAS OR 97741		G	0	0.00		03/09/200	4 04/07/2004				~ ~				
JEFF_50896	11.00S-13.00E-12 SW-NE	615	GRIZZLY RD; 1 MILE FROM C ST		CITY OF MADRAS; WASTE WATER TREATMENT PLANT 71 SE D ST MADRAS OR 97741	G	o	0.00	0.0	11/04/200	11/29/2004			-	1	e.			
JEFF_50899	11.00S-13.00E-12 SW-NE	615	GRIZZLY RD; 1 MILE FROM C ST		CITY OF MADRAS; WASTE WATER TREATMENT PLANT 71 SE D ST MADRAS OR 97741	G	0	0.00	25.0	11/03/200	11/29/2004				~ `	e.			
JEFF_50977	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/07/200	07/13/2006				1	ē			
JEFF_50978	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/07/200	07/13/2006				1	6			
JEFF_50979	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/07/200	07/13/2006				1	6			
JEFF_50980	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/07/200	07/13/2006				~ ~				
JEFF_50981	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/08/200	07/13/2006				1				
JEFF_50982	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/08/200	07/13/2006				v ,				
JEFF_50983	11.00S-13.00E-12 SW-NW	3501	431 SE FIFTH ST, MADRAS, OR 97741		MADRAS REDEVELOPMENT COMMISION 71 SE D ST MADRAS OR 97741	G	30	0.00		06/08/200	07/13/2006				~ ~	f l			

Download Data Return to Well Log Query This Page Intentionally Left Blank
Appendix C

Representative Site Photographs



Photo C-1. View of the commercial building that is located on the west side of the project site. Photo taken facing northeast.



Photo C-2. View of the shop building located on the northeast portion of the project site. Photo taken facing north.



Photo C-3. View of the north half of the commercial building that is operated as Miller's Discount Groceries. Photo taken facing east.



Photo C-4. View of the south half of the commercial building that is operated as Central Oregon Heating and Cooling. Photo taken facing east.



Photo C-5. View of the former Wolfe Truck and Equipment facility that is located adjacent south of the project site. Photo taken facing southwest.



Photo C-6. View of the former Jerry's Muffler facility that is located adjacent east of the project site. Photo taken facing northeast.



Photo C-7. View of the apparent waste oil AST located on the south side of the former Jerry's Muffler building. Note the dead arborvitae tree. Photo taken facing north.



Photo C-8. View of the Madras J & L Truck Stop Shell service station (DEQ LUST Site #16-94-0027) located 0.07 miles south of the project site. Photo taken facing northeast.



Photo C-9. View of some of the Hazardous Substance containers that are stored in the Central Oregon Heating and Cooling facility located on the project site. Photo taken facing south.



Photo C-10. Another view of some of the hazardous substance containers that are stored in the Central Oregon Heating and Cooling facility located on the project site. Photo taken facing south.



Photo C-11. View of the solid waste that is located along the eastern property line of the project site. Photo taken facing north.



Photo C-12. Representative view of the solid waste that is located on the former Jerry's Muffler property along the eastern property line of the project site. Photo taken facing northeast.



Photo C-13. Another representative view of the solid waste that is located on the former Jerry's Muffler property along the eastern property line of the project site. Photo taken facing northeast.



Photo C-14. View of the east bay of the shop building located on the project site. Note the circuit breaker, electrical switches and meter located center right. Photo taken facing northeast.



Photo C-15. Close up view of one of the circuit breakers and electrical switches shown in Photo C-13. Photo taken facing northeast.



Photo C-16. Close up view of another circuit breaker and electrical switch shown in Photo C-13. Photo taken facing northeast.



Photo C-17. Close up view the electrical meter and an electrical switch shown in Photo C-13. Photo taken facing northeast.



Photo C-18. Representative view of the suspected lead-based paint on the shop building located on the project site. Photo taken facing west.



Photo C-19. View of the square concrete patch in the west bay of the shop building where an apparent former hydraulic lift was removed. Photo taken facing south.



Photo C-20. View of the neon sign that may contain a transformer with PCBs located on the east side of the shop building on the project site. Photo taken facing west.



Photo C-21. View of a fluorescent light fixture and bulbs in the shop building located on the project site. Photo taken facing east.



Photo C-22. View of fluorescent light fixtures and bulbs in Miller's Discount Groceries facility located on the project site. Photo taken facing south.



Photo C-23. View of the HID lamp located on the south side of the shop building located on the project site. Photo taken facing northwest.



Photo C-24. View of the HID lamp attached to the utility pole located on near the northwest corner of the project site. Photo taken facing northwest.



Photo C-25. View of one of the treated timbers located on the former Jerry's Muffler Service property located adjacent east of the project site. Photo taken facing southeast.



Photo C-26. View of the former Western Auto LUST site #16-98-0079 located 0.21 miles north of the project site. Photo taken facing southwest.



Photo C-27. View of GeoPotential performing a magnetic survey at the project site. Photo taken facing southwest.



Photo C-28. View of GeoPotential mapping rebar in the shop floor in the vicinity of the apparent former hydraulic lift in the shop building on the project site. Photo taken facing northeast.



Photo C-29. View of BB&A Environmental advancing a push probe boring along the eastern project site property boundary. Photo taken facing south.



Photo C-30. View of BB&A Environmental advancing a push probe boring in the vicinity of the apparent former hydraulic lift in the shop building on the project site. Photo taken facing southwest.

Appendix D

Historical Data



Fhoto D-2. View of the commercial building on the project site on December 8, 1988 when it operated as a tire store. Photo taken facing northeast.



Photo taken facing north.













Photo D-9. 1982 Historic Aerial Photograph of the project site vicinity. Site 1 is the project site.



Photo D-10. 1994 Historic Aerial Photograph of the project site vicinity. Site 1 is the project site.



Photo D-11. 2005 Historic Aerial Photograph of the project site vicinity. Site 1 is the project site.

Appendix E

Environmental Database Reports

Page	90	of	128
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Oklahoma (8 sites)									
Site Name	City	CERCLIS ID	Final Listing Date	Site Score	Federal Facility Indicator	Additional Information	Map It!		
						Federal Register Notice			
Imperial Refining Company	Ardmore	ОК0002024099	07 / 27 / 2000	30.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> Federal Register Notice			
Mosley Road Sanitary Landfill	Oklahoma City	OKD980620868	02 / 21 / 1990	38.06	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> Federal Register Notice			
Oklahoma Refining Co.	Cyril	OKD091598870	02 / 21 / 1990	46.01	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> Federal Register Notice			
Tar Creek (Ottawa County)	Ottawa County	OKD980629844	09 / 08 / 1983	58.15	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> Federal Register Notice			
Tinker Air Force Base (Soldier Creek/Building 3001)	Oklahoma City	OK1571724391	07 / 22 / 1987	42.24	Yes	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register Notice</u>			
Tulsa Fuel and Manufacturing	Collinsville	OKD987096195	01 / 19 / 1999	50.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> Federal Register Notice			
Oregon (14 sites)									
Site Name	City	CERCLIS ID	Final Listing Date	Site Score	Federal Facility Indicator	Additional Information	Map It!		
Black Butte Mine	Cottage Grove	OR0000515759	03 / 04 / 2010	50.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register Notice</u>			
Formosa Mine	Riddle	ORN001002616	09 / 19 / 2007	50.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register Notice</u>			
Fremont National Forest/White King and Lucky Lass	Lake County	OR7122307658	04 / 25 / 1995	50.00	Yes	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register Notice</u>			

Oregon (14 sites)							
Site Name	City	CERCLIS ID	Final Listing Date	Site Score	Federal Facility Indicator	Additional Information	Map It!
Fremont National Forest/White King and Lucky Lass Uranium Mines (USDA)	Lake County	OR7122307658	04 / 25 / 1995	50.00	Yes	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Harbor Oil	Portland	ORD071803985	09 / 29 / 2003	48.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
McCormick & Baxter Creosoting Co. (Portland Plant)	Portland	ORD009020603	05 / 31 / 1994	50.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
North Ridge Estates	Klamath Falls	ORN001002476	09 / 16 / 2011		No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Northwest Pipe & Casing/Hall Process Co	Clackamas	ORD980988307	10 / 14 / 1992	51.09	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Portland Harbor	Portland	ORSFN1002155	12 / 01 / 2000	50.00	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Reynolds Metals Company	Troutdale	ORD009412677	12 / 16 / 1994	70.71	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Taylor Lumber and Treating	Sheridan	ORD009042532	06 / 14 / 2001	71.78	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	
Teledyne Wah Chang	Albany	ORD050955848	09 / 08 / 1983	54.27	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>	

http://www.epa.gov/superfund/sites/query/queryhtm/nplfin.htm

Oregon (14 sites)									
Site Name	City	CERCLIS ID	Final Listing Date	Site Score	Federal Facility Indicator	Additional Information	Map It!		
Umatilla Army Depot (Lagoons)	Hermiston	OR6213820917	07 / 22 / 1987	31.31	Yes	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Union Pacific Railroad Co. Tie- Treating Plant	The Dalles	ORD009049412	08 / 30 / 1990	37.93	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
United Chrome Products, Inc.	Corvallis	ORD009043001	09 / 21 / 1984	31.07	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Pennsylvania (96 sites)									
Site Name	City	CERCLIS ID	Final Listing Date	Site Score	Federal Facility Indicator	Additional Information	Map It!		
A.I.W. Frank/Mid- County Mustang	Exton	PAD004351003	10 / 04 / 1989	42.40	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Avco Lycoming (Williamsport Division)	Williamsport	PAD003053709	02 / 21 / 1990	42.24	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Bally Ground Water Contamination	Bally Borough	PAD061105128	07 / 22 / 1987	37.93	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Bell Landfill	Terry Township	PAD980705107	10 / 04 / 1989	34.79	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			
Bendix Flight Systems Division	Bridgewater Township	PAD003047974	07 / 22 / 1987	33.74	No	<u>Site Listing Narrative</u> <u>Site Progress Profile</u> <u>Federal Register</u> <u>Notice</u>			

http://www.epa.gov/superfund/sites/query/queryhtm/nplfin.htm
http://curoulis.epa.gov/supercpad/cursites/srchrslt.cfm?



10085006&CFTOKEN=86041475&jsessionid=e0309e2d4be1ca28e1b62444c91754443712 Superfund

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Search Superfund Site Information

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Search Results

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Active vs.	Archived:
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County:	
State(s):	

Active What are active and archived sites? MADRAS **JEFFERSON** Oregon

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View Report 🛦	Materials Page	NRC Report #	Type of Call	Date/Time Received	Description Of Incident	Type Of Incident	Incident Cause	Incident Date/Time	e Location	State	Nearest City	County	Suspected Responsible Company	Medium Affected	Material Name
View	Materials	40875	INCIDENT	24-SEP-1990 16:40	TRUCK TRAILER / TRAILER DISENGAGED FROM TRUCK	MOBILE	UNKNOWN	24-SEP-1990 13:15	4TH STREET AT WILLOW CREEK	OR	MADRAS	JEFFERSON	CARSON OIL COMPANY	WATER	OIL: DIESEL
View	Materials	124201	INCIDENT	29-JUN-1992 22:34	TRUCK/OVERTURNED	MOBILE	OPERATOR ERROR	29-JUN-1992 18:22	HIGHWAY 26	OR	MADRAS	JEFFERSON		LAND	OIL: DIESEL
View	Materials	289675	INCIDENT	02-MAY-1995 16:59	FIRE FIGHTING SYSTEM WAS TRIGGERED DURING CONSTRUCTION	FIXED	OPERATOR ERROR	02-MAY-1995 09:31	COMPRESSOR STATION NO.11 STATE RD 26	OR	MADRAS	JEFFERSON	PACIFIC GAS TRANSMISSION	LAND	DIETHYLENE GLYCOL MONOBUTYL ETHE
View	Materials	469217	INCIDENT	30-DEC-1998 15:43	36 INCH DISTRIBUTION NATURAL GAS PIPELINE / MATERIAL RELEASED DUE TO AFAILED WELDED JOINT / THERE WAS NO FIRE OR EXPLOSION	PIPELINE	EQUIPMENT FAILURE	21-DEC-1998 07:00	COMPRESSOR STAION 11	OR	MADRAS	JEFFERSON	PACIFIC GAS AND ELECTRIC	AIR	NATURAL GAS
View	Materiais	477730	INCIDENT	22-MAR-1999 15:21	2.5 GALLON JUGS ON TRUCK/ TRUCK ROLLED OVER	MOBILE	OTHER	22-MAR-1999 12:00	BELMONT LANE, 1/4 MILE WEST OF CULVER HWY	OR	MADRAS	JEFFERSON	CENEX HAVEST STATES	LAND	GRAMOXONE - (PESTICIDE)
View	Materials	783115	INCIDENT	21-DEC-2005 13:00	CALLER STATED THERE WAS A RELEASE OF MATERIALS FROM A SADDLE TANK OF A TRACTOR TRAILER DUE TO A JACKKNIFED TRACTOR TRAILER. CALLER STATED THIS INCIDENT WAS CAUSED BY BLACK ICE ON THE ROADWAY.	MOBILE	NATURAL PHENOMENON	21-DEC-2005 N 10:00	INTERSTATED 97 SOUTHBOUND	OR	MADRAS	JEFFERSON	SWIFT TRANSPORTATION	WATER	OIL, FUEL: NO. 1-D
View	Materials	802197	INCIDENT	27-JUN-2006 12:34	CALLER STATED THAT A DRIVER WAS HOOKING UP HIS BOB TAIL AT AN UNMANNED FACILITY WHEN A FIRE STARTED IN THE COMPRESSOR SHACK DUE TO UNKNOWN CAUSES. THIS RESULTED IN THE DRIVER BEING SENT TO THE HOSPITAL WITH BURNS.	FIXED	UNKNOWN	26-JUN-2006 14:30	UNNAMED BULK STATION IN AN INDUSTRIAL PARK AREA ON CHERRY LANE	OR	MADRAS	JEFFERSON	FERRELL GAS INC	AIR	UNKNOWN MATERIAL
					CALLER IS										

QUERY RESULTS

http://www.nrc.uscg.mil/apex/f?p=109:2:530502544189803::NO:::

3/23/2012

NRC Standard Report

View	Materials	816842	INCIDENT	02-NOV-2006 08:57	REPORTING A SPILL OF DIESEL FUEL FROM THE SADDLE TANK OF A TRACTOR TRAILER TRUCK DUE TO TRUCK SLIDING ON SOME ICE AND ROLLING OVER.	MOBILE	TRANSPORT ACCIDENT	02-NOV-2006 05:20	HWY 26 ON OR ABOUT MILE MARKER 60 NORTH BOUND	OR	MADRAS	JEFFERSON	ATLANTIC & PACIFIC FREIGHTWAYS INC.	SOIL	OIL: DIESEL
View	Materials	824429	INCIDENT	23-JAN-2007 13:18	CALLER IS REPORTING A DISCHARGE OF GEAR BOX OIL FROM A GEAR BOX FOR A ROTATING SCREEN DUE TO THE GEAR BOX ICED UP AND EXPANDED WHICH CAUSED A CRACK.	FIXED	NATURAL PHENOMENON	19-JAN-2007 I 10:00	726 SW LOWER BEND ROAD	OR	MADRAS	JEFFERSON	PORTLAND GENERAL ELECTRIC	WATER	GEAR BOX OIL
View	Materiols	860343	INCIDENT	22-JAN-2008 19:04	CALLER IS REPORTING A DISCHARGE OF HYDRAULIC OIL FROM A CRANE AT THE ROUND BUTTE DAM DUE TO EQUIPMENT FAILURE. APPROXIMATELY 1 CUP IMPACTED THE FORE BAY.	MOBILE	EQUIPMENT FAILURE	22-JAN-2008 03:30	726 SW LOWER BEND ROAD	OR	MADRAS	JEFFERSON	BERNARD CONSTRUCTION	WATER	HYDRAULIC OIL
View	Materiols	897730	INCIDENT	17-FEB-2009 12:56	CALLER REPORTED WHILE WORKING ON A DAM, WHEN THEY PUT THE BOAT IN THE WATER AND DOCKED IT, THEY CAME BACK AND FOUND THE BOAT HAD SANK DUE TO A PLUG LEFT OPEN.	VESSEL	VESSEL SINKING	17-FEB-2009 07:00	4133 NORTHWEST HELTON DAMN RD	OR	MADRAS	JEFFERSON	PORTLAND GENERAL ELECTRIC	WATER	OIL, MISC: MOTOR
View	Materials	897730	INCIDENT	17-FEB-2009 12:56	CALLER REPORTED WHILE WORKING ON A DAM, WHEN THEY PUT THE BOAT IN THE WATER AND DOCKED IT, THEY CAME BACK AND FOUND THE BOAT HAD SANK DUE TO A PLUG LEFT OPEN.	VESSEL	VESSEL SINKING	17-FEB-2009 07:00	4133 NORTHWEST HELTON DAMN RD	OR	MADRAS	JEFFERSON	PORTLAND GENERAL ELECTRIC	WATER	OIL, FUEL: NO. 2
View)	Materiols	902090	INCIDENT	07-APR-2009 19:14	CALLER IS REPORTING A DISCHAAGE OF HYDRAULIC OIL FROM A HYDRAULIC LINE OFF A PIECE OF EQUIPMENT ON THE VESSEL DUE TO A BROKEN HYDRAULIC LINE DURING A CONSTRUCTION OPERATION. TIME OF INCIDENT: 1015 PST.	VESSEL	EQUIPMENT FAILURE	07-APR-2009 10:15	DESCHUTES RIVER, APPROX. MILE MARKER 110 726 SW LOWER BEND RD.	OR	MADRAS	JEFFERSON	PORTLAND GENERAL ELECTRIC	WATER	HYDRAULIC OIL

1 - 13

BACK TO ENTER QUERY

CREATE NEW QUERY

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Oregon DEQ Facility Profiler 2.0

Facility Summary Report

Print Report
12232/3
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Facility / Site Information for Location 92371

Facility / Site information	TOT LOCATION 3237 1		
Facility/Site Name:	LES SCHWAB - MADRAS (FORMER)	Latitude: Longitude:	44° 37' 3" -121° 8' 3.1"
Address:	1412 SW HIGHWAY 97	Location Accuracy:	HIGH
City State Zip:	MADRAS OR 97741	Last Updated:	4/11/2006 5:09:59 PM
Aliases			
Les Schwab - Madras (Former)	ECSI		
Geographic Features			
Township: T11S-R13E-S14	Congress Dist: 2 Fore	st Type: N/A	
County: JEFFERSON	OR Senate Dist: 30 Vege	etation: Western ju wheatgras	niper-big sagebrush-bluebunch s
Watershed: LOWER DESCHUTES	OR House ₅₉ Agri Dist: Lanc	cultural PREDOM	IRR
Drinking Water Source:	N/A		

Oregon DEQ Program Information

Environmental Cleanup (ECSI)

Operation ID	Start Date	NFA Date	Permit Type	Permit SubType	Status	Detail Information ¹	EPA Number
4617	04/11/2006		Contaminated Site		Suspect site requiring further investigation	ECSI Site Report	

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

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3/23/2012

Oregon DEQ: Site Details Environmental Cleanup Site Information (ECSI) Database

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Land Quality

Environmental Cleanup

DEQ Home > Land Quality > Environmental Cleanup > ECSI > Site Summary

Environmental Cleanup Site Information (ECSI) Database Site Summary Report - Details for Site ID 4617, Les Schwab - Madras (Former)

This report shows data entered as of March 23, 2012 at 4:29:46 PM

This report contains site details, organized into the following sections: 1) Site Photos (appears only if the site has photos); 2) General Site Information; 3) Site Characteristics; 4) Substance Contamination Information; 5) Investigative, Remedial and Administrative Actions; and 6) Site Environmental Controls (i.e., institutional or engineering controls; appears only if DEQ has applied one or more such controls to the site). A key to certain acronyms and terms used in the report appears at the bottom of the page.

Go to DEQ's Facility Profiler to see a site map as well is information on what other DEQ programs may be active at this site.

	General	Site Information					
Site ID: 4617	Site Name: Les Schwab - Madras (Former) CERCLIS No:						
Address:	1412 SW Hwy 97 Mac	Iras 97741					
	County: Jefferson		Region: Easter	'n			
Other location information:	1412 S. Highway 97,	Madras					
Investigation Status:	Suspect site requiring	further investigation					
	Brownfield Site: No	NPL Site: No	Orphan Site: No	Study Area: No			
Property:	Twnshp/Range/Sect:	11S , 13E , 14	Tax Lots: 100	and 300			
	Latitude: 44.6175 deg.	Longitude: -121.1342 deg.	Site Size:				
Other Site Names:							
	Site 0	Characteristics					
General Site Description:	(Bob Schwarz, Jan property was a tire used for farming fr	uary 16, 2008) The former store from the early 1960 om before 1944 until the 1	Les Schwab Tir s until 2004. Th 960s.	e Store e land was			
Site History:							
Contamination(Bob Schwarz, January 16, 2008) Sediment from the south drill hole wasInformation:sampled in January 2006. Contaminant concentrations include the follow (in mg/kg):							
	Diesel - 2,080 Oil - 4,000 Zinc - 1,970 Copper - 170						

Low concentrations of toluene and some PAHs were also found.

Manner and Time of Release: Hazardous Substances/Waste Types: Pathways: Environmental/Health Threats:	
Status of Investigative or Remedial Action:	(Bob Schwarz, Jan. 30, 2008) Data provided in 2006 indicate that site contamination is limited. DEQ requested additional information in a letter dated June 26, 2006. The owner has not provided the information, due to lack of funds.
Data Sources:	Level 1 Environmental Assessment for former Les Schwab Tire Store Property, 1412 S. Highway 97, Madras, Oregon. ECI. November 10, 2005 Letter report on the former Les Schwab Tire Store, 1412 S. Highway 97, Madras, Oregon. ECI. January 19, 2006.

	Substance (Contamina	ntion Information	
Substance	Media Contaminated	Conc	centration Level	Date Recorded
	No ir	oformation	is available	
	Investigative, Ren	nedial and	Administrative Actions	5
Action			Start Date Compl. Date	Resp. Staff Lead Pgm
Remedial Invest Action)	tigation recommended (RI)	(Primary	04/11/2006 04/11/2006	Bob VCS Schwarz
View Full Repor	t Showing Action History			

Key to Certain Acronyms and Terms in this Report:

CERCLIS No.: The U.S. EPA's Hazardous Waste Site identification number, shown only if EPA has been involved at the site.

Region: DEQ divides the state into three regions, Eastern, Northwest, and Western; the regional office shown is responsible for site investigation/cleanup.

NPL Site: Is this site on EPA's National Priority List (i.e., a federal Superfund site)? (Y/N). **Orphan Site**: Has DEQ's Orphan Program been active at this site? (Y/N). The Orphan Program uses state funds to clean up high-priority sites where owners and operators responsible for the contamination are absent, or are unable or unwilling to use their own resources for cleanup. **Study Area**: Is this site a Study Area? (Y/N). Study Areas are groupings of individual ECSI sites that may be contributing to a larger, area-wide problem. ECSI assigns unique Site ID numbers to both individual sites and to Study Areas.

Pathways: A description of human or environmental resources that site contamination could affect.

Lead Pgm: This column refers to the Cleanup Program affiliation of the DEQ employee responsible for the action shown. SAS or SAP = Site Assessment; VCS or VCP = Voluntary Cleanup; ICP = Independent Cleanup; SRS or SRP = Site Response (enforcement cleanup); ORP = Orphan Program.

You may be able to obtain more information about this site by contacting Bob Schwarz at the Eastern regional office or via email at schwarz.bob@deq.state.or.us. If this does not work, you may contact Gil Wistar at (503) 229-5512, or via email at wistar.gil@deq.state.or.us or contact the Eastern regional

office.

[print version]

For more information about **ECSI** call Gil Wistar at 503-229-5512 or email.

For more information about DEQ's Land Quality programs, visit the DEQ contact page.

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Headquarters: 811 SW Sixth Ave., Portland, OR 97204-1390 Phone: 503-229-5696 or toll free in Oregon 1-800-452-4011 Oregon Telecommunications Relay Service: 1-800-735-2900 FAX: 503-229-6124

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Facility Summary Report

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SWKS

Facility / Site Information for Location 98305

Facility/Site Name:		MADRAS LAUNDRY & DRY CLEANING (FORMER)	Latitude:		44° 37' 15.6" -121° 7' 56 3"	
Address:		1036 SW HWY 97	Location A	ccuracv:	HIGH	
City State Z	lip:	MADRAS OR 97741	Last Updat	ed:	9/13/2006 10:33:00 AM	
Aliases						
Madras Laur	ndry & Dry Cleaning	(Former) ECSI				
Geograph	ic Features					
Township:	T11S-R13E-S14	Congress Dist: 2 Forest	Туре:	N/A		
County:	JEFFERSON	OR Senate Dist: 30 Vegeta	ation:	Western juniper-big wheatgrass	sagebrush-bluebunch	

Watershed: LOWER DESCHUTES **Drinking Water Source:**

Oregon DEQ Program Information

Environmental Cleanup (ECSI)

Operation ID	Start Date	NFA Date	Permit Type	Permit SubType	Status	Detail Information ¹	EPA Number
3171	10/12/2001		Contaminated Site		Suspect site requiring further investigation	ECSI Site Report	

59 Agricultural

Land:

PREDOM IRR

SIC CODE	SIC Description	PRIMARY
7216	DRY CLEANING PLANTS (NO RUGS)	N

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

OR House

Dist:

N/A

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

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Oregon DEQ: Site Details Environmental Cleanup Site Information (ECSI) Database

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Land Quality

Environmental Cleanup

DEQ Home > Land Quality > Environmental Cleanup > ECSI > Site Summary

Environmental Cleanup Site Information (ECSI) Database Site Summary Report - Details for Site ID 3171, Madras Laundry & Dry Cleaning (Former)

This report shows data entered as of March 23, 2012 at 4:22:46 PM

This report contains site details, organized into the following sections: 1) Site Photos (appears only if the site has photos); 2) General Site Information; 3) Site Characteristics; 4) Substance Contamination Information; 5) Investigative, Remedial and Administrative Actions; and 6) Site Environmental Controls (i.e., institutional or engineering controls; appears only if DEQ has applied one or more such controls to the site). A key to certain acronyms and terms used in the report appears at the bottom of the page.

Go to DEQ's Facility Profiler to see a site map as well is information on what other DEQ programs may be active at this site.

General Site Information Site ID: 3171 Site Name: Madras Laundry & Dry Cleaning CERCLIS No: (Former) Address: 1036 SW Hwy 97 Madras 97741 County: Jefferson Region: Eastern Other location information: Investigation Status: Suspect site requiring further investigation Brownfield Site: No NPL Site: No Study Area: Orphan Site: No No Twnshp/Range/Sect: 11S, 13E, 12 Tax Lots: Property: Latitude: Longitude: Site Size: 44.621 deg. -121.1323 deg. Other Site Names:

Site Characteristics

General Site Description:	
Site History:	
Contamination	(11/8/01 DMC/SAS) Site added to database for tracking purposes as a dry
Information:	cleaner. (10/12/01 JM/HW) Site is now a dry store reporting to the HW Dry Cleaner program but once did dry cleaning on site. May still have a dry cleaning machine with perc in it on site.
Manner and Time of Release:	
Hazardous	

Substances/Waste Types:

Pathways:						
Environmental/H Threats:	lealth					
Status of Investigative or (11/8/01 DMC Remedial Action: cleaning mach to determine t)1 DMC/SAS) A g machine with rmine the statu	C/SAS) According to ER/HW staff, site may still have a dry chine with perc in it on site. Medium priority for further action the status of perc on site.			
Data Sources:		1. ER/H	IW staff Dry Cl	eaner List Annotations (10,	/12/01).	
		Sub	stance Conta	mination Information		
Substance	Media Co	ntamina	ated	Concentration Level	Date Reco	rded
			No informa	tion is available		
	Inv	vestigati	ive, Remedia	l and Administrative Act	ions	
Action				Start Date Compl. Da	te Resp. Staff	Lead Pgm
Site Screening re Action)	ecommend	ed (EV)	(Primary	11/08/2001 11/08/2003	1 Daniel Crouse	SAS
View Full Report	Showing A	Action His	story			

Key to Certain Acronyms and Terms in this Report:

CERCLIS No.: The U.S. EPA's Hazardous Waste Site identification number, shown only if EPA has been involved at the site.

Region: DEQ divides the state into three regions, Eastern, Northwest, and Western; the regional office shown is responsible for site investigation/cleanup.

NPL Site: Is this site on EPA's National Priority List (i.e., a federal Superfund site)? (Y/N). **Orphan Site**: Has DEQ's Orphan Program been active at this site? (Y/N). The Orphan Program uses state funds to clean up high-priority sites where owners and operators responsible for the contamination are absent, or are unable or unwilling to use their own resources for cleanup. **Study Area**: Is this site a Study Area? (Y/N). Study Areas are groupings of individual ECSI sites that may be contributing to a larger, area-wide problem. ECSI assigns unique Site ID numbers to both individual sites and to Study Areas.

Pathways: A description of human or environmental resources that site contamination could affect.

Lead Pgm: This column refers to the Cleanup Program affiliation of the DEQ employee responsible for the action shown. SAS or SAP = Site Assessment; VCS or VCP = Voluntary Cleanup; ICP = Independent Cleanup; SRS or SRP = Site Response (enforcement cleanup); ORP = Orphan Program.

For more information on this site contact the Eastern regional office.

[print version]

For more information about ECSI call Gil Wistar at 503-229-5512 or email.

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Oregon Department of Environmental Quality

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Facility Summary Report

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Maps		

Sw Hart St	JEFFERSON OF SWITCHERSON OF SWITCHER
0	Se Janes St

Facility / Site Information	n for Location 22606		
Facility/Site Name:	BOB'S THRIFTY GAS	Latitude:	44° 37' 8.49"
Address:	1099 SW HWY 97	Longitude:	-121° 7' 56.26"
City State Zip:	MADRAS OR 97741	Location Accuracy:	HIGH
		Last Updated:	12/22/1998 12:00:00 AM
Aliases BOB'S THRIFTY GAS	LUST		
Geographic Features			
Township: T11S-R13E-S14	Congress Dist: 2 For	est Type: N/A	
County: JEFFERSON	OR Senate Dist: 30 Veg	etation: Western junip wheatgrass	er-big sagebrush-bluebunch
Watershed: LOWER DESCHUTES	OR House ₅₉ Agr Dist: Lar	icultural PREDOM IRF	2
Drinking Water Source:	N/A		

Oregon DEQ Program Information Leaking Underground Storage Tanks (LUST)

Leaking U	eaking Onderground Storage Tailks (LOST)							
Log Number	Received	Cleanup Initiated	Cleanup Complete	Туре	Heating Oil Tank	UST Facility ID	Status	Detail Information ¹
16-91- 0071		10/02/1991		REGULATED		6827	CLEANUP_COMPLETED	LUST Site Report

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

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Leaking Underground Storage Tanks (LUST) Site Information

Home > Programs > LUST Program Information > LUST Database

(Use "Back" button on browser to return to previous search results)

Leaking Underground Storage Tank (LUST) Site Information

Log Nbr: 16-91-0071 Site Name: BOB'S THR Address: 1099 SW HV	IFTY GAS WY 97	Basic Incident Infor	nation	Status: CLOS Received Date UST Facility lo	BED e: 10/2/1991 d: 6827
City: MADRAS		Zip Code: 977	741	County: JEF	FERSON
Site Type:		File Status:			
Heating Oil Tank (HOT):		Regulated Tank	: YES		
		Assessment Inform	nation		16-91-0071
Cause: UNKNOWN		Source: Not Rep	orted Di	scovery: DECOMM	ISSIONING
<u>Media Effected</u> >Soil		<u>Conta</u> >Misc	<u>minants Released</u> Gas		
Free Product Removed:		Free Vapor Remov	ed:	CAP Request	ted:
Delineate Groundwater:		Groundwater		CAP Submitte	ed:
Delineate Soil:		Soil Delineated: Compliance Monito	ring:	CAP Approved:	
		Management Inform	mation		16-91-0071
Release Stopped Date:	10/2/1991	Cleanup Start Date:	10/2/1991	Cleanup End Date:	4/25/1992
	No Work	Reported Information	For This Incident		16-91-0071
	This informa For further d	tion may not reflect of the the test of te	current status of Q Regional Office	site. file.	

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Facility Summary Report

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Maps





Facility / Site Information for Location 18078

Facility/Site Name: Address: City State Zip:	MADRAS J & L TRUCK STOP & CAFE INC 992 SW HWY 97 MADRAS OR 97741	Latitude: Longitude: Location Accuracy: Last Updated:	44° 37' 11.9999" -121° 7' 47.9999" HIGH 12/22/1998 12:00:00 AM
Aliases J&L MADRAS TRUCK STOP	UST	MADRAS J & L TRUCK STOP &	CAFE INC LUST
Geographic Features			
Township: T11S-R13E-S14	Congress Dist: 2 Forest	Type: N/A	
County: JEFFERSON	OR Senate Dist: 30 Vegeta	tion: Western juniper-big wheatgrass	sagebrush-bluebunch
Watershed: LOWER DESCHUTES	OR House ₅₉ Agricu Dist: ⁵⁹ Land:	Itural PREDOM IRR	
Drinking Water Source:	N/A		

Oregon DEQ Program Information aking Underground Storage Tanks (LUST)

Leaking U	eaking Onderground Storage Tanks (LOST)							
Log Number	Received	Cleanup Initiated	Cleanup Complete	Туре	Heating Oil Tank	UST Facility ID	Status	Detail Information ¹
16-94- 0027		06/23/1994		REGULATED		210	CLEANUP_COMPLETED	<u>LUST Site</u> Report

Underground Storage Tanks (UST)

UST Facility ID	Permit Number	Installed	Content	Gallons	Status	Reg Cert NO
210	AFBE	03/24/1985	Diesel	10000	Active	16-210-2011-OPER
210	BDKDJ	05/04/1994	Gasoline	6000	Active	16-210-2011-OPER
210	BDKEA	05/04/1994	Gasoline	12000	Active	16-210-2011-OPER
210	BDKEK	05/04/1994	Gasoline	6000	Active	16-210-2011-OPER

SIC CODE	SIC Description	PRIMARY
5983	FUEL OIL DEALERS	N

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

Profiler Site Summary Report

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

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Leaking Underground Storage Tanks (LUST) Site Information

Home > Programs > LUST Program Information > LUST Database

(Use "Back" button on browser to return to previous search results)

Leaking Underground Storage Tank (LUST) Site Information

Log Nbr: 16-94-002 Site Name: MADRA Address: 992 SW	7 AS J & L TRUCK S [*] / HWY 97	Basic Incident Inforr TOP & CAFE INC	nation	Status: CLOSED Received Date: 6/23/19 UST Facility Id: 210		
City: MADRA	AS	Zip Code: 977	41	County: JEF	FERSON	
Site Type:		File Status:				
Heating Oil Tank (H	IOT):	Regulated Tank	: YES			
		Assessment Inforn	nation		16-94-0027	
Cause: UNKNOW	N	Source: Not Rep	orted	Discovery: DECOMM	IISSIONING	
<u>Media Effected</u> >Soil		<u>Conta</u> >Deise	minants Release el	ed		
Free Product Removed:		Free Vapor Remove	əd:	CAP Reques	ted:	
Delineate Groundw	ater:	Groundwater Delineated:		CAP Submitted:		
Delineate Soil:		Soil Delineated: Compliance Monito	ring:	CAP Approved:		
		Management Inform	nation		16-94-0027	
Release Stopped Date:	6/23/1994	Cleanup Start Date:	6/23/1994	Cleanup End Date:	5/11/1995	
	No Wo	rk Reported Information	For This Incide	nt	16-94-0027	
	This inform For further	ation may not reflect o detail, refer to the <u>DEC</u>	urrent status o Regional Offici	of site. <u>ce</u> file.		

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Oregon DEQ Facility Profiler 2.0

Facility Summary Report

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Facility / Site Information for Location 23736



		out the second state of the se				
Facility/Site Name:		SOUTHSIDE TEXACO MADRAS	0 -	Latitude:		44° 37' 22.08" -121° 7' 46 56"
Address: City State Z	ip:	838 SW HWY 97 MADRAS OR 97741		Location Accuracy: Last Updated:		HIGH 12/22/1998 12:00:00 AM
Aliases SOUTHSIDE	TEXACO - MADRA	S	LUST			
Geographi	ic Features					
Township:	T11S-R13E-S12	Congress Dist:	2 Forest	Туре:	N/A	
County:	JEFFERSON	OR Senate Dist:	30 Vegeta	tion:	Western juniper-big wheatgrass	sagebrush-bluebunch
Watershed:	LOWER DESCHUTES	OR House Dist:	⁵⁹ Agricu Land:	Itural	PREDOM IRR	

Oregon DEQ Program Information Leaking Underground Storage Tanks (LUST)

Drinking Water Source:

Leaking U	eaking onderground storage raiks (2001)										
Log Number	Received	Cleanup Initiated	Cleanup Complete	Туре	Heating Oil Tank	UST Facility ID	Status	Detail Information ¹			
16-98- 0067		10/13/1998		REGULATED		8477	CLEANUP_COMPLETED	LUST Site Report			

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

N/A

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

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Leaking Underground Storage Tanks (LUST) Site Information

Home > Programs > LUST Program Information > LUST Database

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Leaking Underground Storage Tank (LUST) Site Information

Basic I	ncident Inform	nation	Status: CLOS	ED	
EXACO - MADRAS			Received Date:	10/13/1998	
7			UST Facility Id:	8477	
Z	p Code: 977	41	County: JEFI	FERSON	
Fi	le Status:				
R	egulated Tank:	YES			
Asse	ssment Inform	nation		16-98-0067	
	Source: Pipin	g C	iscovery: DECOMM	ISSIONING	
	Contar	ninants Release	d		
	>Unlea	as >Deisel			
Free	Vapor Remove	ed:	CAP Requested:		
Grou Delin	ndwater eated:		CAP Submitted:		
Soil E	Delineated:		CAP Approved:		
Com	pliance Monitor	ing:			
Mana	gement Inforn	nation		16-98-0067	
31/1998 Cleanu	ip Start Date:	10/13/1998	Cleanup End Date:	2/17/1999	
No Work Report	ed Information	For This Inciden	t	16-98-0067	
his information ma or further detail, re	y not reflect c fer to the <u>DEG</u>	urrent status of Regional Offic	f site. <u>e</u> file.		
	Basic In EXACO - MADRAS 7 Zi Fi Ra Asses Free Groun Delin Soil E Comp Manag 81/1998 Cleanu No Work Reporte his information ma or further detail, ref	Basic Incident Inform EXACO - MADRAS 7 Zip Code: 977 File Status: Regulated Tank: Assessment Inform Source: Pipin <u>Contar</u> >Unlea Free Vapor Remove Groundwater Delineated: Soil Delineated: Compliance Monitor Management Inform 81/1998 Cleanup Start Date: No Work Reported Information this information may not reflect cor	Basic Incident Information EXACO - MADRAS 7 Zip Code: 97741 File Status: Regulated Tank: YES Assessment Information Source: Piping Contaminants Released >UnleadedGas > MiscG Free Vapor Removed: Groundwater Delineated: Soil Delineated: Compliance Monitoring: Management Information 81/1998 Cleanup Start Date: 10/13/1998 No Work Reported Information For This Inciden his information may not reflect current status of or further detail, refer to the DEQ Regional Offic	Basic Incident Information Status: CLOS EXACO - MADRAS Received Date: 7 UST Facility Id: 7 County: JEFI File Status: Regulated Tank: YES Assessment Information Source: Piping Source: Piping Discovery: DECOMM Contaminants Released >UnleadedGas >MiscGas >Deisel Free Vapor Removed: CAP Request Groundwater CAP Submitte Delineated: CAP Approve Compliance Monitoring: Management Information Battriangement Information Status: CLOS Management Information Cleanup End Date: No Work Reported Information For This Incident No Work Reported Information For This Incident	

This page last updated: January 9, 2006 DEQ Online is the official web site for the Oregon Department of Environmental Quality.

http://www.deq.state.or.us/lq/tanks/lust/LustPublicDetail.asp?lognumber=16-98-0067



Oregon DEQ Facility Profiler 2.0

Facility Summary Report

Return to Site Listing	Print Report
Maps	



Swi	S	w G St		10 11 11			15 412 aS Se 6th St
Sylvia St Marshall St		And Andrew Andrews	JEFF	SW H S	1 1	mmerce St	Se H St
	Sw Madison St	is puz ms Sw 1st St	ij	Sw J Si	S Adams Dr	0 00 50	JSt
0		0.127	Sw 3rd	SwK	St	Sø	Tracie St

12:00:00 AM

Facility / Site Information	for Location 31621				
Facility/Site Name: Address: City State Zip:	WESTERN AUTO 717 SW 5TH ST. MADRAS OR 97741		Latitude: Longitude: Location Accuracy: Last Updated:		44° 37' 35.4" -121° 7' 55.2' HIGH 9/28/1999 12
Aliases WESTERN AUTO	LUST				
Geographic Features	Congress Dist	2	Forest Type:	N/A	

Township:	T11S-R13E-S11	Congress Dist:	2 Forest Type:	N/A
County:	JEFFERSON	OR Senate Dist:	30 Vegetation:	Agricultural cropland and pastureland
Watershed:	LOWER DESCHUTES	OR House Dist:	59 Agricultural La	nd: PREDOM IRR
Drinking Wa	ter Source:	N/A		

Oregon DEQ Program Information

Leaning C	Eaking Onderground Storage Tanks (2001)										
Log Number	Received	Cleanup Initiated	Cleanup Complete	Туре	Heating Oil Tank	UST Facility ID	Status	Detail Information ¹			
16-98- 0079		11/17/1998	03/18/2010	NON_REGULATED			CLEANUP_COMPLETED	LUST Site Report			

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

Oregon DEQ Neighborhood Info (by region/county) See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application See county's scanned assessor maps through ORMAP

[DEQ's Privacy Notice] [Contact DEQ] [Application Feedback]

Disclaimer: This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.



Page 1 of 1

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[Help] [Close Window]

http://deq12.deq.state.or.us/fp20/FPDetail.aspx?siteid=31621

Leaking Underground Storage Tanks (LUST) Site Information

Home > Programs > LUST Program Information > LUST Database

(Use "Back" button on browser to return to previous search results)

Leaking Underground Storage Tank (LUST) Site Information

Log Nbr: 16 Site Name: Address:	-98-0079 WESTERN / 717 SW 5TH	AUTO I ST.	Basic Incident In	formation	Status: CLOS Received Date	SED :: 11/17/1998	
City:	MADRAS		Zip Code:	County: JEF	FERSON		
Site Type:	Soil Matrix C	leanup	File Status:	No Further Action			
Heating Oil	Tank (HOT):		Regulated T	ank:			
			Assessment In	formation		16-98-0079	
Cause: UN	IKNOWN		Source: Not	Reported	Discovery: DECOMM	IISSIONING	
Media Effec >Soil	cted		Contaminants Released >Lubricant				
Free Produ Removed:	ct		Free Vapor Rer	moved:	CAP Reques	ted:	
Delineate G	Groundwater:		Groundwater Delineated:		CAP Submitt	ed:	
Delineate S	Soil:		Soil Delineated Compliance Mo	: YES onitoring:	CAP Approve	ed:	
			Management In	formation		16-98-0079	
Release St Date:	opped	11/17/1998	Cleanup Start Da	ate: 11/17/1998	Cleanup End Date:	3/18/2010	
			Work Reported I	nformation		16-98-0079	
Work Reported 20 DAY REPORT Tank Decommissioning			<u>Reported By</u> Data Conversi Do'ers, Inc.	ion 2006	<u>Reported Date</u> 2/8/1999 11/11/1998		

This information may not reflect current status of site. For further detail, refer to the DEQ Regional Office file.

This page last updated: January 9, 2006 DEQ Online is the official web site for the Oregon Department of Environmental Quality.



	Incidents by Zip Code								
IncZipCode	IncNumber	IncLocation	IncCity	IncDate	DeptRsp	Chem1	AmtReleased	Comments	
97741	860171	1380 SW HWY 97	MADRAS	11/22/1986	JEFFERSON RFPD	GASOLINE	5 GALLONS	VEHICLE KNOCKED A GAS PUMP OFF OF ISLAND AND RELEASED APPROXIMATELY 5 GALS OF GASOLINE.	
97741	900466	1743 SW HWY 97	MADRAS	9/25/1990	JEFFERSON CO RFPD #1	PROPANE	10 GALLONS	NO COMMENTS GIVEN	
97741	880054	1778 NW MILL ST	MADRAS	8/16/1988	JEFFERSON CO RFPD #1	GASOLINE	75 GALLONS	FUEL DELIVERY TRUCK DRIVER WAS FILLING GASOLINE TANK WHEN IT FELL ON HIM INJURING HIS CHEST. WITH THE 150 GAL TANK ON ITS SIDE, PRODUCT WAS LEAKING OUT OF THE VENT PIPE. VICTIM WAS TRANSPORTED TO HOSPITAL VIA AMBULANCE. FIRE DEPARTMENT SECURED AREA, STOPPED LEAK, CONTAINED PRODCT, AND FOAMED AREA FOR UPRIGHTING OF FUEL TANK.	
97741	970507	335 NW HESS	MADRAS	12/22/1997	JEFFERSON CO RFPD #1	DIESEL	75 GALLONS	NO COMMENTS GIVEN	
97741	970072	335 NW HESS ST	MADRAS	3/24/1997	JEFFERSON CO RFPD #1	NATURAL GAS	0	EXCAVATOR USING BACKHOE RIPPED A HOLE INTO A PLASTIC 2" GAS PIPE	
97741	940091	409 NW CHERRY	MADRAS	3/16/1994	HAZMAT TEAM REDMOND	ASPHALT CEMENT	2 GALLONS	NO COMMENTS GIVEN	
97741	060026	439 CHERRY Ln	MADRAS	6/26/2006	JACKSON CC FD #3	REQUEST REPORT		Called to report of explosion and fire with injuries at a propane delivery truck filling station. On arrival Jefferson Co Fire found a small shed (containing delivery piping) on fire. The fire was impinging on a 15, 000 gal bulk tank. The 15, 000 gal container was next to a 30, 000 gal bulk container. Fire had spread to brush in surrounding area. A delivery truck driver was injured in the explosion/fire. He was flown to Emanuel Burn Center in Portland by AirLife of Oregon. JCFD crews contained the brush fire, cooled the 15, 000 gal tank and assisted PD in securing area. Madras PD & JCFD evaluated to a district of about 1 mile. JCFD crews made entry to hot zone and turned off valves to piping that was feeding the fire. HM7 arrived while fire was still burning. The HM team made offsite recon then entry to monitor atmosphere and do an on-site recon. Recon determined that fire was being fed by residual liquid propane in piping. Fire was allowed to burn off. Site turned over to Ferrelgas rep Darrel Gray.	
97741	900465	4TH & A ST	MADRAS	11/6/1990	JEFFERSON CO RFPD #1	DIESEL	10 GALLONS	NO COMMENTS GIVEN	
97741	950384	4TH & A ST	MADRAS	7/31/1995	JEFFERSON RFPD	DIESEL	5 GALLONS	NO COMMENTS GIVEN	
97741	900467	5TH & PINE ST	MADRAS	9/24/1990	JEFFERSON CO RFPD #1	DIESEL	4000 GALLONS	RESPONDED TO THE SCENE OF A DIESEL SPILL FROM A 4000 GALLON TANK TRAILER THAT HAD HIT THE SIDE OF A BRIDGE OVER WILLOW CREEK, NORTH OF MADRAS. THE TANK HAD RUPTURED AND SPILLED APPROXIMATELY 3000 GALS OF THE CONTENTS INTO WILOW CREEK AND APPROXIMATELY 1000 GALS ONTO THE STREET & HWY WHICH EVENTUALLY RAN DOWN THE CURB AND INTO THE STORM DRAIN SYSTEM. FOUR PAGES OF INCIDENT DESCRIPTION AND 2 MAPS ATTACHED TO HARD FILE.	
97741	880190	600 NW PLUM ST	MADRAS	12/17/1988	JEFFERSON CO RFPD #1	GASOLINE	2 GALLONS	NO COMMENTS GIVEN	
97741	890007	657 C ST	MADRAS	1/19/1989	JEFFERSON RFPD	CHEM-ION CLEANER	0		
97741	950432	901 WASHINGTON	METOLIUS	7/6/1995	JEFFERSON RFPD	AMMONIA ANHYDROUS	400 GALLONS	ANHYDROUS AMMONIA: 400LBS VENTED DURING FIRE; ANHYDROUS ISOPROPANOL: 55 GALS; HYPOCHLORITE SOLUTION: 55 GALS; PHOSPHORIC NITRIC ACID: 18 GALS; SODIUM HYDROXIDE: 135 GALS: POTASSIUM HYDROXIDE: 55 GALS.	
97741	990414	BELMONT LN W OF HWY 361	MADRAS	3/22/1999	JEFFERSON CO RFPD #1	GRAMOXONE	0	BANVEL - # OF CONTAINERS 1 -SIZE 2.5 - AT RISK 1.5 GALLONS - AMT RLSD 1.5 GALLONS - THIOSUL - #OF CONTAINERS 2 - SIZE 2.5 - AT RISK 5 GALLONS - AMNT RELEASED 5 GALLONS	
97741	950448	CONROY AT	MADRAS	9/12/1995	JEFFERSON RFPD	NATURAL GAS	840 CF		
97741	010283	HESS RD (BRIGHT WOOD MILL)	MADRAS	11/2/2001	HAZMAT TEAM REDMOND	UNKNOWN CHEMICAL	1 POUNDS	CALLED TO BRIGHT WOOD MILL IN MADRAS BY IC CORDES FOR PEOPLE BECOMING DIZZY, NAUSEOUS AND SORE THROATS FROM WHITE POWDER ON THE TOPS OF POP CANS FROM THE POP MACHINES IN THE BREAK ROOMS. THEY HAD EVACUATED THE BREAK ROOM AND ISOLATED THE PEOPLE WHO HAD POOSSIBLE CONTAMINATION. ADVISED THEM TO WASH HANDS AND FACE WITH SOAP & WATER DUE TO INSTANTANEOUS ILLNESS, IT DID NOT FIT "WHITE POWDER" CRITERIA. TEAM DID AN ENTRY AND FOUND POP CANS BUT WERE UNABLE TO GET ENOUGH PRODUCT TO HAZ CAT. ADVISED ENTRY TO SECURE SEVERAL CANS (WITH THE MOST PRODUCT) IN ZIPLOCK BAGS AND PLACE IN 5 GAL BUCKET. TALKED TO BRIGHT WOOD MANAGERS AND ADVISED THEM THAT WE COULDN'T TEST IT, NOT ENOUGH, AND THAT IT WOULD HAVE TO BE TESTED BY A LAB. THEIR SAFETY OFFICER, JOHN ROBINSON, STARTED CALLING TO GET IT TESTED. ENTRY SECURED SAMPLE IN 5 GAL BUCKET AND SAFETY OFFICER WAS TAKING IT TO A LAB IN PORTLAND. ADVISED EMPLOYEES TO GO HOME, REMOVE CLOTHES, PUT THEM IN WASHER AND TO TAKE A SHOWER ASAP. MET WITH IC AND MANAGER, BILL CRAUS. WHAT WE HAD DONE, WHAT SHOULD OCCUR AND WE SECURED THE DECON AREA UNTIL LAB RESULTS WERE IN AND RELEASED SCENE TO CRAUSE.	
97741	910218	HWY 26 E	MADRAS	7/5/1991	JEFFERSON RFPD	DIESEL FUEL	0		
97741	920218	HWY 26 E MP 2	MADRAS	6/29/1992	JEFFERSON	DIESEL FUEL	50 GALLONS	JCFD#1 RESPONDED TO HWY 26 E MP 2 TO A REPORTED SEMI-TRACTOR TAILER BELONGING TO SS	

 $http://www.sfm.state.or.us/CR2K_IncDB/Incidents_by_Zip_Code_1.ASP?\%5BEnter+5-digit+zip+code\%5D=97741$

					CO RFPD #1			FLEGEL CO OF PRINEVILLE JACKNIFED ON HWY LEAKING FUEL. ONE SEMI-TRACTOR WAS IN BORROW PIT WITH TWO FLAT BED TRAILERS IN HWY. UNIT 1720 PULLED 20 LB DRY CHEM MULTI PURPOSE EXTINGUISHER TO STAND BY WHILE 1720 STAGED UP WIND & UP GRADE FROM DIESEL FUEL LEAKING FROM PASSENGER SIDE RUPTURED SADDLE TANK OF SEMI-TRACTOR. SET UP FOAM OPERATIONS WITH SELF-CONTAINED BREATHING APPARATUS. GARY MARSHALL 1792 WAS COMMAND OF INCIDENT. IRA'S TRUCK TOWING SERVICE ASSISTED IN TURNING OFF CROSSOVER VALVE. 1720 PLUGGED FUEL LEAK WITH WOODEN PLUG. OR ST HWY SPREAD SAND APPOX 18" DEEP ON SPILL IN BORROW PIT & UNDER TANKS. 1720 DAMMED FUEL TO KEEP FROM SPREADING. HWY REOPENED ONCE OPERATION COMPLETED & FLATBEDS REMOVED BY IRA'S TOWING. INCIDENT CONTROLLED THEN RELEASED TO JACK KINGERY, STATE HWY PERSONNEL. (MORE INFO IN HARD COPY)
97741	870158	HWY 97 @ MP 76	MADRAS	10/9/1987	JEFFERSON CO RFPD #1	DIESEL FUEL	50 GALLONS	NO COMMENTS GIVEN
97741	040032	SANTIAM HWY	MADRAS	9/29/2004	SISTERS- CAMP SHERMAN RFPD	REQUEST REPORT		CALLED BY DISPATCH AS SISTER/CAMP SHERMAN WAS RESPONDING TO AN 11,000 GALLON TANKER ON FIRE ON SANTIAM. DISPATCH HAD 3 CALLS WITH BASICALLY THE SAME INFORMATION. CALLED OERS AND EXPLAINED THE CALL, ACTIVATED THE TEAM. AS THE TEAM WAS RESPONDING SISTER/CAMP SHERMAN ARRIVED ONSCENE AND THE TRACTOR ENGINE WAS ON FIRE AND CONFINED TO ENGINE COMPARTMENT. GASOLINE TANK ITSELF WAS NOT INVOLVED NOR ANY DAMAGE AND WE WERE CANCELLED BY 710 OF SISTERS/CAMP SHERMAN. BACK IN QUARTERS AVAILABLE @

Appendix F

Initial Site Assessment (ISA) Checklist

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INITIAL SITE ASSESSMENT (ISA) CHECKLIST

Project Information

District: 10	County: Jefferson	Route: US97	Milepost: 92.78 to 96.30						
Description:									
Does the project have	Does the project have potential hazardous waste involvement? Not anticipated								

Screening Criteria

1.	Project Features: New R/W? Yes	Excavation? Yes	Relocate Utilities? Yes
2.	Land Use History and Development Setting (urban/rural; industrial, commercial, agricultural,		
	housing other –list)		
	Current land uses: Commercial		
	Previous land uses: Commercial		
	Adjacent land uses: Residential and commercial		
3.	In-house record review: Yes		
4.	Any known hazardous waste sites i	n vicinity? No If y	es, identify and explain.

Optional Records

County Assessor: Yes Fire Dept: Yes Sanborn Maps: Yes Other

Take photos of sites or sketch

Visual Inspection of Project Site and Adjoining Properties

Storage Structures:	Contamination:	Potential asbestos
		containing materials:
Underground tanks: Yes	Surface Staining: Possibly	Buildings: Yes
Aboveground tanks: Yes	Oil sheen: No	Sprayed-on fireproofing:
		No
Sumps: No	Odors: No	Pipe wrap: No
Ponds: No	Stress vegetation: Yes	Floor tiles: N/A
Transformers: Yes	Other	Siding: No
Other		Ceiling tiles: Possibly
		Acoustical plaster: No
Sites:	Sites:	Sites: N/A
Project site and adjoining	Property adjacent east to	Shop building and possibly
properties.	project site has stressed	in the commercial building.
	vegetation	

Comments:

Conducted by: Ryan Franklin

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Appendix G

Geophysical Survey Report

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ENVIRONMENTAL & EXPLORATION GEOPHYSICS

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SUMMARY REPORT

SUBSURFACE MAPPING SURVEY TO DETECT UNDERGROUND FEATURES

US97 @ J Street Intersection The Dalles – California Highway Madras, Jefferson County, Oregon

CLIENT

ODOT 355 Capitol St. N.E. Salem, OR 97301-3871

DATE OF SURVEY

June 15, 2012

GeoPotential Project Number: 8903

CONTENTS

Terres de settem
Introduction
Survey Objectives
Survey Site
Survey Equipment
Procedure
Results
Limitations

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SUMMARY

A Subsurface Mapping Survey (SMS) was conducted over the exterior and interior of an abandoned garage along US97 (The Dalles – Columbia Highway) in Madras, Oregon for the purpose of detecting Underground Storage Tanks (USTs), utilities and perform Bore Hole Clearance Surveys (BHCS).

Magnetic Surveys, Ground Penetrating Radar (GPR) Surveys and hand held magnetic and electromagnetic scanners were used for the project.

No USTs were detected in any areas covered by the SMS. BHCS were conducted over 8 proposed bore hole locations. Detected utilities were mapped.

INTRODUCTION

Ralph Soule and Tony Bartruff of GeoPotential conducted the Subsurface Mapping Survey. Ryan Franklin was ODOT's on-site representative. Fieldwork was conducted on June 15, 2012. The report was completed and e-mailed to ODOT on June 18, 2012.

Subsurface mapping surveys are geophysical surveys utilizing geophysical methods and data to detect and locate natural and manmade subsurface features. Magnetic Surveys are used to detect and map the locations of buried **ferrous** (iron-bearing) objects (see Appendix A). Ground Penetrating Radar (GPR) Surveys are used to map both natural and manmade subsurface features such as USTs, utilities, backfilled pits, etc. (see Appendix B.). Pipe and cable locators are used to map the locations of buried utilities and piping.

Once subsurface ferrous objects are detected from a magnetic survey then hand held scanners and GPR surveys are used to map the locations, depths, sizes and shapes of the objects.

SURVEY OBJECTIVES

The objectives of this subsurface mapping survey are:

- 1. Search for UST's.
- 2. Map Utilities
- 3. Clear 8 proposed Bore Hole locations.

SURVEY SITE

The survey Site is shown on Figures 1, 2 & 3. The Site consisted of and abandoned garage which contained a water valve and a concrete 4X4 foot patch in the reinforced concrete floor. A small patch extension led to a stubbed pipe against the West interior wall of the garage. These features suggested a former hydraulic lift which had been removed. The South exterior of the site consisted of a gravel covered parking lot and reinforced concrete apron on the garage. A water valve was located on the apron and in the Southeast corner of the property. The North side of the garage consisted of soil with grass and shrubs. A sewer manhole was located on the Northwest corner of the Eastern adjacent property. Locating marks on the manhole indicated a East-West sewer line may pass under North edge of the Site. There were no surface indications of USTs.

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- GEOMETRICS 858G Cesium Vapor Magnetometer (Magnetic Survey).
- Mala RAMAC Ground Penetrating Radar System with a 500 MHz antenna (GPR Survey).
- MALA Concrete Imaging Radar with a 1.6 GHz Antenna (GPR Survey)
- Schonstedt GA52 Magnetic Gradiometer.
- Aqua-Tronics A6 Pipe & Cable locator.
- Heath Shurlock Pipe & Cable locator.

This equipment and the procedures used to meet the survey objectives of this project have been proven effective in detecting metallic objects and mapping non-metallic features such as disturbed soil from backfilled pits.

Geophysical techniques are excellent at detecting changes in the subsurface caused by natural and manmade objects; however, they are poor at actually identifying subsurface features. Complementary methods may be used to assist in the interpretation; however, the only sure way of identifying a buried feature is by excavation.

Brief descriptions of the magnetic method and the radar method are included in the Appendices.

PROCEDURE

Magnetic Survey

The Magnetic Survey consisted of acquiring magnetic readings along traverses using a 5-foot spacing between traverses over the exterior portion of the Site. Magnetic data were downloaded to a computer, processed and contoured to produce Figure 2. Magnetic Map for the Site. The Magnetic Map is plotted at a Contour Interval of 500 nT a Contour Interval sufficient to detect USTS. In general buried ferriferous objects will produce stronger positive magnetic anomalies that are shown as red contours on the Magnetic Map. Surface ferriferous objects such as fences or buildings my produce negative magnetic anomalies that are shown as blue contours on the magnetic map. Significant positive Magnetic Anomalies are marked on the Maps as M1 (Magnetic Anomaly 1), M2 and M3.

Ground Penetrating Radar Surveys

Over AREAS that contained suspect USTs GPR Profiles were acquired using a 500 MHz antenna. The data were processed and interpreted as discussed below. A 2.3 GHz antenna was used to map reinforcement in the vicinity of the former hydraulic lift. Also GPR data were acquired over all proposed bore holes.

Pipe and Cable Survey

Hand held magnetic and electromagnetic scanners were used to help identify USTs and utilities and clear proposed bore holes.

RESULTS

Results were marked on the Site and are shown on the Figures 2 & 3.

Significant Magnetic Anomalies are:

M1 – this Magnetic Anomaly is interpreted as a buried vertical pipe which may be water well casing. The investigation of the water valve inside the garage indicated a water line extended to this feature. It is necessary to excavate to confirm the identity of this feature.

M2 – is interpreted as ferric debris.

M3- is interpreted as reinforcement in the concrete slab

All other Magnetic Anomalies observed in AREA are interpreted to be caused by Surface features and minor ferric debris.

Eight bore holes were cleared for drilling.

No Underground Storage Tanks were detected on the Site.

LIMITATIONS

Limitations of magnetometer and GPR surveys can be seen in the Appendices.

Geophysical surveys consist of interpreting geophysical responses from subsurface features. Since a variety of subsurface features can produce identical geophysical responses, it is necessary to confirm the geophysical interpretation with intrusive investigations such as excavating or drilling. In addition, many subsurface features may produce no geophysical response.

Rolph Soule

Ralph Soule GeoPotential

June 18, 2012





 ENVIRONMENTAL & EXPLORATION GEOPHYSICS
 US97 @ J St. Intersection The Dalles - California Highway Madras, Jefferson County, Oregon
 Figure 1. Location Maps

 DATE:
 June 15, 2012
 SUBSURFACE MAPPING SURVEY
 PROJECT No.
 8903
 CLIENT:
 ODOT
 DOT






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APPENDIX A MAGNETOMETER SURVEYS

The earth's magnetic field, measured in "nano Teslas" (nT), behaves like a bar magnet (a dipolar field), with the strongest magnetic field located at the poles, and the weakest field located near the equator. In the continental United States, the average field intensity varies widely, however, the average value is about 50,000 nT. Also, like the magnetic field around the bar magnet, the earth's magnetic field is inclined. This inclination in the continental United States varies between 60 and 75 degrees, generally depending upon the latitude of the measuring location. The earth's magnetic field varies constantly and, during sunspot activity, quite dramatically. A magnetometer is an electronic device that measures the intensity of the earth's magnetic field.

Naturally occurring geologic features and buried ferrous metal objects such as underground storage tanks, drums, ordnance, pipes and debris filled trenches produce both horizontal and vertical disturbances to the earth's local magnetic field. The objects causing these "anomalies" can be detected quickly and reliably using portable magnetometers.

The intensity of an anomaly is a function of the size, depth of burial and magnetic susceptibility of the object. As a rule of thumb, single drums buried several feet below the surface produce anomalies of about 200 nT relative to the normal undisturbed background and can be detected at a horizontal distance of about 15 feet, while large caches of drums can produce anomalies of many thousands of nT and may be detectable 50 feet away.

Magnetometers generally measure total intensity of the local magnetic field. A magnetic gradiometer is a variant of the magnetometer that measures both the horizontal and the vertical magnetic field at each survey point. It consists of two identical sensors located vertically on a staff and having a fixed separation. The intensity of the magnetic field caused by a buried metal object varies inversely with the distance between the object and the sensor. The relative intensities measured simultaneously at each sensor are used to determine the relative depth of burial of an object.

Relative depth estimates of buried metal objects can be made using a single sensor. In general, for a given object, the deeper the object is buried, the lower the amplitude and the wider the anomaly. Shallowly buried objects produce higher amplitude anomalies with closely spaced contour lines.

Magnetic surveys can only detect <u>ferrous metal</u> objects and cannot be used to identify the buried object. Estimates of the total mass of a buried object are difficult due to the physical properties of the object and other factors. Interference caused by observed surface metal objects limits the accuracy of the survey. The anomalies produced by fences, power lines, cars and buildings can easily mask the anomaly caused by an underground target.

Magnetic surveys are cost effective. Using the standard "step and wait" magnetometer, data from approximately 1000 points can be obtained in one field day corresponding to between 1 acre and about 5 acres depending on site conditions and survey goals. More modern cesium magnetometers collect up to 10 readings per second continuously, thus the operator can proceed without stopping. Many modern magnetometers use an audible signal to call attention to anomalous data as it is obtained. At some sites metallic objects can be detected and marked in the field at the time of the survey.

The use of a second, automatically recording "base station" magnetometer is highly recommended due to temporal variations in the earth's magnetic field. These changes must be removed from the field data before an accurate interpretation can be made, particularly when searching for small-buried objects.

Magnetic data are most commonly presented in two contour maps. The TOTAL MAGNETIC FIELD CONTOUR MAP shows the horizontal variation of the total intensity of the magnetic field and, therefore, the areal extent of anomalies. The GRADIOMETER CONTOUR MAPS show the horizontal variation of the vertical gradient of the magnetic field and indicate the relative depth of burial of the objects causing those anomalies. Color versions of these maps may be produced showing only the magnetic highs and lows.



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APPENDIX B GROUND PENETRATING RADAR SURVEYS

Ground Penetrating Radar (GPR) can be a valuable tool to accurately locate both metallic and non-metallic UST's and utilities, buried drums and hazardous material at some sites. It may detect objects below reinforced concrete floors and slabs. GPR may delineate trenches and excavations and, under some conditions, it may be used to locate contaminant plumes. It has been used as an archaeological tool to look for buried artifacts. It may accurately profile fresh water lake bottoms either from a boat or from a frozen lake surface. GPR may be used to locate voids below roads and runways. GPR has numerous engineering applications. It can be used in non-destructive testing of engineering material, for example, locating rebar in concrete structures and determining the thickness of concrete and other structural material.

GPR uses short impulses of high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having different electrical properties to that of the surrounding material. The greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, contaminant plumes and man-made objects such as UST's and metal and plastic utilities. Materials having little electrical contrast like clay and concrete pipes may not produce strong reflections and may not be seen. Data are digitally recorded or downloaded to a laptop computer for filtering and processing.

The frequency of the radar signal used for a survey is a trade off. Low frequencies (250 MHz - 50 MHz) give better penetration but low resolution so that pipes and utilities may not be seen. Pipes and utilities may be seen using higher frequencies (500 MHz) but the depth of penetration may be limited to only a few feet especially in the wet, clayey soils found in many areas of the NW USA. The GPR frequency is dependent upon the antenna. Once an antenna is selected, nothing the operator can do can increase the depth of penetration.

Radar data is ambiguous. Many buried objects produce echoes that may be similar to the echo expected from the target object. Boulders and debris produce reflections that are similar to pipes and tanks. Subtle changes in the electrical properties along a traverse caused by changes in soil type, mineralogy, grain size, and moisture content all produce "noise" that can make interpretation difficult. Interpreting radargrams is an art as much as a science.

Under some conditions, although a UST itself may not be clearly visible in a GPR record, the excavation or trench in which the UST is buried is evident. Usually GPR data is used to compliment data from other "tools". For example, a trench-like reflection but no clear UST reflection, combined with a "tank" shaped magnetic anomaly suggests the presence of a UST. Although the UST itself could not be seen using GPR, the radar showed a trench-like reflection. The magnetic data showed a large ferrous object. We would report a possible UST at that location.

GPR is often used in conjunction with magnetometer surveys. Magnetometer Surveys are very fast and large areas can be covered cost effectively. Magnetic anomalies are marked in the field, and then may be further investigated using radar.

GPR, like other geophysical tools, is excellent at detecting changes across a site, but it is poor at actually identifying the cause of the change. The only definite way to identify buried objects is through excavation.

ADVANTAGES - General

- When GPR data is properly interpreted subsurface objects can usually be confidently identified. This often requires the GPR data be combined with other geophysical data, surface features and historical information.
- GPR provides continuous records along traverses which, depending on the goal of the survey, may be interpreted in the field.
- At flat, open sites, for reconnaissance purposes, the antenna can be towed behind a vehicle at several mph.
- Many GPR antennas are shielded and are unaffected by surface and overhead objects and power lines.
- GPR can be used in conjunction with magnetic or EM surveys to accurately locate buried objects.

ADVANTAGES – Site specific

- With a low frequency antenna, in clean, dry, sandy soil, reflections from targets as deep as 100 feet are possible. Geologic features such as bedrock and cross bedding may be seen at some sites.
- The resolution of data is very high particularly for high frequency antennas.
- Shallow, man-made objects generally can be detected.
- Fiberglass UST's and plastic pipes can be detected using GPR.

LIMITATIONS - General

- To acquire the highest quality data, proper coupling between the antenna and the ground surface is necessary. Poor data may be obtained at sites covered with debris, an uneven surface, tall grass and brush. Objects located at curbs are difficult to see.
- Acquiring GPR data is slow. The antenna must be over the target. The signal from the antenna is cone-shaped. Reflections from objects to the side of the antenna may be seen, but their actual location relative to the antenna is not obvious.
- Penetration of the GPR signal is "site specific" and its depth of penetration at a particular site cannot be predicted ahead of time. Near surface conductive material, such as salty or contaminated ground water and wet, clay-rich soil, may attenuate the radar signal, limiting the effective depth of the survey to several feet. Reinforced concrete also can attenuate the signal. Rebar may produce reflections that look like pipes.

• GPR may not be cost-effective for some projects. For a detailed survey mapping underground storage tanks and utilities, it may be necessary to collect data in orthogonal directions at 5-foot line spacing.

LIMITATIONS – Interpretation

- Interpretation can be difficult. Radar data are ambiguous. Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.
- The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce the reflection. Due to "noise", the target may be missed. USTs and deep utilities may be missed if they are under debris and/or other pipes.
- Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).
- Adequate contrast between the ground and the target is required to obtain reflections. UST's may be missed if they are badly corroded. Utilities made of "earth" materials like clay and concrete may not be detected since their electrical properties are similar to the surrounding soil.
- To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties. Even with ground truth at several locations on the same site, changes in material across a site (therefore changes in signal velocity) can cause errors in depth measurements at other locations.

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Appendix H

Boring Logs

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						OREGON DEPARTMEN	NT OF TR	ANSPO	ORTAT	TION	[Pa	nge 1 of	f 1
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Stort	Doto lu	151 Kyc	042		End D	ata Juno 25, 2012	Total Dan	th 50	4000		-	Tuba Haight	2320.0 IL	
Start	Date Ju	Test T	U12		Ellu D	Doole Abbreviation		un 5.0		Typic	al Dr	illing Abbrev	iations	
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0	MC1a	100				MC- 1a (0.0-1.2) Silty SAND with Grav Nonplastic; Dry; Est. ~15% Coarse to F Coarse Sand, 20% Medium Sand, 40% 15% Fines; Angular Gravel; (Fill)	vel; SM; Brow Fine Gravel, 1 ∱ Fine Sand a	n; 10% and	0.0 - FILL	1.2		Used Push Macro Corr Hole locatio approx. lat. = Hydrocar Photo-ioniz Detector. p	Probe with e Tooling. ons given as and long. HC bon. PID = :ation pm = Parts	
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						(5.0) Bottom of Hole			5.0 Botto	om of Hole		Bottom of Hole Locat Northernm east prope Groundwat encountere Used 1/4 b bentonite c abandon b Note: Dx = Hydrocarbo NWTPH m Below Labu Detection I	Hole = 5 ft ion: ost boring - ty line. er not id. ag of 3/8 inch hips to oring. Diesel Range ons by ethod; BDL = oratory .imits	
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Hole No. P1242 Project US97 @ J Street (Madras) Purpose Property Appraisal E.A. No. CO161601-010 Highway County Jefferson Key No. 15409 Hole Location Northing: 44.62 Easting: -421.13 Start Card No. NA Equipment Geoprobe 5600 Driller B3 & Environmental - Rod Johnson Bridge No. NA Project Goografie Fand Date June 25, 2012 Total Depth 5.0 ft Tube Height NA Y: - Auger Core Xr Auger Core Na Pinitian Methods Drilling Methods Dril
Project US97 @ J Street (Madras) Purpose Proprist Proprist Proprist E.A. No. CO161601-010 Highway County Jefferson Kcy No. 15409 Highway Userson Kcy No. 15409 Hole Location Northing: 44.52 Easting: -121.3 Start Card No. NA Equipment Geoprobe 6600 Driller B8 & A Environmental - Rod Johnson Bridge No. NA Project Geologist Ryan Franklin Recorder: Kelty Wood Ground Elev. 2320.0 ft Start Date Janie 25, 2012 End Date Janie 2, 2012 Total Deplot 5.0 ft Tube Height NA "* - Auger Core: Project Geologist Rock Abbreviations Drilling: Abbreviations Drilling: Abbreviations "* - Auger Core: Project Geologist Rock Abbreviations Same Scale Auger Drilling: Abbreviations "* - Test Pit B Beding U- Londiating: Same Scale Auger Drilling: Abbreviations "* - Test Pit Soil: Soil: Man, USCS, Cole, Plasticity, Testatrice Colir Same Scale Auger Drilling: Abbrevia
Highway County Jefferson Key No. 15409 Hole Location Northing: 44.62 Easing: 121.33 Start Card No. N/A Equipment Geoprobe 6600 Driller B8 & A Environmental - Rod Johnson Bridge No. N/A Project Geologist Ryan Franklin Recorder Kely Wood Ground Elev. 232.0 ft Start Date June 25, 2012 End Date June 25, 2012 Total Depth 5.0 ft Tube Height N/A "X" - Auger CVC Discontinuity Share Surface Routhness Tupical Drilling Methods Drilling Methods Drilling Methods "X" - Auger CVC Discontinuity Share Surface Routhness Drilling Methods Drilling Methods Drilling Methods "X" - Auger CVC Discontinuity Share Surface Routhness Drilling Methods Drilling Methods Drilling Methods "X" - Auger CVC Curved Single I - Intel Field Sorti Start Routh Routh Route Drilling Methods Drilling Methods Drilling Methods Drilling Methods "X" - Auger Course Sorti Start Routh Nort Hanger Nort Hanger Drilling Methods Drilling Methods Drilling Methods "X" - Auger Course Sorti Start Routhne Routh, Routh Routh Routh, Routh Rout
Hote Location Northing: 44.62 Easting: 121.13 Start Card No. N/A Equipment Geoprobe 6600 Driller BB & Environmental - Rod Johnson Bridge No. N/A Project Geologist Ryan Franklin Recorder: Kely Wood Ground Elev. 2232.0 ft Start Data June 25, 2012 End Date June 25, 2012 Total Depth 6.0 ft Tube Height N/A ** Auge: Croce Project Geologist Rock: Abbreviations Tube Height N/A ** Auge: Croce Discontinuity Simal: Simal: Simal: Simal: Simal: Simold Tube Height N/A ** Coursed B- Bedding U - Undulating Simal: Simold Tube Height N/A ** Standard Penetration Frie Foliation Simal: Simold Simal: Simold Tube Height N/A ** Trace File Soit Rock Simal: Simold Simal: Simold Discontinuity Simal: Simold No. No. ** Standard Penetration Frie Foliation Simal: Simold Simold No. No. No. No. ** Standard Penetration Soit Rock Material Description Simold No. No. No. ** Trace File Soit Rock Material Description
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Project Geologist Ryan Franklin Recorder Kolly Wood Ground Elev. 2320.0 ft Start Date June 25, 2012 End Date June 25, 2012 Total Depth 5.0 ft Tube Height NA "A - Auger Core Discontinuity Share Surface Routhness United Methods Dilling Abbreviations "X - Auger Core Discontinuity Share Surface Routhness Dilling Abbreviations Dilling Abbreviations "X - Auger Core Discontinuity Share Si-Shepdel Dilling Abbreviations Dilling Abbreviations "X - Auger Core Discontinuity Si-Shepdel Si-Shepdel N-South Alger Dilling Abbreviations "Y - Indisturbed Sample F- Foliation Si-Shepdel R- Rough Carcing Advancer DR - None Plocation "Y - Indisturbed Sample Soil Rock Material Description SOIL: Soil Name, USCS, Cole, Plasticity, Testure, Commation Structure, Origin, Rock Sing SAMD with Gravet, SM Brown and Red. Nopatistic Quastrance, Joint Filling, Distributing, Conscience, Stare, Coler, Wastrate, Co
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Highv	vay US9	7: The	Dalles Ca	alifornia H	lighway		County	Jeffers	on		1	Key No.	15409	
Hole	Location	No	orthing:	44.62		Easting: -12	1.13					Start Card No.	N/A	
Equip	ment G	eoprobe	6600				Driller	BB & /	A Envir	onmental - Rod Johns	ion]	Bridge No.	N/A	
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o Depth (ft)	at Type, No.	00 Percent Recovery	lioS Resistance	Discontinuity Data W Or RQD%	Percent Natural Moisture	<u>Material Descripti</u> SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Re Texture, Cementation, Str ROCK: Rock Name, Color, Weather Discontinuity Spacing, Joi Core Recovery, Formation MC- 1a (0.0-0.5) Silty SAND with Grav Brown and Red; Nonplastic; Moist; Est Fine Gravel, 10% Coarse Sand, 15% N Fine Sand and 15% Fines; Angular to I and Cinder Gravel; (Fill) MC- 1b (0.5-5.0) Silty SAND with Grav Nonplastic; Damp: Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 55% 15% Fines; Pumice Sand; Weakly to N Tuff; (Pulverized by Drilling); Deschute:	On sticity, lative Density ucture, Origi ring, Hardnes int Filling, a Name. rel; SM; Dark Coar ledium Sanc Rounded Bas vel; SM; Brow o Fine Sand loderately W s Formation	√, n. s, s, tese to , 45% salt /n; and /elded	0.0 - FILL DESS FOR Silty Grav Nonj (Tuff pulv sanc drilli	Jnit Description Jnit Description 0.5 5.0 CHUTES MATION TUFF: SAND with el; SM; Brown; Jastic; Damp is sample erized to silt, I, and gravel by ng)	Craphic Log	 azis syltemay Used Push Macro Core Hole locatic approx.lat. Hydrocari Photo-ioniz Detector. p Per Million. MC-1a: Sm ft - Dx = BD PID-0.4' = (MC-1b: Slo ft. 	Date Date of the second	Backfill
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"A" - "X" - "C" - "N" - "U" - "T" -	Auger Cor Auger Core, Barr Standard F Undisturbe Test Pit	el Type el Type enetratio ed Sample	n e		Discor J - Join F - Far B - Be Fo - F S - Sh	KOCK ADDREVIATIO ntinuity Shape nt Pl - Planar ult C - Curved vdding U - Undulating oliation St - Stepped ear Ir - Irregular	<u>IIS</u> Surface Rou P - Polished SI - Slickens Sm - Smootl R - Rough VR - Very R	ghness sided n cough		Drilling Methods WL - Wire Line HS - Hollow Stem Aug DF - Drill Fluid SA - Solid Auger CA - Casing Advancer HA - Hand Auger	er	Drill LW WR WC DP - DR - DA -	ing Remarks - Lost Water - Water Return - Water Color Down Pressure Drill Rate - Drill Action	
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L L L L L L L 0 MC1a 90 MC1a MC1a </td <td>MC- 1a (0.0-1.0) Sitly SAND with Grax Red; Nonplastic; Damp; Est. ~15% Co. 10% Coarse Sand, 15% Medium Sand and 15% Fines; Abundant Pumice and Subrounded Gravel; (Fill)</td> <td>vel; SM; Brow arse to Fine , 45% Fine S Cinder;</td> <td>vn and Gravel, Sand</td> <td>0.0 - FILL</td> <td>1.0</td> <td></td> <td>Used Push Macro Core Hole locatic approx. lat. = Hydrocarl</td> <td>Probe with Tooling. ons given as and long. HC oon. PID =</td> <td></td>						MC- 1a (0.0-1.0) Sitly SAND with Grax Red; Nonplastic; Damp; Est. ~15% Co. 10% Coarse Sand, 15% Medium Sand and 15% Fines; Abundant Pumice and Subrounded Gravel; (Fill)	vel; SM; Brow arse to Fine , 45% Fine S Cinder;	vn and Gravel, Sand	0.0 - FILL	1.0		Used Push Macro Core Hole locatic approx. lat. = Hydrocarl	Probe with Tooling. ons given as and long. HC oon. PID =	
	MC1b 90 90 Subrounded Gravel; (F MC- 1b (1.0-5.0) Silty Nonplastic; Damp; Est. Coarse Sand, 10% Me 15% Fines; Pumice Sa Tuff; (Pulverized by Dri				MC- 1b (1.0-5.0) Silty SAND with Grav Nonplastic; Damp; Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 55% 15% Fines; Pumice Sand; Weakly to N Tuff; (Pulverized by Drilling); Deschute:	rel; SM; Brow o Fine Grave 6 Fine Sand a Moderately W s Formation	/n; sl, 5% and /elded	1.0 - DES FOR Silty Grav Non (Tuff pulv sanc drilli	5.0 CHUTES MATION TUFF: SAND with rel; SM; Brown; olastic; Damp f sample erized to silt, I, and gravel by ng)		Proto-toniz Detector. p Per Million. MC-1a: Sm PID-0.7' = (MC-1: No F Staining. 1 BDL. MC-1b: Res ~2.0 ft. Slov ft.	ation pom = Parts poth DA. 0.1 ppm. IC Odor or $ft - Dx =sistance atv DR 2.0-5.0$		
- 5 -						(5.0) Bottom of Hole			5.0			5.0 ft - PID	= 0.1 ppm. Hole = 5 ft	
I									Botto	om of Hole		Hole Locati Southernme east proper	on: ost boring - ty line.	
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	OREGON DEPARTME	NT OF TRANSPORTATION	Page 1 of 2
		1	Hole No. P12-05
ect US97 @ J Street (Madras)		Purpose Property Appraisal	E.A. No. CO161601-010
hway US97: The Dalles California	Highway	County Jefferson	Key No. 15409
e Location Northing: 44.62	Easting: -12	1.13	Start Card No. N/A
ipment Geoprobe 6600		Driller BB & A Environmental - Rod Johns	on Bridge No. N/A
ect Geologist Ryan Franklin		Recorder Kelly Wood	Ground Elev. 2320.0 ft
t Date June 25, 2012	End Date June 25, 2012	Total Depth 13.0 ft	Tube Height N/A
Test Type	Rock Abbreviatio	ns Typic	al Drilling Abbreviations
 Auger Core Auger Core, Barrel Type Standard Penetration Undisturbed Sample Test Pit 	Discontinuity Shape J - Joint Pl - Planar F - Fault C - Curved B - Bedding U - Undulating Fo - Foliation St - Stepped S - Shear Ir - Irregular	Surface Roughness Drining Methods P - Polished WL - Wire Line SI - Slickensided HS - Hollow Stem Aug Sm - Smooth SA - Solid Auger R - Rough CA - Casing Advancer VR - Very Rough HA - Hand Auger	LW - Lost Water er WR - Water Return WC - Water Color DP - Down Pressure DR - Drill Rate DA - Drill Action
Percent Recovery Driving Driving Driving Resistance Or RQD%	Material Descripti SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Re Texture, Cementation, Str ROCK: Rock Name, Color, Weather Discontinuity Spacing, Jo Core Recovery, Formation MC- 1a (0.0-0.3) Concrete; (Fill) MC- 1b (0.3-5.0) Silty SAND with Grav Gray; Nonplastic; Dry; Est20% Coar Fine Gravel, 10% Coarse Sand, 20% N Fine Sand and 15% Fines; Basalt and Angular Gravel; (Fill)	on Unit Description sticity, Unit Description lative Density, ucture, Origin. ing, Hardness, int Filling, int Filling, 0.0 - 0.3 vel; SM; Brown and CONCRETE se Gravel, 20% 0.3 - 8.0 fedium Sand, 15% FILL: Silty SAND with Gravel; HC odor 5-10 ft. 0.5 - 11.0 Approximate Extent of HC Contamination OHC Contamination	Bo Bo Bo Bo Bo Bo Bo Bo Bo Bo
MC2a 76 MC2b 76	MC- 2a (5.0-8.0) Silty SAND with Grav Gray; Nonplastic; Damp; Est. ~10% Cc Fine Gravel, 10% Ccarse Sand, 20% N Fine Sand and 15% Fines; Angular to I and Tuff Gravel; (Fill) MC- 2b (8.0-10.0) Silty SAND with Gra Nonplastic; Damp; Est. ~15% Ccarse t Ccarse Sand, 10% Medium Sand, 55% 15% Fines; Weakly to Moderately Wel (Pulverized by Drilling); Deschutes For	vel; SM; Brown and barse Gravel, 15% ledium Sand, 30% Rounded Basalt Rounded Basalt avel; SM; Brown; o Fine Gravel, 5% o Fine Gravel, 5% o Fine Sand and ded Tuff; mation 8.0 - 13.0 DESCHUTES FORMATION TUFF: Silty SAND with Gravel; SM; Brown; Mention to the to the to the total server.	MC-2: HC odor 5.0-10.0 ft. 7.5 ft - PID = 1.1 ppm; Dx = 1,800 mg/kg, RR0 = 10,000 mg/kg. MC-2b: Resistance at ~8.0 ft. Slow DR.

Proje	ect Name	US97 @	J Stree	t (Madras)	Hole No. P12-05			Page 2 of	2
Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance lio	Discontinuity Data 2 Or RQD%	Percent Natural Moisture	<u>Material Description</u> SOIL: Soil Name, USCS, Color, Plasticity, Moisture, Consistency/Relative Density, Texture, Cementation, Structure, Origin. ROCK: Rock Name, Color, Weathering, Hardness, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name.	Unit Description	Graphic Log	Drilling Methods, Size and Remarks Water Level/ Date	Backfill/ Instrumentation
10	MC3	100				MC- 3 (10.0-12.0) Silty SAND with Gravel; SM; Brown; Nonplastic to Low Plasticity; Moist; Est. ~15% Coarse to Fine Gravel, 5% Coarse Sand, 10% Medium Sand, 55% Fine Sand and 15% Fines; Pumice Sand; Weakly to Moderately Welded Tuff; (Pulverized by Drilling); Deschutes Formation	pulverized to silt, sand, and gravel by drilling)		mg/kg. 10.0 ft - PID = 1.3 ppm. MC-3: HC Odor 10.0-11.0 ft. Very difficult drilling. Near refusal. 10.5 ft - VOCs = Det. 11.5 ft - PID = 0.3 ppm. MC-4: Very difficult	
	MC4	100				MC- 4 (12.0-13.0) Silty SAND; SM; Brown; Nonplastic; Moist; Est. ~10% Fine Gravel, 5% Coarse Sand, 10% Medium Sand, 55% Fine Sand and 20% Fines; Pumice Sand; Weakly to Moderately Welded Tuff; (Pulverized by Drilling); Deschutes Formation (13.0) Bottom of Hole	13.0 Bottom of Hole		drilling. Very Slow DR. No odor or staining. Probe stuck in boring - removed with difficulty. 13 ft - PID = 0.3 ppm; Dx = BDL Bottom of Hole = 13 ft	· · · · · · · · · · · · · · · · · · ·
							botom of hole		Hole Location: Center of hydraulic lift. Groundwater not encountered. Used 3/4 bag of 3/8 inch bentonite chips to	
- 15	-								Note: Dx = Diesel Range Hydrocarbons by NWTPH method; RRO = Residual Range Hydrocarbons by NWTPH method; VOCs = Volatile Organic Hydrocarbons by EPA Method 8260; Det = Constituents detected at or above laboratory detection limits; BDL = Below laboratory detection limits.	
INT EXPLORATION LOGS.GPJ ODOT_MAN.GDT 8/1/12	-									
25										

						OREGON DEPARTME	NT OF TR	ANSPO	ORTAT	TION	г	Pa	age 1 o	f 2
							1					Hole No.	P12-06	
Proje	ct US97	@ J Sti	reet (Mad	ras)			Purpose	Prope	rty App	raisal		E.A. No.	CO161601-0	10
High	way US9	7: The	Dalles Ca	alifornia H	lighway		County	Jeffers	son			Key No.	15409	
Hole	Location	N	orthing:	44.62		Easting: -12	1.13					Start Card No.	N/A	
Equip	oment G	eoprob	e 6600				Driller	BB & /	A Envir	onmental - Rod John	son	Bridge No.	N/A	
Proje	ct Geolog	ist Rya	an Frankl	lin			Recorder	Kelly \	Nood			Ground Elev.	2320.0 ft	
Start	Date Ju	ne 25, 2	012		End D	ate June 25, 2012	Total Dep	oth 10.0) ft	1		Tube Height	N/A	
		Test T	<u>ype</u>			Rock Abbreviatio	ns			Typi Drilling Methods	cal D	rilling Abbrev	riations	
"A" - "X" - "C" - "N" - "U" - "T" -	"X" - Auger J - Joint Pl - F "C" - Core, Barrel Type F - Fault C - C "N" - Standard Penetration B - Bedding U - U "U" - Undisturbed Sample Fo - Foliation St - S "T" - Test Pit Soil Rock Ma O Soil Rock SOIL: SOIL: Soil Nock SOIL: SOIL: SOIL:						P - Polished Sl - Slickens Sm - Smoot R - Rough VR - Very F	<u>ghness</u> sided h tough		WL - Wire Line HS - Hollow Stem Aug DF - Drill Fluid SA - Solid Auger CA - Casing Advancer HA - Hand Auger	ger	LW LW WR WC DP DR DR DA	 Lost Water Water Return Water Color Down Pressure Drill Rate Drill Action 	1
o Depth (ft)	"T" - Test Pit S - Shear I Vitation Soil Rock Soil Soil Vitation Soil Soil Soil Mck Vitation Soil Soil Soil Soil Vitation Soil Soil Soil Mck Vitation Soil Soil Soil Soil Vitation Soil Soil Soil Soil <					<u>Material Descripti</u> SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Re Texture, Cementation, Str ROCK: Rock Name, Color, Weathe Discontinuity Spacing, Jo Core Recovery, Formation MC- 1a (0.0-0.5) Concrete	Material Description Unit Description me, USCS, Color, Plasticity, sture, Consistency/Relative Density, ture, Cementation, Structure, Origin. Unit Description Name, Color, Weathering, Hardness, scontinuity Spacing, Joint Filling, e Recovery, Formation Name. 0.0 - 0.5 CONCRETE					A Drilling A Methods, Size and Remarks	agodo time Mater Level/ Date	Backfill/ Instrumentation
		MC1b 60 MC-1b (0.5-1.5) Silty SAND with							CON	CRETE	9 4 4 8 4	Macro Cor	e Tooling.	
MC1b 60 MC- 1b (0.5-1.5) Silty SAND with Gray, Nonplastic; Dry; Est. ~20%, Fine Gravel, 10% Coarse Sand, 2 Fine Sand and 15% Fines; Angula MC1c 60 MC- 1c (1.5-5.0) Silty SAND with Tan: Nonplastic; Dry; Est. ~10% Coarse Sand, 2 Fine Sand and 15% Fines; Angula						MC- 1b (0.5-1.5) Silty SAND with Grav Gray; Nonplastic; Dry; Est. ~20% Coar Fine Gravel, 10% Coarse Sand, 20% N Fine Sand and 15% Fines; Angular Ba	vel; SM; Brov se Gravel, 20 Aedium Sano salt Gravel; (vn and)% I, 15% Fill)	0.5 - FILL Grav	1.5 : Silty SAND with rel		approx. lat. = Hydrocar Photo-ioniz Detector. p Per Million	and long. HC bon. PID = zation opm = Parts	
	MC1c	60				MC- 1c (1.5-5.0) Silty SAND with Graz Tan; Nonplastic; Dry; Est. ~10% Coars Gravel, 5% Coarse Sand, 15% Mediun Sand and 15% Fines; Abundant Pumid Moderately Welded Tuff; (Pulverized b Deschutes Formation	rel; SM; Brov e Gravel, 10 n Sand, 45% ce Sand; We y Drilling);	<i>r</i> n and % Fine Fine akly to	1.5 - DES FOR Silty Grav Tan; to Da pulv sanc drilli	10.0 CHUTES MATION TUFF: SAND with vel; Brown and Nonplastic; Dry amp (Tuff sample erized to silt, I, and gravel by ng)		MC-1: No I staining. F	HC odor or ast DR.	······································
	MC2	90				MC- 2 (5.0-10.0) Silty SAND with Grav Nonplastic; Damp; Est. ~15% Coarse I Coarse Sand, 10% Medium Sand, 50% 20% Fines; Pumice Sand; Weakly to N Tuff; (Pulverized by Drilling); Deschute	vel; SM; Brov to Fine Gravd 6 Fine Sand Joderately W s Formation	vn; 2l, 5% and /elded				4.8 ft - PID MC-2: No I staining. Si refusal. Ro sample. 8 ft - Dx = I	= 0.1 ppm. HC odor or low DR. Near bots in	
10												 √ 9.0 ft - PID √ √ √ 	= 2.2 ppm.	

	Projec	t Name	US97 @	J Street	(Madras)	Hole No. P12-06			Page 2 of	2
	Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance	Discontinuity Data a Or RQD%	Percent Natural Moisture	<u>Material Description</u> SOIL: Soil Name, USCS, Color, Plasticity, Moisture, Consistency/Relative Density, Texture, Cementation, Structure, Origin. ROCK: Rock Name, Color, Weathering, Hardness, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name.	Unit Description	Graphic Log	Drilling Methods, Size and Remarks Water Level/ Date	Backfill/ Instrumentation
	- 15 -						(10.0) Bottom of Hole	10.0 Bottom of Hole		Bottom of Hole = 10 ft Hole Location: Adjacent north of hydraulic lift. Groundwater not encountered. Used 1/2 bag of 3/8 inch bentonite chips to abandon boring. Note: Dx = Diesel Range Hydrocarbons by NWTPH method; BDL = Below Laboratory Detection Limits	
ODOT DRILL LOG GINT EXPLORATION LOGS.GPJ ODOT_MAN.GDT 8/1/12	- 20 -										

							OREGON DEPARTMEN	NT OF TR	ANSPO	ORTAT	TION	Г	Pa	ge 1 o	f 2
ſ								1				1	Hole No.	P12-07	
	Projec	t US97	@ J Sti	reet (Mad	lras)			Purpose	Prope	rty App	raisal	1	E.A. No.	CO161601-0	10
	Highw	ay US9	7: The	Dalles Ca	alifornia I	lighway		County	Jeffers	son		1	Key No.	15409	
	Hole I	Location	N	orthing:	44.62		Easting: -12	1.13					Start Card No.	N/A	
	Equip	ment G	eoprob	e 6600				Driller	BB & /	A Envir	onmental - Rod Johns	son 1	Bridge No.	N/A	
	Projec	t Geolog	ist Rya	an Frank	lin			Recorder	Kelly \	Wood		(Ground Elev.	2320.0 ft	
	Start I	Date Ju	ne 25, 2	012		End D	ate June 25, 2012	Total Dep	oth 10.0	0 ft	T :	'	Tube Height	N/A	
	"A" "X" "C" "N" "U"	Auger Cor Auger Core, Barr Standard F Undisturbe Fest Pit	Test T e el Type Penetratic ed Sample	<u>ype</u> m e		<u>Discon</u> J - Join F - Fa B - Be Fo - F S - Sh	Rock Abbreviatio ntinuity Shape nt Pl - Planar ult C - Curved xdding U - Undulating oliation St - Stepped ear Ir - Irregular	ns Surface Rou P - Polished SI - Slicken Sm - Smoot R - Rough VR - Very F	ighness sided h Rough		Drilling Methods WL - Wire Line HS - Hollow Stem Aug DF - Drill Fluid SA - Solid Auger CA - Casing Advancer HA - Hand Auger	ger	<u>Drilli</u> LW - WR - WC - DP - DR - DA -	ng Remarks Lost Water Water Return Water Color Down Pressure Drill Rate Drill Action	
DRILL LOG GINT EXPLORATION LOGS.GPJ ODDT_MAN.GDT 8/1/12	(tj) Uppth (tj)	NC1c MC1c MC2	00 00 00 00 00 00 00 00 00 00 00 00 00	Driving Resistance	Discontinuity Data Nov	Percent	Material Descripti SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Re Texture, Cementation, Str ROCK: Rock Name, Color, Weather Discontinuity Spacing, Joi Core Recovery, Formation MC- 1a (0.0-0.5) Concrete MC- 1b (0.5-1.5) Silty SAND with Grav Gray; Nonplastic; Dry; Est. ~20% Coars Fine Gravel, 10% Coarse Sand, 20% N Fine Sand and 15% Fines; Angular Ba MC- 1c (1.5-5.0) Silty SAND with Grav Tan; Nonplastic; Dry; Est. ~10% Coarse Gravel, 5% Coarse Sand, 15% Mediun Sand and 15% Fines; Abundant Pumic Moderately Welded Tuff; (Pulverized b) Deschutes Formation MC- 2 (5.0-10.0) Silty SAND with Grav Nonplastic; Damp: Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 50% 20% Fines; Pumice Sand; 50% 20% Fines; Pumice Sand; 50% MC- 2 (5.0-10.0) Silty SAND with Grav Nonplastic; Damp: Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 50% MC- 1c (1.5-5.0) Silty SAND with Grav Nonplastic; Damp: Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 50% MC- 2 (5.0-10.0) Silty SAND with Grav Nonplastic; Damp: Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 50% MC- 10% Jedium Sand, 50% MC- 10% Jedium Sand, 50%	on sticity, lative Densit ucture, Origi ring, Hardnes int Filling, n Name. vel; SM; Brow se Gravel, 20 dedium Sand salt Gravel, 21 dedium Sand salt Gravel, 20 rel; SM; Brow e Gravel, 20 rel; SM; Brow o Fine Gravel, 10 N; Brow o Fine Gravel o Fine Gravel o Fine Sand Moderately V s Formation	y, n. s, s, vn and y, 15% Fine Fine akly to vn; el, 5% and /elded	0.0 - CON 0.5 - FILL Grav 1.5 - DES FOR Silty Grav Tan; to Da pulv sanc drilli	0.5 CRETE 1.5 : Silty SAND with rel 10.0 CHUTES MATION TUFF: SAND with rel; Brown and Nonplastic; Dry amp (Tuff sample erized to silt, I, and gravel by ng)	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	DA-	Drill Action Probe with Tooling. Ins given as and long. HC pon. PID = ation pm = Parts IC odor or iller states pmpacted heath PID = 1.0 IC odor or ry difficult w DR. Near er stuck in DL	Contraction
ODOT DR	10												9.5 ft - PID	= 0.4 ppm.	

	Projec	t Name	US97 @	J Street	: (Madras)	Hole No. P12-07			Page 2 of	2
	Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance	Discontinuity Data a Nor RQD%	Percent Natural Moisture	<u>Material Description</u> SOIL: Soil Name, USCS, Color, Plasticity, Moisture, Consistency/Relative Density, Texture, Cementation, Structure, Origin. ROCK: Rock Name, Color, Weathering, Hardness, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name.	Unit Description	Graphic Log	Drilling Methods, Size and Remarks Water Level/ Date	Backfill/ Instrumentation
	- 15 -						(10.0) Bottom of Hole	10.0 Bottom of Hole		Bottom of Hole = 10 ft Hole Location: Adjacent south of hydraulic lift. Groundwater not encountered. Used 1/3 bag of 3/8 inch bentonite chips to abandon boring. Note: Dx = Diesel Range Hydrocarbons by NWTPH method; BDL = Below Laboratory Detection Limits	
ODOT DRILL LOG GINT EXPLORATION LOGS.GPJ ODOT_MAN.GDT 8/1/12	- 20 -										

						OREGON DEPARTMEN	NT OF TR	ANSPO	ORTAT	TION	Г	Pa	ge 1 o	f 2
												Hole No.	P12-08	
Proj	ect US97	@ J Str	eet (Madı	as)			Purpose	Proper	ty App	raisal		E.A. No.	CO161601-0	10
Higł	nway US	97: The	Dalles Ca	lifornia H	lighway		County	Jeffers	on			Key No.	15409	
Hole	e Location	No	orthing:	44.62		Easting: -12	1.13					Start Card No.	N/A	
Equi	pment G	eoprobe	e 6600				Driller	BB & A	A Envir	onmental - Rod John	son	Bridge No.	N/A	
Proj	ect Geolog	sist Rya	an Frankli	n	_		Recorder	Kelly V	Vood			Ground Elev.	2320.0 ft	
Star	t Date Ju	ne 25, 2	012		End D	ate June 25, 2012	Total Dep	th 10.5	5 ft			Tube Height	N/A	
"A" "X" "C" "N" "U" "T"	$\begin{array}{c c c c c c c c c c c c c c c c c c c $						ns Surface Roug P - Polished SI - Slickens Sm - Smooth R - Rough VR - Very R	<u>ghness</u> ided 1 ough		<u>Typic</u> <u>Drilling Methods</u> WL - Wire Line HS - Hollow Stem Aug DF - Drill Fluid SA - Solid Auger CA - Casing Advancer HA - Hand Auger	er	rilling Abbrevi Drill LW WR WC DP - DR - DA -	ations ing Remarks - Lost Water - Water Return - Water Color Down Pressure Drill Rate Drill Action	1
Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance	Discontinuity Data 2 Or RQD%	Percent Natural Moisture	<u>Material Descripti</u> SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Rel Texture, Cementation, Str ROCK: Rock Name, Color, Weather Discontinuity Spacing, Joi Core Recovery, Formation	on sticity, lative Density ucture, Origir ing, Hardness nt Filling, Name.	7, 1. 5,	<u>L</u>	Init Description	Graphic Log	Drilling Methods, Size and Remarks	Water Level/ Date	Backfill/ Instrumentation
0	MC1a	56				MC- 1a (0.0-0.5) Concrete			0.0 - CON	0.5 CRETE	2.4 4 4	 Used Push Macro Core 	Probe with Tooling.	
	MC1b	56				MC- 1b (0.5-1.5) Silty SAND with Grav Gray; Nonplastic; Dry; Est. ~15% Coar Fine Gravel, 10% Coarse Sand, 20% M Fine Sand and 15% Fines; Angular Ba	rel; SM; Brow se Gravel, 20 ledium Sand salt Gravel; (I	n and % , 20% Fill)	0.5 - FILL Grav	1.5 : Silty SAND with el		Hole locatic approx. lat. = Hydrocarl Photo-ioniz Detector. p Per Million.	ons given as and long. HC con. PID = ation pm = Parts	
	MC1c	56				MC- 1c (1.5-5.0) Silty SAND with Grav Tan; Nonplastic; Damp; Est. ~15% Coa 5% Coarse Sand, 15% Medium Sand, and 15% Fines; Pumice Sand; Weakly Welded Tuff; (Pulverized by Drilling); D Formation	el; SM; Brow arse to Fine C 50% Fine Sa 50% Fine Sa to Moderate eschutes	n and Gravel, nd ly	1.5 - DES FOR Silty Grav Tan; Dam pulv sand drilli	10.5 CHUTES MATION TUFF: SAND with rel; Brown and Nonplastic; p (Tuff sample erized to silt, I, and gravel by ng)		MC-1: No H staining. Di	IC odor or fficult drilling.	
- 5	MC2	100				MC- 2 (5.0-8.5) Silty SAND with Grave Nonplastic; Damp; Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 55% 15% Fines; Pumice Sand; Weakly to N Tuff; (Pulverized by Drilling); Deschutes	el; SM; Brown o Fine Grave o Fine Sand a foderately W s Formation	; I, 5% and elded				MC-2: No F staining. Ve drilling. Slov refusal.	= 0.8 ppm. IC odor or ry difficult w DR. Near	
	MC3	100				MC- 3 (8.5-10.5) Silty SAND with Grav Nonplastic; Damp; Est. ~15% Coarse t	rel; SM; Brow o Fine Grave	n; I, 5%				6.8 ft - PID	= 1.5 ppm IC odor or fficult drilling.	······································
10						20% Fines; Pumice Sand; Weak,90% 20% Fines; Pumice Sand; Weak,90% Tuff; (Pulverized by Drilling); Deschute;	loderately W s Formation	elded						

	Projec	et Name	US97 @) J Stree	t (Madras	5)	Hole No. P12-08	1		Page 2	of 2
	Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance	Discontinuity Data O Or RQD%	Percent Natural Moisture	<u>Material Description</u> SOIL: Soil Name, USCS, Color, Plasticity, Moisture, Consistency/Relative Density, Texture, Cementation, Structure, Origin. ROCK: Rock Name, Color, Weathering, Hardness, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name.	Unit Description	Graphic Log	Drilling Methods, Size and Remarks Water Level/	Date Backfill/ Instrumentation
	- 15 -						(10.5) Bottom of Hole	10.5 Bottom of Hole		10.0 ft - PID = 1.7 ppm Dx = BDL Bottom of Hole = 10.5 Hole Location: Adjacer west of hydraulic lift. Groundwater not encountered. Used 1/3 bag of 3/8 ind bentonite chips to abandon boring. Note: Dx = Diesel Rang Hydrocarbons by NWTPH method; BDL Below Laboratory Detection Limits	ft ft tt
ODOT DRILL LOG GINT EXPLORATION LOGS.GPJ ODOT_MAN.GDT 8/1/12	- 20 -										

						OREGON DEPARTMEN	NT OF TR	ANSPO	ORTAT	TION	г	Pa	nge 1 of	f 2
							1					Hole No.	P12-09	
Proje	ct US97	@ J Str	eet (Mad	ras)			Purpose	Prope	rty App	raisal		E.A. No.	CO161601-0	10
High	way USS	97: The	Dalles Ca	alifornia H	lighway		County	Jeffers	on			Key No.	15409	
Hole	Location	No	orthing:	44.62		Easting: -12	1.13					Start Card No.	N/A	
Equip	oment G	eoprobe	e 6600				Driller	BB & /	A Envir	onmental - Rod Johns	son	Bridge No.	N/A	
Proje	ct Geolog	sist Rya	n Frankl	in			Recorder	Kelly V	Nood			Ground Elev.	2320.0 ft	
Start	Date Ju	ne 25, 2	012		End D	ate June 25, 2012	Total Dep	th 11.0) ft			Tube Height	N/A	
		Test T	ype			Rock Abbreviation	ns			Typic	cal D	rilling Abbrev	iations	
"A" - "X" - "C" - "N" - "U" - "T" -	Auger Cor Auger Core, Barr Standard I Undisturbe Test Pit	el Type Penetratio ed Sample	n e		Discon J - Join F - Fa B - Be Fo - F S - Sh	ntinuity Shape ht Pl - Planar ult C - Curved dding U - Undulating oliation St - Stepped ear Ir - Irregular	Surface Roug P - Polished SI - Slickens Sm - Smooth R - Rough VR - Very R	<u>ghness</u> ided i		Drilling Methods WL - Wire Line HS - Hollow Stem Aug DF - Drill Fluid SA - Solid Auger CA - Casing Advancer HA - Hand Auger	jer	Drill LW WR WC DP - DR DA	- Lost Water - Water Return - Water Color - Down Pressure - Drill Rate - Drill Action	T
Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance	Discontinuity Data N Or RQD%	Percent Natural Moisture	<u>Material Descripti</u> SOIL: Soil Name, USCS, Color, Pla Moisture, Consistency/Rel Texture, Cementation, Str ROCK: Rock Name, Color, Weather Discontinuity Spacing, Joi Core Recovery, Formation	on sticity, lative Density ucture, Origin ring, Hardness int Filling, 1 Name.	7, 1. 3,	<u>L</u>	Jnit Description	Graphic Log	Drilling Methods, Size and Remarks	Water Level/ Date	Backfill/ Instrumentation
0	MC1a	70				MC- 1a (0.0-0.5) Concrete			0.0 - CON	0.5 CRETE	2 4 9 4	Used Push Macro Core	Probe with e Tooling.	
	MC1b	70				MC- 1b (0.5-1.5) Silty SAND with Grav Brown; Nonplastic; Dry; Est. ~15% Coa Fine Gravel, 10% Coarse Sand, 15% M Fine Sand and 15% Fines; Angular Gra	vel; SM; Light arse Gravel, ledium Sand avel; (Fill)	5% , 30%	0.5 - FILL Grav	1.5 : Silty SAND with rel		Hole locatio approx. lat. = Hydrocar Photo-ioniz Detector. p Per Million.	ons given as and long. HC bon. PID = cation pm = Parts	×///// ///////////////////////////////
	MC1c	70				MC- 1c (1.5-5.0) Silty SAND with Grav Brown; Nonplastic; Dry; Est. ~15% Coa 5% Coarse Sand, 10% Medium Sand, and 15% Fines; Pumice Sand; Weakly Welded Tuff; (Pulverized by Drilling); D Formation	rel; SM; Light arse to Fine C 55% Fine Sa to Moderate eschutes	Gravel, nd ly	1.5 - DES FOR Silty Grav Brov Non Dam pulv sanc drilli	11.0 CHUTES MATION TUFF: SAND with rel; Brown, Light vn and Tan; blastic; Dry to p (Tuff sample erized to silt, I, and gravel by ng)		MC-1: No F staining.	+C odor or	····· ····· ····· ····· ····· ····· ····
- 5	MC2	100				MC- 2 (5.0-9.0) Silty SAND with Grave Nonplastic; Damp; Est. ~15% Coarse to Coarse Sand, 10% Medium Sand, 50% 20% Fines; Pumice Sand; Weakly to M Tuff; (Pulverized by Drilling); Deschutes	el; SM; Brown o Fine Grave 6 Fine Sand a Noderately W s Formation	; , 5% and elded				4.5 ft - PID	= 0.4 ppm. HC odor or ow DR.	
10	MC3	100				MC- 3 (9.0-11.0) Silty SAND with Grav Nonplastic; Damp; Est. ~15% Coarse t Coarse Sand, 10% Medium Sand, 50% 20% Fines; Pumice Sand; Weakly to M Tuff; (Pulverized by Drilling); Deschutes	vel; SM; Brow o Fine Grave 5 Fine Sand a 4 foderately W s Formation	n; I, 5% and elded				8.5 ft - PID MC-3: No c staining.	= 0.5 ppm.	· · · · · · · · · · · · · · · · · · ·

I	Projec	t Name	US97 @	J Stree	t (Madras)	Hole No. P12-09			Page 2 o	f 2
	Depth (ft)	Test Type, No.	Percent Recovery	Driving Resistance lio	Discontinuity Data 8 Or RQD%	Percent Natural Moisture	<u>Material Description</u> SOIL: Soil Name, USCS, Color, Plasticity, Moisture, Consistency/Relative Density, Texture, Cementation, Structure, Origin. ROCK: Rock Name, Color, Weathering, Hardness, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name.	Unit Description	Graphic Log	Drilling Methods, Size and Remarks Water Level/ Date	Backfill/ Instrumentation
	10						(11 0) Bettern of Help			10.6 ft - PID = 0.5 ppm. 11 ft - Dx BDL	
							(11.0) Bottom of Hole	11.0 Bottom of Hole		Bottom of Hole = 11 π	
										Hole Location: Adjacent east of hydraulic lift.	
										Groundwater not encountered.	
										Used 1/3 bag of 3/8 inch bentonite chips to abandon boring.	
										Note: Dx = Diesel Range Hydrocarbons by NWTPH method; BDL = Below Laboratory Detection Limits	
	- 15 -										
/12	- 20 -										
I.GDT 8/1											
DOT_MAN											
S.GPJ O											
TION LOG											
EXPLORA											
DG GINTE											
DRILL LO											
ODOT	25										

Appendix I

Chain of Custody Forms and Analytical Results

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State of Oregon Sample Chain of Custody E082 06-0085

Agency, Authorized Purch	gency, Authorized Purchaser or Agent:					orato	rv Nam	e.		Lab Se	lection (criteria:	Turn Around Time:
ODOT				Enviro	nmenta	al Scier	nces Co	orporatio	on		kimity (if ⁻	TAT < 48 hrs	\boxtimes 10 days (std.)
Send Lab Report To: Rva	n Franklin			Lab B	atch #						r work or	same project	\Box 5 days
Address: 6303	34 O.B. Riley Rd			Invoid	e To:	Sam	е				t (for anti	cipated analyse	es) \Box 72 hours
Ben	d, OR 97701			Addre	SS:					🗍 Othe	er labs di	squalified or un	able 🔲 48 hours
Tel. #: (541) 388-6088									to p	erform re	quested service	es 🗌 24 hours
E-mail: ryan	.franklin@odot.s	state.or.	us	Tel. #						🗌 Eme	ergency v	vork	Other
Project Name: US97: J Stree	et Intersection (N	/ladras \$	South Y)				San	nple Pr	eserva	ative			
Project #: 15409				None	5035 Kit	None	5035 Kit	None	None	None			1.1. 日本発展で発展した構成した。 時期には、日本の構成した。 たたし、日本の構成した。 たたし、日本の表現にの構成した。
Sampler Name: Ryan Fran	klin						Req	uested	Anal	yses			
Sample ID#	Collection Date/Time	Matrix	Number of Contain	NTPH- HCID	ИТРН- Gx	ИТРН- Dx)Cs by 3260	NHs by 70SIM	VOCs 8270	CRA 8 letals	CBs by 3082		Comments
			0.0	ź	ź	ź	<u>۲</u>	P/ 82	S S	` <u>~</u> 2	P		
P12-01-1'	6/25/P	S	1			X							1582318-01
P12-02-0.5'	8:57am		1			X							L582318 07
F12-03-0,5'	7:14 am					Ż							53
P12-04-1'	9:23 am					X							04
P12-05-0'-5'	9:43 am					<u>X</u>							05
P12-05-7,5'	9:51 Lm					X			X		X		04
P12-05-9.5'	9:55 am		1			X			_X		X		0
P12-05-10.5'	10:06 cm		4				X				•		A
P12-05-13'	10 26 cm		l			X							09
P12-06-81	10:51 am					<u>X</u>							[0
P12-07-9'	11:25 am					X							<i>L</i> 1
P12-08-11-21	11:40 am	Y				X							n
Notes:													
							5040) 06	3 <u>3</u> (1627			3.4° JF OR
Relinquished By: Ryan Franklin Agency/Agen				ODC	Т	F	Receive	d By:	Fee	dEx		Agen	cy/Agent:
Signature: Time & Date:		126/1	2 3.	DS pm	Signate	tin p	cont	t. fedEx			& Date: 7-72 0900		
Relinquished By: Agency/Agent:		it: Rec			Receive	d By:	· · · ·			Agen	cy/Agent:		
Signature: Time & Date:			& Date:	Signature			ure:				Time	& Date:	

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # []. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

State of Oregon Sample Chain of Custody

Agency, Authorized I ODOT	gency, Authorized Purchaser or Agent: DOT				Contract Laboratory Name: Environmental Sciences Corporation				on	Lab Selection Criteria:					Turn Around Time:	
Send Lab Report To:	Ryan Fra	nklin			Lab E	Batch #	:					or work o	on same	project		\Box 5 days
Address:	63034 O. Bend, OR	B. Riley Ro 8 97701	1.		Invoi Addre	ce To: ess:	Sam	ne				st (for ar er labs	nticipated disqualifi	analys	ses) Inable	72 hours
Tel. #:	(541) 388	-6088									to p	erform i	requested	d servio	ces	24 hours
E-mail:	ryan.franl	klin@odot.s	state.or.	us	Tel. #	:					🗌 Em	ergency	work			Other
Project Name: US97: J	J Street Inte	ersection (I	Madras	South Y)				San	nple Pr	reserva	tive			1	ŝ.	a da anti-
Project #: 15409					None	5035	None	5035	None	None	None			.5.4 		
Sampler Name: Ryan	Franklin							Rec	wester	Analy	1995					
Sample ID#	C	Collection Date/Time	Matrix	Number of Contain -ers	NWTPH- HCID	NWTPH- Gx	NWTPH- Dx	VOCs by 8260	PAHs by 8270SIM	SVOCs by 8270	RCRA 8 Metals	PCBs by 8082			<u>et 120</u>	Comments १९४२ ३७४
P12-08-8'	6	125/12	15	1											Hold	
P12-08-101		11:57an	i	1			X	-							1 1 010 1	()
812-09-8.5'		12:1400												1	Isli	'/
P12 - 09 - 111		12122 010					V							<i>I</i> *	7010	
		12,22 pm	¥	_Ψ												19
		- 														
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Notos																
Noles.																3.4° TF
Relinquished By: Ryar	Relinquished By: Ryan Franklin Agency/Agent				ODO	Т	F	Receive	d By:	Fed	Ex			Ager	ncy/Age	nt:
Signature:	Signature: Time & Date:6			& Date: 6/	26/12	3:00 pr	n ⁸	sign any	5 10	lant	FLE	٢		Time	& Date	" man
Relinquished By:			Ageno	cy/Agent:		,	F	Receive	d By:		Age				ncy/Age	
Signature: Time & Date:				Signature:					Time 8			& Date	. (291)			

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # []. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ryan Franklin (ODOT) Oregon Dept of Transportation - ODOT 63034 O.B. Riley Rd Bend, OR 97701

Report Summary

Thursday July 12, 2012

Report Number: L582318 Samples Received: 06/27/12 Client Project: 15409

Description: US97: J Street Intersections

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701	REPORT D	OF ANALYSIS	Jul	y 12,2012		
Date Received : June 27, 2	2012		ESC	Sample # :	L582318-01	
Description : US97: J Street	Intersections		Sit	e ID :		
Sample ID : P12-01-1 FT			Dree		1 5 4 0 0	
Collected By : Ryan Franklin Collection Date : 06/25/12 08:57			Pro	ject # · ·	15409	
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.9	0.100	00	2540G	07/02/12	1
Diesel Range Organics (DRO) Residual Range Organics (RRO) Surrogate Recovery	BDL BDL	4.5 11.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/05/12 07/05/12	1 1
o-Terphenyl	78.3		% Rec.	NWTPHDX	07/05/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:24

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (OI Oregon Dept of Ti 63034 O.B. Riley Bend, OR 97701	DOT) cansportation - ODC Rd	REPORT	OF ANALYSIS	Jul	y 12,2012		
Date Received	: June 27, 2	2012		ESC	Sample # :	L582318-02	2
Description	: US97: J Street	Intersections		sit	e TD :		
Sample ID	P12-025 FT			510			
Collected By Collection Date	Ryan Franklin 06/25/12 08:59			Pro	ject # : :	15409	
Parameter		Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids		84.9	0.100	010	2540G	07/02/12	1
Diesel Range O Residual Range	rganics (DRO) Organics (RRO)	BDL BDL	4.7 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/05/12 07/05/12	1 1
o-Terphenyl	- X	78.0		% Rec.	NWTPHDX	07/05/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:24

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970 2,2012

Ryan Franklin (ODOT) Oregon Dept of Transportation - OD 63034 O.B. Riley Rd Bend, OR 97701	REPORT C	OF ANALYSIS	Jul	y 12,2012		
Date Received : June 27, 2	2012		ESC	C Sample # :	L582318-03	
Description : US97: J Street	Intersections		sit	e TD :		
Sample ID : P12-035 FT			D		F 4 0 0	
Collected By : Ryan Franklin Collection Date : 06/25/12 09:14			Pro	ject # ∙ ⊥	.5409	
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	85.5	0.100	00	2540G	07/02/12	1
Diesel Range Organics (DRO) Residual Range Organics (RRO) Surrogate Recovery	BDL BDL	4.7 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/05/12 07/05/12	1 1
o-Terphenyl	72.0		% Rec.	NWTPHDX	07/05/12	1

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970 2,2012

Ryan Franklin (Oregon Dept of 63034 O.B. Rile Bend, OR 97701	ODO Trai y Ro	I) nsportation - ODO d	REPORT	OF ANALYSIS	Jul	y 12,2012		
Date Received	:	June 27, 2	012		ESC	Sample # :	L582318-04	
Description	:	US97: J Street	Intersections		c;+			
Sample ID	:	P12-04-1 FT			SIL	e id ;		
Collected By Collection Date	:	Ryan Franklin 06/25/12 09:23			Pro	ject # :	15409	
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids			84.1	0.100	00	2540G	07/02/12	1
Diesel Range Residual Rang	Orga e Oi	anics (DRO) rganics (RRO)	BDL BDL	4.8 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/05/12 07/05/12	1 1
o-Terphenyl	CTY		69.5		% Rec.	NWTPHDX	07/05/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:24

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (ODC Oregon Dept of Tra 63034 O.B. Riley F Bend, OR 97701	DT) unsportation - ODO Rd	REPORT	OF ANALYSIS	Jul	y 12,2012		
Data Descived .	Tuno 27 20	010		ESC	Sample # :	L582318-05	
Description :	US97: J Street	Intersections		sit	e TD :		
Sample ID :	P12-05-0-5 FT			510	0 12		
Collected By : Collection Date :	Ryan Franklin 06/25/12 09:43			Pro	ject # : 1	5409	
Parameter		Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids		91.0	0.100	010	2540G	07/02/12	1
Diesel Range Org Residual Range (Surrogate Recovery	ganics (DRO) Organics (RRO)	31. 320	4.4 55.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/05/12 07/12/12	1 5
o-Terphenyl		65.1		% Rec.	NWTPHDX	07/05/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:24

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

July 12,2012

Date Received : June 27, 2012 Description : US97: J Street Intersections : P12-05-7.5 FT Sample ID Collected By : Ryan Franklin Collection Date : 06/25/12 09:51

Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701

ESC Sample # : L582318-06 Site ID :

Project # : 15409

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	83.6	0.100	00	2540G	07/02/12	1
Diesel Range Organics (DRO)	1800	190	ma/ka	NWTPHDX	07/12/12	40
Residual Range Organics (RRO)	10000	960	ma/ka	NWTPHDX	07/12/12	80
Surrogate Recovery	10000	200			0,,12,22	00
o-Terphenyl	0.00		% Rec.	NWTPHDX	07/12/12	40
Polychlorinated Biphenyls						
PCB 1016	BDL	0.020	ma/ka	8082	07/02/12	1
PCB 1221	BDL	0.020	ma/ka	8082	07/02/12	1
PCB 1232	BDL	0.020	ma/ka	8082	07/02/12	1
PCB 1242	BDL	0 020	ma/ka	8082	07/02/12	1
PCB 1248	BDL	0 020	ma/ka	8082	07/02/12	1
DCB 1254	BDL.	0 020	mg/kg	8082	07/02/12	1
PCB 1260	BDL	0.020	ma/ka	8082	07/02/12	1
DCBs Surrogates		0.020	1119/119	0002	07/02/12	-
Decachlorohiphenyl	46 0		& Rec	8082	07/02/12	1
Tetrachloro-m-xylene	53.5		% Rec.	8082	07/02/12	1
-						
Base/Neutral Extractables		0 50	(1	00000	00/05/10	~ ~
Acenaphthene	BDL	0.79	mg/kg	8270D	07/05/12	20
Acenaphthylene	BDL	0.79	mg/kg	8270D	07/05/12	20
Anthracene	BDL	0.79	mg/kg	8270D	07/05/12	20
Benzidine	BDL	8.0	mg/kg	8270D	07/05/12	20
Benzo(a)anthracene	BDL	0.79	mg/kg	8270D	07/05/12	20
Benzo(b)fluoranthene	BDL	3.9	mg/kg	8270D	07/06/12	100
Benzo(k)fluoranthene	BDL	3.9	mg/kg	8270D	07/06/12	100
Benzo(g,h,i)perylene	BDL	3.9	mg/kg	8270D	07/06/12	100
Benzo(a)pyrene	BDL	3.9	mg/kg	8270D	07/06/12	100
Bis(2-chlorethoxy)methane	BDL	8.0	mg/kg	8270D	07/05/12	20
Bis(2-chloroethyl)ether	BDL	8.0	mg/kg	8270D	07/05/12	20
Bis(2-chloroisopropyl)ether	BDL	8.0	mg/kg	8270D	07/05/12	20
4-Bromophenyl-phenylether	BDL	8.0	mg/kg	8270D	07/05/12	20
2-Chloronaphthalene	BDL	0.79	mg/kg	8270D	07/05/12	20
4-Chlorophenyl-phenylether	BDL	8.0	mg/kg	8270D	07/05/12	20
Chrysene	BDL	0.79	mg/kg	8270D	07/05/12	20
Dibenz(a,h)anthracene	BDL	3.9	mg/kg	8270D	07/06/12	100
3,3-Dichlorobenzidine	BDL	8.0	mg/kg	8270D	07/05/12	20
2,4-Dinitrotoluene	BDL	8.0	mg/kg	8270D	07/05/12	20
2,6-Dinitrotoluene	BDL	8.0	mg/kg	8270D	07/05/12	20
Fluoranthene	BDL	0.79	mg/kg	8270D	07/05/12	20
Fluorene	BDL	0.79	mg/kg	8270D	07/05/12	20
Hexachlorobenzene	BDL	8.0	mg/kg	8270D	07/05/12	20
Hexachloro-1,3-butadiene	BDL	8.0	mg/kg	8270D	07/05/12	20

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note:

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Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

July 12,2012

Date Received	:	June 27, 2	012		ESC	C Sample #	: L582318-06	
Description	:	US97: J Street	Intersections		C			
Sample ID	:	P12-05-7.5 FT			511	Le ID ·		
-					Pro	oject # :	15409	
Collected By Collection Date	:	Ryan Franklin 06/25/12 09:51						
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Hexachlorocyc	lop	entadiene	BDL	8.0	mg/kg	8270D	07/05/12	20
Hexachloroetha	ane		BDL	8.0	mg/kg	8270D	07/05/12	20
Indeno(1,2,3-0	cd)]	pyrene	BDL	3.9	mg/kg	8270D	07/06/12	100
Isophorone			BDL	8.0	mg/kg	8270D	07/05/12	20
Naphthalene			BDL	0.79	mg/kg	8270D	07/05/12	20
Nitrobenzene			BDL	8.0	mg/kg	8270D	07/05/12	20
n-Nitrosodime	thy	lamine	BDL	8.0	mg/kg	8270D	07/05/12	20

maphonarono	222	0.75		01/02	0,,00,11	
Nitrobenzene	BDL	8.0	mg/kg	8270D	07/05/12	20
n-Nitrosodimethylamine	BDL	8.0	mg/kg	8270D	07/05/12	20
n-Nitrosodiphenylamine	BDL	8.0	mg/kg	8270D	07/05/12	20
n-Nitrosodi-n-propylamine	BDL	8.0	mg/kg	8270D	07/05/12	20
Phenanthrene	BDL	0.79	mg/kg	8270D	07/05/12	20
Benzylbutyl phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Bis(2-ethylhexyl)phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Di-n-butyl phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Diethyl phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Dimethyl phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Di-n-octyl phthalate	BDL	8.0	mg/kg	8270D	07/05/12	20
Pyrene	BDL	0.79	mg/kg	8270D	07/05/12	20
1,2,4-Trichlorobenzene	BDL	8.0	mg/kg	8270D	07/05/12	20
Acid Extractables						
4-Chloro-3-methylphenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2-Chlorophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2,4-Dichlorophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2,4-Dimethylphenol	BDL	8.0	mg/kg	8270D	07/05/12	20
4,6-Dinitro-2-methylphenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2,4-Dinitrophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2-Nitrophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
4-Nitrophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
Pentachlorophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
Phenol	BDL	8.0	mg/kg	8270D	07/05/12	20
2,4,6-Trichlorophenol	BDL	8.0	mg/kg	8270D	07/05/12	20
Surrogate Recovery						
2-Fluorophenol	40.0		% Rec.	8270D	07/05/12	20
Phenol-d5	87.7		% Rec.	8270D	07/05/12	20
Nitrobenzene-d5	122.		% Rec.	8270D	07/05/12	20
2-Fluorobiphenyl	97.4		% Rec.	8270D	07/05/12	20
2,4,6-Tribromophenol	41.9		% Rec.	8270D	07/05/12	20
p-Terphenyl-d14	112.		% Rec.	8270D	07/05/12	20

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

July 12,2012

Date Received : June 27, 2012 Description : US97: J Street Intersections P12-05-9.5 FT Sample ID : Collected By : Ryan Franklin Collection Date : 06/25/12 09:55

Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701

ESC Sample # : L582318-07

Site ID : Project # : 15409

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	82.7	0.100	010	2540G	07/02/12	1
Diesel Range Organics (DRO)	1700	190	ma/ka	NWTPHDX	07/12/12	40
Residual Range Organics (RRO)	8900	480	ma/ka	NWTPHDX	07/12/12	40
Surrogate Recovery						
o-Terphenyl	0.00		% Rec.	NWTPHDX	07/12/12	40
Polychlorinated Biphenyls						
PCB 1016	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1221	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1232	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1242	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1248	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1254	BDL	0.020	mg/kg	8082	07/02/12	1
PCB 1260	BDL	0.020	mg/kg	8082	07/02/12	1
PCBs Surrogates			5. 5			
Decachlorobiphenyl	55.6		% Rec.	8082	07/02/12	1
Tetrachloro-m-xylene	59.1		% Rec.	8082	07/02/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	2.0	mg/kg	8270D	07/05/12	50
Acenaphthylene	BDL	2.0	mg/kg	8270D	07/05/12	50
Anthracene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzidine	BDL	20.	mg/kg	8270D	07/05/12	50
Benzo(a)anthracene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzo(b)fluoranthene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzo(k)fluoranthene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzo(g,h,i)perylene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzo(a)pyrene	BDL	2.0	mg/kg	8270D	07/05/12	50
Bis(2-chlorethoxy)methane	BDL	20.	mg/kg	8270D	07/05/12	50
Bis(2-chloroethyl)ether	BDL	20.	mg/kg	8270D	07/05/12	50
Bis(2-chloroisopropyl)ether	BDL	20.	mg/kg	8270D	07/05/12	50
4-Bromophenyl-phenylether	BDL	20.	mg/kg	8270D	07/05/12	50
2-Chloronaphthalene	BDL	2.0	mg/kg	8270D	07/05/12	50
4-Chlorophenyl-phenylether	BDL	20.	mg/kg	8270D	07/05/12	50
Chrysene	BDL	2.0	mg/kg	8270D	07/05/12	50
Dibenz(a,h)anthracene	BDL	2.0	mg/kg	8270D	07/05/12	50
3,3-Dichlorobenzidine	BDL	20.	mg/kg	8270D	07/05/12	50
2,4-Dinitrotoluene	BDL	20.	mg/kg	8270D	07/05/12	50
2,6-Dinitrotoluene	BDL	20.	mg/kg	8270D	07/05/12	50
Fluoranthene	BDL	2.0	mg/kg	8270D	07/05/12	50
Fluorene	BDL	2.0	mg/kg	8270D	07/05/12	50
Hexachlorobenzene	BDL	20.	mg/kg	8270D	07/05/12	50
Hexachloro-1,3-butadiene	BDL	20.	mg/kg	8270D	07/05/12	50

Hexachloro-1,3-butadiene

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

Note:

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mg/kg



Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

July 12,2012

Date Received :June 27, 2012Description :US97: J Street IntersectionsSample ID :P12-05-9.5 FTCollected By :Ryan FranklinCollection Date :06/25/12 09:55	Descenter			Deves Deves 14	Det	T 2 2	TToo di terra			Data	
Date Received : June 27, 2012 ESC Sample # : L582318- Description : US97: J Street Intersections Site ID : Sample ID : P12-05-9.5 FT Site ID : Collected By : Ryan Franklin Project # : 15409	Collection Date	:	06/25/12 09:55								
Date Received : June 27, 2012 Description : US97: J Street Intersections Sample ID : P12-05-9.5 FT	Collected By	:	Ryan Franklin				Pro	ject # :	154	09	
Date Received : June 27, 2012 Description : US97: J Street Intersections	Sample ID	:	P12-05-9.5 FT				SIL	e ID •			
	Date Received Description	:	June 27, 20 US97: J Street I)12 Intersections			ESC	Sample #	:	L582318-0	7

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Hexachlorocyclopentadiene	BDL	20.	mg/kg	8270D	07/05/12	50
Hexachloroethane	BDL	20.	mg/kg	8270D	07/05/12	50
Indeno(1,2,3-cd)pyrene	BDL	2.0	mg/kg	8270D	07/05/12	50
Isophorone	BDL	20.	mg/kg	8270D	07/05/12	50
Naphthalene	BDL	2.0	mg/kg	8270D	07/05/12	50
Nitrobenzene	BDL	20.	mg/kg	8270D	07/05/12	50
n-Nitrosodimethylamine	BDL	20.	mg/kg	8270D	07/05/12	50
n-Nitrosodiphenylamine	BDL	20.	mg/kg	8270D	07/05/12	50
n-Nitrosodi-n-propylamine	BDL	20.	mg/kg	8270D	07/05/12	50
Phenanthrene	BDL	2.0	mg/kg	8270D	07/05/12	50
Benzylbutyl phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Bis(2-ethylhexyl)phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Di-n-butyl phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Diethyl phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Dimethyl phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Di-n-octyl phthalate	BDL	20.	mg/kg	8270D	07/05/12	50
Pyrene	BDL	2.0	mg/kg	8270D	07/05/12	50
1,2,4-Trichlorobenzene	BDL	20.	mg/kg	8270D	07/05/12	50
Acid Extractables						
4-Chloro-3-methylphenol	BDL	20.	mg/kg	8270D	07/05/12	50
2-Chlorophenol	BDL	20.	mg/kg	8270D	07/05/12	50
2,4-Dichlorophenol	BDL	20.	mg/kg	8270D	07/05/12	50
2,4-Dimethylphenol	BDL	20.	mg/kg	8270D	07/05/12	50
4,6-Dinitro-2-methylphenol	BDL	20.	mg/kg	8270D	07/05/12	50
2,4-Dinitrophenol	BDL	20.	mg/kg	8270D	07/05/12	50
2-Nitrophenol	BDL	20.	mg/kg	8270D	07/05/12	50
4-Nitrophenol	BDL	20.	mg/kg	8270D	07/05/12	50
Pentachlorophenol	BDL	20.	mg/kg	8270D	07/05/12	50
Phenol	BDL	20.	mg/kg	8270D	07/05/12	50
2,4,6-Trichlorophenol	BDL	20.	mg/kg	8270D	07/05/12	50
Surrogate Recovery						
2-Fluorophenol	0.00		% Rec.	8270D	07/05/12	50
Phenol-d5	0.00		% Rec.	8270D	07/05/12	50
Nitrobenzene-d5	140.		% Rec.	8270D	07/05/12	50
2-Fluorobiphenyl	115.		% Rec.	8270D	07/05/12	50
2,4,6-Tribromophenol	0.00		% Rec.	8270D	07/05/12	50
p-Terphenyl-d14	106.		% Rec.	8270D	07/05/12	50

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Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

July 12,2012

Date Received	:	June 27, 201	2		E	SC Sample #	: L58	2318-08	3
Description	•	DS97: J Street In	tersections		S	ite ID :			
Sample ID	•	P12-05-10.5 FT			P	roject # :	15409		
Collected By Collection Date	:	Ryan Franklin 06/25/12 10:06							
Parameter]	Dry Result	Det. Limit	Units	Method		Date	Dil.

Total Solids	87.6	0.100	olo	2540G	07/02/12 1
Volatile Organics					
Acetone	0.28	0.057	mg/kg	8260B	06/28/12 1
Acrylonitrile	BDL	0.011	mg/kg	8260B	06/28/12 1
Benzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Bromobenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Bromodichloromethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
Bromoform	BDL	0.0011	mg/kg	8260B	06/28/12 1
Bromomethane	BDL	0.0057	mg/kg	8260B	06/28/12 1
n-Butylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
sec-Butylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
tert-Butylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Carbon tetrachloride	BDL	0.0011	mg/kg	8260B	06/28/12 1
Chlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Chlorodibromomethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
Chloroethane	BDL	0.0057	mg/kg	8260B	06/28/12 1
2-Chloroethyl vinyl ether	BDL	0.057	mg/kg	8260B	06/28/12 1
Chloroform	BDL	0.0057	mg/kg	8260B	06/28/12 1
Chloromethane	BDL	0.0028	mg/kg	8260B	06/28/12 1
2-Chlorotoluene	BDL	0.0011	mg/kg	8260B	06/28/12 1
4-Chlorotoluene	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,2-Dibromo-3-Chloropropane	BDL	0.0057	mg/kg	8260B	06/28/12 1
1,2-Dibromoethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
Dibromomethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,2-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,3-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,4-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Dichlorodifluoromethane	BDL	0.0057	mg/kg	8260B	06/28/12 1
1,1-Dichloroethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,2-Dichloroethane	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,1-Dichloroethene	BDL	0.0011	mg/kg	8260B	06/28/12 1
cis-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	06/28/12 1
trans-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,1-Dichloropropene	BDL	0.0011	mg/kg	8260B	06/28/12 1
1,3-Dichloropropane	BDL	0.0011	mg/kg	8260B	06/28/12 1
cis-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	06/28/12 1
trans-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	06/28/12 1
2,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	06/28/12 1
Di-isopropyl ether	BDL	0.0011	mg/kg	8260B	06/28/12 1
Ethylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Hexachloro-1,3-butadiene	BDL	0.0011	mg/kg	8260B	06/28/12 1
Isopropylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12 1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note:

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Ryan Franklin (ODOT) Oregon Dept of Transportation - ODO 63034 O.B. Riley Rd Bend, OR 97701 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 12,2012

Date Received	:	June 27, 2012		E	SC Sample #	: L5	82318-08	3
Description	:	US97: J Street Intersections		S	ite ID :			
Sample ID	:	P12-05-10.5 FT		P	roject # :	15409		
Collected By Collection Date	:	Ryan Franklin 06/25/12 10:06						
Parameter		Dry Result	Det. Limit	Units	Method		Date	Dil.

REPORT OF ANALYSIS

p-Isopropyltoluene	BDL	0.0011	mg/kg	8260B	06/28/12	1
2-Butanone (MEK)	0.12	0.011	mg/kg	8260B	06/28/12	1
Methylene Chloride	BDL	0.0057	mg/kg	8260B	06/28/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.011	mg/kg	8260B	06/28/12	1
Methyl tert-butyl ether	BDL	0.0011	mg/kg	8260B	06/28/12	1
Naphthalene	BDL	0.0057	mg/kg	8260B	06/28/12	1
n-Propylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
Styrene	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0011	mg/kg	8260B	06/28/12	1
Tetrachloroethene	BDL	0.0011	mg/kg	8260B	06/28/12	1
Toluene	BDL	0.0057	mg/kg	8260B	06/28/12	1
1,2,3-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,2,4-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,1,1-Trichloroethane	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,1,2-Trichloroethane	BDL	0.0011	mg/kg	8260B	06/28/12	1
Trichloroethene	BDL	0.0011	mg/kg	8260B	06/28/12	1
Trichlorofluoromethane	BDL	0.0057	mg/kg	8260B	06/28/12	1
1,2,3-Trichloropropane	BDL	0.0028	mg/kg	8260B	06/28/12	1
1,2,4-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,2,3-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
1,3,5-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	06/28/12	1
Vinyl chloride	BDL	0.0011	mg/kg	8260B	06/28/12	1
Xylenes, Total	BDL	0.0034	mg/kg	8260B	06/28/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	06/28/12	1
Dibromofluoromethane	111.		% Rec.	8260B	06/28/12	1
a,a,a-Trifluorotoluene	96.9		% Rec.	8260B	06/28/12	1
4-Bromofluorobenzene	89.2		% Rec.	8260B	06/28/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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Collected By : Ryan Franklin Collection Date : 06/25/12 10:26 ESC Sample # : L582318-09 Site ID : Project # : 15409

12065 Lebanon Rd.

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	83.6	0.100	00	2540G	07/02/12	1
Diesel Range Organics (DRO) Residual Range Organics (RRO)	BDL BDL	4.8 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/12/12 07/12/12	1 1
o-Terphenyl	102.		% Rec.	NWTPHDX	07/12/12	1

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970 2,2012

Ryan Franklin (Oregon Dept of 63034 O.B. Rile Bend, OR 97701	ODOI Tran y Rc	C) hsportation - ODO 1	REPORT OF ANALYSIS July 12,2012					
Date Received	:	June 27, 2	012		ESC	Sample # :	L582318-10	
Description	:	US97: J Street	Intersections		Sit	e ID :		
Sample ID	:	P12-06-8 FT			-		1 5 4 0 0	
Collected By Collection Date	:	Ryan Franklin 06/25/12 10:51			Pro	ject # : .	15409	
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids			85.8	0.100	olo	2540G	07/02/12	1
Diesel Range Residual Rang Surrogate Recov	Orga e Or	anics (DRO) rganics (RRO)	BDL BDL	4.7 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/12/12 07/12/12	1 1
o-Terphenyl	Cry		91.9		% Rec.	NWTPHDX	07/12/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (Oregon Dept of 63034 O.B. Rile Bend, OR 97701	ODOI Tran y Ro	?) sportation - ODO l	REPORT	OF ANALYSIS	Jul	y 12,2012			
Date Received	:	June 27, 2	012		ESC	Sample # :	L582318-11		
Description	:	US97: J Street	Intersections						
Sample ID	:	P12-07-9 FT			Sit	elD :			
Collected By Collection Date	:	Ryan Franklin 06/25/12 11:25			Pro	ject # : ː	15409		
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.	
Total Solids			84.3	0.100	00	2540G	07/03/12	1	
Diesel Range Residual Rang	Orga e Or	nics (DRO) ganics (RRO)	BDL BDL	4.7 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/12/12 07/12/12	1 1	
o-Terphenyl	ст Х		99.1		% Rec.	NWTPHDX	07/12/12	1	

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (Oregon Dept of 63034 O.B. Rile Bend, OR 97701	ODO: Trai y Ro	F) nsportation - ODO 1							
Date Received	:	June 27, 2	012		ESC	ESC Sample # : L582318-12			
Description	·	US97: J Street	Intersections		Sit	e ID :			
Sample ID	:	P12-08-1-2 FT				Project # : 15409			
Collected By Collection Date	:	Ryan Franklin 06/25/12 11:40			110		19109		
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.	
Total Solids			86.1	0.100	90	2540G	07/03/12	1	
Diesel Range Residual Rang	Orga e Oi	anics (DRO) rganics (RRO)	BDL BDL	4.6 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/12/12 07/12/12	1 1	
o-Terphenyl	Cry		105.		% Rec.	NWTPHDX	07/12/12	1	

REPORT OF ANALYSIS

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin (Oregon Dept of 63034 O.B. Rile Bend, OR 97701	ODOI Trar y Rċ	r) nsportation - ODO N	REPORT	OF ANALYSIS	Jul	y 12,2012		
Date Received	:	June 27.2	012		ESC	Sample # :	L582318-13	
Description	:	US97: J Street	Intersections	ections				
Sample ID	:	P12-08-10 FT			Sit	e ID :		
bampic ib		112 00 10 11		Project # : 15409				
Collected By	:	Ryan Franklin						
Collection Date	·	06/25/12 11:5/						
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids			81.4	0.100	010	2540G	07/03/12	1
Diesel Range	Orga	anics (DRO)	BDL	4.9	mg/kg	NWTPHDX	07/12/12	1
Residual Rang	e Ōr	ganics (RRO)	BDL	12.	mg/kg	NWTPHDX	07/12/12	1
Surrogate Recov	ery		117		° Dee	NUMPLIPY	07/10/10	1
o-ierpnenyi			L1/.		KeC.	INWIPHDX	$\cup I / \bot Z / \bot Z$	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289 Est. 1970

Ryan Franklin ((Oregon Dept of 5 63034 O.B. Riley Bend, OR 97701	ODO Tran y Ro	T) nsportation - ODO d	REPORT	OF ANALYSIS	Jul	y 12,2012.		
Date Received	:	June 27, 2	012		ESC	2 Sample # :	L582318-14	:
Description	:	US97: J Street	Intersections		sit	e TD :		
Sample ID	:	P12-09-11 FT			DIC			
Collected By Collection Date	:	Ryan Franklin 06/25/12 12:22			Pro	ject # :]	15409	
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids			85.1	0.100	00	2540G	07/03/12	1
Diesel Range (Residual Range Surrogate Recov	Orga e Oj	anics (DRO) rganics (RRO)	BDL BDL	4.7 12.	mg/kg mg/kg	NWTPHDX NWTPHDX	07/12/12 07/12/12	1 1
o-Terphenyl	- ± Y		118.		% Rec.	NWTPHDX	07/12/12	1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 07/12/12 19:24 Printed: 07/12/12 19:25

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Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Run ID	Qualifier		
L582318-06	WG600178	SAMP	o-Terphenyl	R2240913	J7
	WG600176	SAMP	Acenaphthene	R2234913	0
	WG600176	SAMP	Acenaphthylene	R2234913	0
	WG600176	SAMP	Anthracene	R2234913	0
	WG600176	SAMP	Benzidine	R2234913	J40
	WG600176	SAMP	Benzo(a)anthracene	R2234913	0
	WG600176	SAMP	Benzo(b)fluoranthene	R2234913	0
	WG600176	SAMP	Benzo(k)fluoranthene	R2234913	0
	WG600176	SAMP	Benzo(g,h,i)perylene	R2234913	0
	WG600176	SAMP	Benzo(a)pyrene	R2234913	0
	WG600176	SAMP	Bis(2-chlorethoxy)methane	R2234913	0
	WG600176	SAMP	Bis(2-chloroethyl)ether	R2234913	0
	WG600176	SAMP	Bis(2-chloroisopropyl)ether	R2234913	0
	WG6UU1/6	SAMP	4-Bromopneny1-pneny1etner	R2234913	0
	WG600176	SAMP	2-Chloronaphthalene	R2234913	0
	WG600176	SAMP	4-CIIIOFOPHENYI-PHENYIECHEF	R2234913	0
	WG600176	SAMP	Dibenz(a b)anthracene	R2234913 R2234913	0
	WG600176	SAMD	3 3-Dichlorobenzidine	R2234913	0
	WG600176	SAMP	2 4-Dinitrotoluene	R2234913	0
	WG600176	SAMP	2.6-Dinitrotoluene	R2234913	0
	WG600176	SAMP	Fluoranthene	R2234913	0
	WG600176	SAMP	Fluorene	R2234913	0
	WG600176	SAMP	Hexachlorobenzene	R2234913	0
	WG600176	SAMP	Hexachloro-1,3-butadiene	R2234913	0
	WG600176	SAMP	Hexachlorocyclopentadiene	R2234913	0
	WG600176	SAMP	Hexachloroethane	R2234913	0
	WG600176	SAMP	Indeno(1,2,3-cd)pyrene	R2234913	0
	WG600176	SAMP	Isophorone	R2234913	0
	WG600176	SAMP	Naphthalene	R2234913	0
	WG600176	SAMP	Nitrobenzene	R2234913	0
	WG600176	SAMP	n-Nitrosodimethylamine	R2234913	0
	WG600176	SAMP	n-Nitrosodiphenylamine	R2234913	0
	WG600176	SAMP	n-Nitrosodi-n-propylamine	R2234913	0
	WG600176	SAMP	Phenanthrene Reparthetti phthelete	R2234913	0
	WG600176	SAMP	Benzyibulyi pillialale Big(2-othylhowyl)phthalato	R2234913	0
	WG600176	SAMP	Di-n-butyl phthalate	R2234913 R2234913	0
	WG600176	SAMP	Diethyl phthalate	R2234913	0
	WG600176	SAMP	Dimethyl phthalate	R2234913	Õ
	WG600176	SAMP	Di-n-octyl phthalate	R2234913	0
	WG600176	SAMP	Pyrene	R2234913	0
	WG600176	SAMP	1,2,4-Trichlorobenzene	R2234913	0
	WG600176	SAMP	4-Chloro-3-methylphenol	R2234913	0
	WG600176	SAMP	2-Chlorophenol	R2234913	0
	WG600176	SAMP	2,4-Dichlorophenol	R2234913	0
	WG600176	SAMP	2,4-Dimethylphenol	R2234913	J40
	WG600176	SAMP	4,6-Dinitro-2-methylphenol	R2234913	0
	WG6UU176	SAMP	2,4-Dinitrophenol	R2234913	03040
	WG600176	SAMP	2-Nitrophenol	RZZ34913	0
	WG600176	SAMP	Pontaghlorophonol	R2234913	0
	WG600176	SAMP	Dhenol	R2234913	0
	WG600176	SAMP	2 4 6-Trichlorophenol	R2234913	0
	WG600176	SAMP	2-Fluorophenol	R2234913	т7
	WG600176	SAMP	Phenol-d5	R2234913	J7
	WG600176	SAMP	Nitrobenzene-d5	R2234913	J7
	WG600176	SAMP	2-Fluorobiphenyl	R2234913	J7
	WG600176	SAMP	2,4,6-Tribromophenol	R2234913	J7
	WG600176	SAMP	p-Terphenyl-d14	R2234913	J7
L582318-07	WG600178	SAMP	o-Terphenyl	R2240913	J7
	WG600176	SAMP	Acenaphthene	R2234913	0
	WG600176	SAMP	Acenaphthylene	R2234913	0
	WG600176	SAMP	Anthracene	R2234913	0
	WG600176	SAMP	Benzidine	R2234913	J40
	WG6UU176	SAMP	Benzo(a)anthracene	R2234913	0
	WGOUUL/O	SAMP	Benzo(b)Iluoranthene	KZZ34913	0
	WG600176	CAMD	Benzo(a h i)perviono	R4434913 D992/019	0
	MGOUDILO	DAME	Deuro (A'u' t'ber à tene	1/2724272	0

Page 19 of 35

Attachment A List of Analytes with QC Qualifiers

Sample	Work	Sample		Run	
Number	Group	Туре	Analyte	ID	Qualifier
	WG600176	SAMP	Benzo(a)pyrene		0
	WG600176	SAMP	Bis(2-chlorethoxy)methane	R2234913	0
	WG600176	SAMP	Bis(2-chloroethyl)ether	R2234913	0
	WG600176	SAMP	Bis(2-chloroisopropyl)ether	R2234913	0
	WG600176	SAMP	4-Bromophenyl-phenylether	R2234913	0
	WG600176	SAMD	2-Chloronaphthalene	R2234913	0
	WG600176	SAMP	4-Chlorophenyl-phenylether	R2234913	0
	WG600176	SAMD	Chrysene	R2234913	0
	WG600176	SAMP	Dibenz(a h)anthracene	R2234913	0
	WG600176	SAMD	3 3-Dichlorobenzidine	R2234913	0
	WG600176	SAMD	2 4-Dinitrotoluene	R2231913	0
	WG600176	SAMD	2,1 Dimitrotoluene	R2234913	0
	WG600176	SAMP	Fluoranthene	R2234913	0
	WG600176	SAMD	Fluorene	P2234913	0
	WG600176	SAMP	Heyachlorobenzene	D22234913	0
	WG600176	SAMD	Hexachloro-1 3-butadiene	D2234013	0
	WG600176	SAMP	Hexachlorogyglopentadiene	D22234913	0
	WG600176	SAMP	Hexachloroethane	R2234913	0
	WG600176	SAMD	Indeno(1, 2, 3-cd) pyrene	P2234913	0
	WG600176	SAMP	Indeno(1,2,5 cd/pyrene	D22234913	0
	WG600176	SAMD	Naphthalene	P2234913	0
	WG600176	SAMP	Nitrohenzene	D22234913	0
	WG600176	SAMD	n-Nitrogodimethylamine	D2234013	0
	WG600176	SAMP	n-Nitrosodinbenylamine	D22234913	0
	WG600176	SAMD	n-Nitrosodi-n-propylamine	D2234013	0
	WG600176	SAMP	Dhenanthrene	D22234913	0
	WG600176	SAMD	Renzylbutyl phthalate	D2234013	0
	WG600176	SAMP	Big(2-ethylbeyyl)phthalate	R2234913	0
	WG600176	SAMD	Di-n-butyl phthalate	P2234913	0
	WG600176	SAMP	Diethyl phthalate	R2234913	0
	WG600176	SAMD	Dimethyl phthalate	P2234913	0
	WG600176	SAMP	Di-n-octvl phthalate	D22234913	0
	WG600176	SAMD	Di il occyi pilchatace	D2234013	0
	WG600176	SAMP	1 2 A-Trichlorobenzene	D22234913	0
	WG600176	SAMD	4-Chloro-3-methylphenol	P2234913	0
	WG600176	SAMD	2-Chlorophenol	R2231913	0
	WG600176	SAMD	2 4-Dichlorophenol	R2234913	0
	WG600176	SAMD	2 4-Dimethylphenol	R2231913	
	WG600176	SAMD	4 6-Dinitro-2-methylphenol	R2234913	0
	WG600176	SAMD	2 4-Dinitrophenol	R2231913	.T3.T40
	WG600176	SAMD	2-Nitrophenol	R2234913	0
	WG600176	SAMD	4-Nitrophenol	R2231913	0
	WG600176	SAMP	Pentachlorophenol	R2234913	0
	WG600176	SAMP	Phenol	R2234913	0
	WG600176	SAMP	2.4.6-Trichlorophenol	R2234913	õ
	WG600176	SAMP	2-Fluorophenol	R2234913	т7
	WG600176	SAMP	Phenol-d5	R2234913	J7
	WG600176	SAMP	Nitrobenzene-d5	R2234913	д. Д.7
	WG600176	SAMP	2-Fluorobiphenyl	R2234913	J7
	WG600176	SAMP	2.4.6-Tribromophenol	R2234913	J7
	WG600176	SAMP	p-Terphenyl-d14	R2234913	J7

Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning								
J3	The associated batch QC was outside the established quality control range for precision.								
J4	The associated batch QC was outside the established quality control range for accuracy.								
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.								
0	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.								

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Summary of Remarks For Samples Printed 07/12/12 at 19:25:04

TSR Signing Reports: 358 RX - Priority Rush

Clients MUST use the State of Oregon COCs for all work. Create an NCF for any samples received on ESC COCs.

eived: 06/27/12	09:00 Due I	Date: 07/12/12	00:00 RPT	Date:	07/12/12	19:24
eived: 06/27/12	09:00 Due I	Date: 07/12/12	00:00 RPT	Date:	07/12/12	19:24
eived: 06/27/12	09:00 Due I	Date: 07/12/12	00:00 RPT	Date:	07/12/12	19:24
eived: 06/27/12	09:00 Due I	Date: 07/12/12	00:00 RPT	Date:	07/12/12	19:24
eived: 06/27/12	09:00 Due I	Date: 07/12/12	00:00 RPT	Date:	07/12/12	19:24
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ELA-B S-C-I-E-N-C-E-S

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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Quality Assurance Report Level II

L582318

July 12, 2012

		Talaanstaan Dlaala			
Analvte	Result	Laboratory Blank Units % Rec	Limit	Batch	Date Analvzed
1,1,1,2-Tetrachloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1,1-Trichloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1,2,2-Tetrachloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1,2-Trichloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1-Dichloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,1-Dichloroethene	< .001	mg/kg		WG600099	06/27/12 22:34
1,1-Dichloropropene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2,3-Trichlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2,3-Trichloropropane	< .0025	mg/kg		WG600099	06/27/12 22:34
1,2,3-Trimethylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2,4-Trichlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2,4-Trimethylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2-Dibromo-3-Chloropropane	< .005	mg/kg		WG600099	06/27/12 22:34
1,2-Dibromoethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,2-Dichlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,2-Dichloroethane	< .001	mg/kg		WG600099	06/27/12 22:34
1,2-Dichloropropane	< .001	mg/kg		WG600099	06/27/12 22:34
1,3,5-Trimethylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,3-Dichlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
1,3-Dichloropropane	< .001	mg/kg		WG600099	06/27/12 22:34
1,4-Dichlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
2,2-Dichloropropane	< .001	mg/kg		WG600099	06/27/12 22:34
2-Butanone (MEK)	< .01	mg/kg		WG600099	06/27/12 22:34
2-Chloroethyl vinyl ether	< .05	mg/kg		WG600099	06/27/12 22:34
2-Chlorotoluene	< .001	mg/kg		WG600099	06/27/12 22:34
4-Chlorotoluene	< 001	mg/kg		WG600099	06/27/12 22:34
4-Methyl-2-pentanone (MTBK)	< 01	mg/kg		WG600099	06/27/12 22:34
Acetone	< 05	mg/kg		WG600099	06/27/12 22:34
Acrylonitrile	< 01	mg/kg		WG600099	06/27/12 22:31
Benzene	< 001	mg/kg		WG600099	06/27/12 22:34
Bromohenzene	< 0.001	mg/kg		WG600099	06/27/12 22:31
Bromodichloromethane	< 0.001	mg/kg		WG600099	06/27/12 22:31
Bromoform	< 0.001	mg/kg		WG600099	06/27/12 22:34
Bromomethane	< 005	mg/kg		WG600099	06/27/12 22:34
Carbon tetrachloride	< 0.005	mg/kg		WG600099	06/27/12 22:31
Chlorobenzene	< .001	mg/kg		WG600099	06/27/12 22:34
Chlorodibromomothano	< .001	mg/kg		WC600000	06/27/12 22:34
Chloroothano	< .001	mg/kg		WC600099	06/27/12 22:34
Chioroform	< .005	mg/kg		WCG000099	06/27/12 22:34
Chloromothano	< .005	mg/kg		WC600099	06/27/12 22:34
aig 1 2 Dighleroothone	< .0025	mg/kg		WGGOOOD99	06/27/12 22:34
cis-1,2-Dichloropropaga	< .001	mg/kg		WGG00099	06/27/12 22.34
Di isonucui sther	< .001	mg/kg		WGGOOOD99	06/27/12 22:34
Di-Isopropyi etner	< .001	liig / kg		WG600099	06/27/12 22:34
Dibromomethane	< .001			WG600099	06/27/12 22:34
Dichlorodilluoromethane	< .005			WG600099	06/27/12 22.34
Echylbenzene	< .001			WG600099	06/27/12 22.34
Hexachioro-1, 3-Dutadiene	< .001	mg/kg		WG600099	06/27/12 22:34
Isopropyidenzene	< .001	mg/kg		WG600099	06/27/12 22:34
Methyl tert-butyl ether	< .001	mg/kg		WG600099	06/27/12 22:34
Methylene Chloride	< .005	mg/kg		WG600099	06/27/12 22:34
n-Butylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
n-Propyibenzene	< .001	mg/kg		WG600099	06/27/12 22:34
Naphthalene	< .005	mg/kg		WG600099	06/27/12 22:34
p-Isopropyltoluene	< .001	mg/kg		WG600099	06/27/12 22:34
sec-Butylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
Styrene	< .001	mg/kg		WG600099	06/27/12 22:34
tert-Butylbenzene	< .001	mg/kg		WG600099	06/27/12 22:34
Tetrachloroethene	< .001	mg/kg		WG600099	06/27/12 22:34

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 22 of 35

L·A·B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Laboratory	Blank		
Analyte	Result	Units	% Rec	Limit	Batch Date Analyzed
m - 1					Mac00000 06 (07 (10 00.04
Toluene	< .005	mg/kg			WG600099 06/27/12 22:34
trans-1,2-Dichloroethene	< .001	mg/kg			WG600099 06/27/12 22:34
Trans-1, 3-Dichioropropene	< .001	nig/kg			WG600099 06/27/12 22:34
Trichloroethene	< .001	mg/kg			WG600099 06/27/12 22:34
Trichlorofluoromethane	< .005	mg/kg			WG600099 06/27/12 22:34
Vinyi chioride	< .001	nig/kg			WG600099 06/27/12 22:34
Aylenes, Total	< .003	mg/kg	00 54	69 100	WG600099 06/27/12 22:34
4-Bromolluorobenzene		s Rec.	98.54	07-133	WG600099 06/27/12 22:34
Dibromofluoromethane		∛ ReC.	103.3	/2-135	WG600099 06/27/12 22:34
Toluene-d8		∛ Rec.	103.3	90-113	WG600099 06/27/12 22:34
a,a,a-Trifiuorotoluene		∛ ReC.	101.7	89-115	WG600099 06/27/12 22:34
1,2,4-Trichlorobenzene	< .333	mg/kg			WG600176 06/30/12 07:17
2,4,6-Trichlorophenol	< .333	mg/kg			WG600176 06/30/12 07:17
2,4-Dichlorophenol	< .333	mg/kg			WG600176 06/30/12 07:17
2,4-Dimethylphenol	< .333	mg/kg			WG600176 06/30/12 07:17
2,4-Dinitrophenol	< .333	mg/kg			WG600176 06/30/12 07:17
2,4-Dinitrotoluene	< .333	mg/kg			WG600176 06/30/12 07:17
2,6-Dinitrotoluene	< .333	mg/kg			WG600176 06/30/12 07:17
2-Chloronaphthalene	< .033	mg/kg			WG600176 06/30/12 07:17
2-Chlorophenol	< .333	mg/kg			WG600176 06/30/12 07:17
2-Nitrophenol	< .333	mg/kg			WG600176 06/30/12 07:17
3,3-Dichlorobenzidine	< .333	mg/kg			WG600176 06/30/12 07:17
4,6-Dinitro-2-methylphenol	< .333	mg/kg			WG600176 06/30/12 07:17
4-Bromophenyl-phenylether	< .333	mg/kg			WG600176 06/30/12 07:17
4-Chloro-3-methylphenol	< .333	mg/kg			WG600176 06/30/12 07:17
4-Chlorophenyl-phenylether	< .333	mg/kg			WG600176 06/30/12 07:17
4-Nitrophenol	< .333	mg/kg			WG600176 06/30/12 07:17
Acenaphthene	< .033	mg/kg			WG600176 06/30/12 07:17
Acenaphthylene	< .033	mg/kg			WG600176 06/30/12 07:17
Anthracene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzidine	< .333	mg/kg			WG600176 06/30/12 07:17
Benzo(a)anthracene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzo(a)pyrene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzo(b)fluoranthene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzo(g,h,i)perylene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzo(k)fluoranthene	< .033	mg/kg			WG600176 06/30/12 07:17
Benzylbutyl phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Bis(2-chlorethoxy)methane	< .333	mg/kg			WG600176 06/30/12 07:17
Bis(2-chloroethyl)ether	< .333	mg/kg			WG600176 06/30/12 07:17
Bis(2-chloroisopropyl)ether	< .333	mg/kg			WG600176 06/30/12 07:17
Bis(2-ethylhexyl)phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Chrysene	< .033	mg/kg			WG600176 06/30/12 07:17
Di-n-butyl phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Di-n-octyl phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Dibenz(a,h)anthracene	< .033	mg/kg			WG600176 06/30/12 07:17
Diethyl phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Dimethyl phthalate	< .333	mg/kg			WG600176 06/30/12 07:17
Fluoranthene	< .033	mg/kg			WG600176 06/30/12 07:17
Fluorene	< .033	mg/kg			WG600176 06/30/12 07:17
Hexachloro-1,3-butadiene	< .333	mg/kg			WG600176 06/30/12 07:17
Hexachlorobenzene	< .333	mg/kg			WG600176 06/30/12 07:17
Hexachlorocyclopentadiene	< .333	mg/kg			WG600176 06/30/12 07:17
Hexachloroethane	< .333	mg/kg			WG600176 06/30/12 07:17
Indeno(1,2,3-cd)pyrene	< .033	mg/kg			WG600176 06/30/12 07:17
Isophorone	< .333	mg/kg			WG600176 06/30/12 07:17
n-Nitrosodi-n-propylamine	< .333	mg/kg			WG600176 06/30/12 07:17
n-Nitrosodimethylamine	< .333	mg/kg			WG600176 06/30/12 07:17

* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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АВ S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

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Ame Jack o	Derult	Labora	tory Blank	_	Timit	Detek	Dete Inclused
Analyte	Result	UIIIUS	* Ket			Batti	Date Analyzeu
n-Nitrosodiphenylamine	< 333	ma/ka				WG600176	06/30/12 07:17
Naphthalono	< .555	mg/hg				WC600176	06/30/12 07:17
Napiichaiene	< .033	mg/kg				WG600176	06/30/12 07:17
Nitrobelizelle	< . 333 	ilig/kg				WG600176	06/30/12 07:17
Pentachiorophenol	< .333	mg/kg				WG600176	06/30/12 07:17
Phenanthrene	< .033	mg/kg				WG600176	06/30/12 07:17
Phenol	< .333	mg/kg				WG600176	06/30/12 07:17
Pyrene	< .033	mg/kg				WG600176	06/30/12 07:17
2,4,6-Tribromophenol		% Rec	. 75.6	53	16-136	WG600176	06/30/12 07:17
2-Fluorobiphenyl		% Rec	. 81.3	38	37-119	WG600176	06/30/12 07:17
2-Fluorophenol		% Rec	. 59.9	98	22-114	WG600176	06/30/12 07:17
Nitrobenzene-d5		% Rec	. 61.4	43	20-114	WG600176	06/30/12 07:17
Phenol-d5		% Rec	. 65.6	59	26-127	WG600176	06/30/12 07:17
p-Terphenyl-d14		% Rec	. 106.0	5	15-174	WG600176	06/30/12 07:17
PCB 1016	< .017	mg/kg				WG600177	07/02/12 10:30
PCB 1221	< .017	mq/kq				WG600177	07/02/12 10:30
PCB 1232	< .017	ma/ka				WG600177	07/02/12 10:30
PCB 1242	< 017	ma/ka				WG600177	07/02/12 10:30
DCB 1248	< 017	mg/kg				WG600177	07/02/12 10:30
DCB 1250	< .017	mg/kg				WC600177	07/02/12 10:30
PCB 1254	< .017	iiig/kg				WG600177	07/02/12 10:30
PCB 1200	< .017	nig/kg	07	1.2	10 0 115 0	WG600177	07/02/12 10:30
Decachiorobiphenyi		∛ Rec	. 97.	13	18.9-115.8	WG6001//	07/02/12 10:30
Tetrachloro-m-xylene		% Rec	. 79.0	00	31.8-115.7	WG600177	07/02/12 10:30
Total Solids	< .1	%				WG600199	07/02/12 11:34
Total Solids	< .1	૪				WG600201	07/03/12 07:31
Diesel Range Organics (DRO)	< 4	mqq				WG600178	07/05/12 03:15
Residual Range Organics (RRO)	< 10	mqq				WG600178	07/05/12 03:15
o-Terphenyl		% Rec	. 77.9	90	50-150	WG600178	07/05/12 03:15
		Du	nlicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Sam	p Batch
Total Solida	٩.	85.0	95 0	0 692	5	T 5 9 2 2 1 9	-10 WC600199
iotal solids	6	85.0	05.9	0.092	5	1302310	-10 WG000199
Total Solids	90	92.0	91.8	0.261	5	L582343	-06 WG600201
		Laboratory	Control Sam				
Analyte	Units	Known Val	Res	sult	% Rec	Limit	Batch
1 1 1 2 -Totrachloroothano	ma /ka	0.25	0.02	77	90 9	77-120	WC600099
1,1,1,2-ietrachioroethane	mg/kg	.025	0.022	40	90.9	70 127	WGG000099
1,1,2,2 metworkleweethere	ilig/kg	.025	0.02	10	99.0	70-127	WGGOOOD99
1,1,2,2-Tetrachioroethane	mg/kg	.025	0.02	19	87.7	70-133	WG600099
1,1,2-Trichloroethane	mg/kg	.025	0.02	18	8/.2	79-123	WG600099
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.028	50	112.	52-145	WG600099
1,1-Dichloroethane	mg/kg	.025	0.025	50	99.8	74-121	WG600099
1,1-Dichloroethene	mg/kg	.025	0.025	58	103.	53-135	WG600099
1,1-Dichloropropene	mg/kg	.025	0.025	54	102.	67-127	WG600099
1,2,3-Trichlorobenzene	mg/kg	.025	0.021	11	84.4	74-131	WG600099
1,2,3-Trichloropropane	mg/kg	.025	0.020	07	82.8	75-135	WG600099
1,2,3-Trimethylbenzene	mg/kg	.025	0.024	41	96.5	76-128	WG600099
1,2,4-Trichlorobenzene	mg/kg	.025	0.025	57	103.	72-130	WG600099
		c					

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L·A·B S.C.I.E.N.C.E.S

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Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Laboratory Cor	ntrol Sample			
Analyte	Units	Known Val	Result	% Rec	Limit	Batch
	(1	0.05	0.0040	00 5	85 101	
1,2,4-Trimethylbenzene	mg/kg	.025	0.0249	99.7	75-131	WG600099
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0176	70.5	55-142	WG600099
1,2-Dibromoethane	mg/kg	.025	0.0233	93.0	77-126	WG600099
1,2-Dichlorobenzene	mg/kg	.025	0.0242	97.0	80-123	WG600099
1,2-Dichloroethane	mg/kg	.025	0.0237	94.9	70-128	WG600099
1,2-Dichloropropane	mg/kg	.025	0.0249	99.6	74-125	WG600099
1,3,5-Trimethylbenzene	mg/kg	.025	0.0252	101.	77-129	WG600099
1,3-Dichlorobenzene	mg/kg	.025	0.0249	99.5	76-128	WG600099
1,3-Dichloropropane	mg/kg	.025	0.0231	92.3	77-118	WG600099
1,4-Dichlorobenzene	mg/kg	.025	0.0250	99.9	77-119	WG600099
2,2-Dichloropropane	mg/kg	.025	0.0252	101.	60-132	WG600099
2-Butanone (MEK)	mg/kg	.125	0.119	95.3	56-146	WG600099
2-Chloroethyl vinyl ether	mg/kg	.125	0.113	90.1	17-179	WG600099
2-Chlorotoluene	mg/kg	.025	0.0255	102.	76-125	WG600099
4-Chlorotoluene	mg/kg	.025	0.0254	101.	76-125	WG600099
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.107	85.4	55-148	WG600099
Acetone	mg/kg	.125	0.131	105.	47-155	WG600099
Acrylonitrile	mg/kg	.125	0.101	80.6	50-155	WG600099
Benzene	mg/kg	.025	0.0244	97.5	72-120	WG600099
Bromobenzene	mg/kg	.025	0.0240	96.1	74-122	WG600099
Bromodichloromethane	ma/ka	.025	0.0206	82.3	74-128	WG600099
Bromoform	ma/ka	.025	0.0190	75.8	62-137	WG600099
Bromomethane	ma/ka	025	0.0287	115	38-180	WG600099
Carbon tetrachloride	ma/ka	025	0 0218	87 3	62-130	WG600099
Chlorobenzene	ma/ka	025	0.0251	101	77-124	WG600099
Chlorodibromomethane	ma/ka	025	0.0207	82 7	74-128	WG600099
Chloroethane	mg/kg	025	0.0207	119	46-173	WG600099
Chloroform	ma/ka	025	0.0246	98 4	76-122	WG600099
Chloromothano	mg/kg	025	0.0240	07.9	/0 122	WC600099
cig_1 2-Dichloroethene	mg/kg	025	0.0238	95.2	73-123	WG600099
cis_1_3_Dichloropropene	mg/kg	025	0.0230	89.4	73-125	WG600099
Di-igopropul other	mg/kg	025	0.0225	02.5	64-121	WC600099
Di-isopiopyi ether	mg/kg	.025	0.0231	92.5	75-107	WC600099
Dighlorediflueremethane	mg/kg	.025	0.0252	102	20 177	WGG00099
Dichiorodiliuoromethane	llig/kg	.025	0.0258	103.	30-177	WG600099
Kunyibenzene	llig/kg	.025	0.0253	101.	70-120	WG600099
Hexachioro-1, 3-Dutadiene	mg/kg	.025	0.0221	88.0	71-134	WG600099
Isopropyidenzene	mg/kg	.025	0.0267	107.	70-128	WG600099
Methyl tert-butyl ether	mg/kg	.025	0.0222	88.7	66-127	WG600099
Metnylene Chioride	mg/kg	.025	0.0197	/8./	6/-124	WG600099
n-Butylbenzene	mg/kg	.025	0.0279	112.	71-133	WG600099
n-Propylbenzene	mg/kg	.025	0.0265	106.	76-126	WG600099
Naphthalene	mg/kg	.025	0.0205	82.1	68-136	WG600099
p-Isopropyltoluene	mg/kg	.025	0.0258	103.	75-134	WG600099
sec-Butylbenzene	mg/kg	.025	0.0261	104.	75-132	WG600099
Styrene	mg/kg	.025	0.0243	97.1	68-148	WG600099
tert-Butylbenzene	mg/kg	.025	0.0260	104.	75-132	WG600099
Tetrachloroethene	mg/kg	.025	0.0253	101.	70-131	WG600099
Toluene	mg/kg	.025	0.0239	95.7	74-155	WG600099
trans-1,2-Dichloroethene	mg/kg	.025	0.0239	95.7	63-126	WG600099
trans-1,3-Dichloropropene	mg/kg	.025	0.0224	89.6	68-126	WG600099
Trichloroethene	mg/kg	.025	0.0228	91.3	75-121	WG600099
Trichlorofluoromethane	mg/kg	.025	0.0277	111.	48-170	WG600099
Vinyl chloride	mg/kg	.025	0.0259	104.	54-144	WG600099
Xylenes, Total	mg/kg	.075	0.0763	102.	76-126	WG600099
4-Bromofluorobenzene				101.6	67-133	WG600099
Dibromofluoromethane				103.0	72-135	WG600099
Toluene-d8				105.9	90-113	WG600099
a,a,a-Trifluorotoluene				99.21	89-115	WG600099

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L·A·B S.C.I.E.N.C.E.S

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Laboratory Cor	trol Sample				
Analyte	Units	Known Val	Result	% Rec	Limit	Batch	
1,2,4-Trichlorobenzene	mg/kg	.333	0.259	77.8	48-87	WG600176	
2,4,6-Trichlorophenol	mg/kg	.333	0.264	79.3	50-98	WG600176	
2,4-Dichlorophenol	mg/kg	.333	0.283	85.1	56-96	WG600176	
2,4-Dimethylphenol	mg/kg	.333	0.322	96.7	52-101	WG600176	
2,4-Dinitrophenol	mg/kg	.333	0.0498	15.0	10-109	WG600176	
2,4-Dinitrotoluene	mg/kg	.333	0.295	88.6	54-103	WG600176	
2,6-Dinitrotoluene	mg/kg	.333	0.289	86.7	53-99	WG600176	
2-Chloronaphthalene	mg/kg	.333	0.273	81.9	55-96	WG600176	
2-Chlorophenol	mg/kg	.333	0.263	79.0	52-88	WG600176	
2-Nitrophenol	mg/kg	.333	0.281	84.4	55-106	WG600176	
3,3-Dichlorobenzidine	mg/kg	.333	0.261	78.4	36-84	WG600176	
4,6-Dinitro-2-methylphenol	mg/kg	.333	0.170	51.0	24-98	WG600176	
4-Bromophenyl-phenylether	mg/kg	.333	0.284	85.2	58-111	WG600176	
4-Chloro-3-methylphenol	mg/kg	.333	0.318	95.5	58-98	WG600176	
4-Chlorophenyl-phenylether	mg/kg	.333	0.288	86.5	59-103	WG600176	
4-Nitrophenol	mg/kg	.333	0.232	69.5	34-101	WG600176	
Acenaphthene	mg/kg	.333	0.271	81.5	55-96	WG600176	
Acenaphthylene	mg/kg	.333	0.294	88.4	61-107	WG600176	
Anthracene	mg/kg	.333	0.315	94.7	58-105	WG600176	
Benzidine	mg/kg	.333	0.0116	3.48*	10-21	WG600176	
Benzo(a)anthracene	mg/kg	.333	0.293	88.0	56-103	WG600176	
Benzo(a)pyrene	mg/kg	.333	0.295	88.6	57-103	WG600176	
Benzo(b)fluoranthene	mg/kg	.333	0.290	87.0	52-106	WG600176	
Benzo(g,h,i)perylene	mg/kg	.333	0.281	84.5	47-112	WG600176	
Benzo(k)fluoranthene	mg/kg	.333	0.292	87.7	53-104	WG600176	
Benzylbutyl phthalate	mg/kg	.333	0.331	99.4	61-118	WG600176	
Bis(2-chlorethoxy)methane	mg/kg	.333	0.277	83.2	58-104	WG600176	
Bis(2-chloroethyl)ether	mg/kg	.333	0.248	74.4	51-103	WG600176	
Bis(2-chloroisopropyl)ether	mg/kg	.333	0.255	76.5	56-95	WG600176	
Bis(2-ethylhexyl)phthalate	mg/kg	.333	0.335	101.	56-120	WG600176	
Chrysene	mg/kg	.333	0.305	91.6	55-102	WG600176	
Di-n-butyl phthalate	mg/kg	.333	0.337	101.	59-114	WG600176	
Di-n-octyl phthalate	mg/kg	.333	0.326	97.9	51-119	WG600176	
Dibenz(a,h)anthracene	mg/kg	.333	0.281	84.5	49-111	WG600176	
Diethyl phthalate	mg/kg	.333	0.319	95.9	61-105	WG600176	
Dimethyl phthalate	mg/kg	.333	0.306	91.8	60-106	WG600176	
Fluoranthene	mg/kg	.333	0.314	94.1	59-108	WG600176	
Fluorene	mg/kg	.333	0.294	88.4	59-100	WG600176	
Hexachloro-1,3-butadiene	mg/kg	.333	0.279	83.8	53-106	WG600176	
Hexachlorobenzene	mg/kg	.333	0.259	77.8	50-108	WG600176	
Hexachlorocyclopentadiene	mg/kg	.333	0.220	66.2	36-117	WG600176	
Hexachloroethane	mg/kg	.333	0.254	76.3	45-83	WG600176	
Indeno(1,2,3-cd)pyrene	mg/kg	.333	0.285	85.4	50-110	WG600176	
Isophorone	mg/kg	.333	0.234	70.2	51-99	WG600176	
n-Nitrosodi-n-propylamine	mg/kg	.333	0.280	84.0	52-103	WG600176	
n-Nitrosodimethylamine	mg/kg	.333	0.232	69.8	31-107	WG600176	
n-Nitrosodiphenylamine	mg/kg	.333	0.298	89.5	57-121	WG600176	
Naphthalene	mg/kg	.333	0.273	82.0	55-91	WG600176	
Nitrobenzene	mg/kg	.333	0.272	81.6	47-92	WG600176	
Pentachlorophenol	mg/kg	.333	0.163	49.1	10-89	WG600176	
Phenanthrene	mg/kg	.333	0.296	88.9	55-103	WG600176	
Phenol	mg/kg	.333	0.261	78.3	49-99	WG600176	
Pyrene	mg/kg	.333	0.294	88.4	54-104	WG600176	
2,4,6-Tribromophenol				78.22	16-136	WG600176	
2-Fluorobiphenyl				84.03	37-119	WG600176	
2-Fluorophenol				75.31	22-114	WG600176	
Nitrobenzene-d5				80.33	20-114	WG600176	
Phenol-d5				79.69	26-127	WG600176	

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Laboratory Cor	ntrol Sample			
Analyte	Units	Known Val	Result	% Rec	Limit	Batch
p-Terphenyl-d14				88.36	15-174	
PCB 1016	mg/kg	.167	0.155	93.1	64-120	WG600177
PCB 1260	mg/kg	.167	0.166	99.4	72-130	WG600177
Decachlorobiphenyl				100.7	18.9-115.8	WG600177
Tetrachloro-m-xylene				88.18	31.8-115.7	WG600177
Total Solids	8	50	50.0	99.9	85-115	WG600199
Total Solids	8	50	50.0	99.9	85-115	WG600201
Diesel Range Organics (DRO)	mg/kg	30	23.7	79.1	50-150	WG600178
Residual Range Organics (RRO)	mg/kg	30	20.3	67.6	50-150	WG600178
o-Terphenyl				69.95	50-150	WG600178

Laboratory Control Sample Duplicate										
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch		
1,1,1,2-Tetrachloroethane	mg/kg	0.0220	0.0227	88.0	77-129	3.16	20	WG600099		
1,1,1-Trichloroethane	mg/kg	0.0251	0.0248	100.	70-127	1.53	20	WG600099		
1,1,2,2-Tetrachloroethane	mg/kg	0.0215	0.0219	86.0	76-133	1.73	20	WG600099		
1,1,2-Trichloroethane	mg/kg	0.0224	0.0218	89.0	79-123	2.55	20	WG600099		
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0287	0.0280	115.	52-145	2.45	20	WG600099		
1,1-Dichloroethane	mg/kg	0.0250	0.0250	100.	74-121	0.230	20	WG600099		
1,1-Dichloroethene	mg/kg	0.0250	0.0258	100.	53-135	2.98	20	WG600099		
1,1-Dichloropropene	mg/kg	0.0258	0.0254	103.	67-127	1.38	20	WG600099		
1,2,3-Trichlorobenzene	mg/kg	0.0209	0.0211	83.0	74-131	1.09	20	WG600099		
1,2,3-Trichloropropane	mg/kg	0.0207	0.0207	83.0	75-135	0.160	20	WG600099		
1,2,3-Trimethylbenzene	mg/kg	0.0248	0.0241	99.0	76-128	2.77	20	WG600099		
1,2,4-Trichlorobenzene	mg/kg	0.0266	0.0257	106.	72-130	3.17	20	WG600099		
1,2,4-Trimethylbenzene	mg/kg	0.0258	0.0249	103.	75-131	3.44	20	WG600099		
1,2-Dibromo-3-Chloropropane	mg/kg	0.0170	0.0176	68.0	55-142	3.42	20	WG600099		
1,2-Dibromoethane	mg/kg	0.0239	0.0233	95.0	77-126	2.54	20	WG600099		
1,2-Dichlorobenzene	mg/kg	0.0244	0.0242	98.0	80-123	0.630	20	WG600099		
1,2-Dichloroethane	mg/kg	0.0235	0.0237	94.0	70-128	0.940	20	WG600099		
1,2-Dichloropropane	mg/kg	0.0244	0.0249	97.0	74-125	2.15	20	WG600099		
1,3,5-Trimethylbenzene	mg/kg	0.0260	0.0252	104.	77-129	3.09	20	WG600099		
1,3-Dichlorobenzene	mg/kg	0.0253	0.0249	101.	76-128	1.74	20	WG600099		
1,3-Dichloropropane	ma/ka	0.0218	0.0231	87.0	77-118	5.60	20	WG600099		
1,4-Dichlorobenzene	mg/kg	0.0256	0.0250	102.	77-119	2.64	20	WG600099		
2.2-Dichloropropane	mg/kg	0.0262	0.0252	105.	60-132	3.86	20	WG600099		
2-Butanone (MEK)	ma/ka	0.118	0.119	95.0	56-146	0.490	20	WG600099		
2-Chloroethyl vinyl ether	mg/kg	0.0952	0.113	76.0	17-179	16.8	22	WG600099		
2-Chlorotoluene	mg/kg	0.0259	0.0255	104.	76-125	1.77	20	WG600099		
4-Chlorotoluene	ma/ka	0 0257	0 0254	103	76-125	1 27	20	WG600099		
4-Methyl-2-pentanone (MIBK)	ma/ka	0 103	0 107	82 0	55-148	3 54	20	WG600099		
Acetone	ma/ka	0 130	0 131	104	47-155	0 680	22	WG600099		
Acrylonitrile	mg/kg	0.0980	0 101	78 0	50-155	2 70	20	WG600099		
Benzene	ma/ka	0.0250	0 0244	100	72-120	2 32	20	WG600099		
Bromobenzene	mg/kg	0.0247	0 0240	99 0	74-122	2.65	20	WG600099		
Bromodichloromethane	mg/kg	0.0209	0 0206	84 0	74-128	1 72	20	WG600099		
Bromoform	mg/kg	0.0205	0.0200	77 0	62-137	2 15	20	WG600099		
Promomothano	mg/kg	0.0290	0.0190	116	29-190	0.930	20	WC600000		
Carbon totrachlorido	mg/kg	0.0290	0.0207	90 0	62-130	2 59	20	WC600099		
Chlorobenzene	mg/kg	0.0224	0.0210	99.0	77-124	1 69	20	WG600099		
Chlorodibromomothano	mg/kg	0.0247	0.0207	95.0	74-129	2 19	20	WC6000099		
Chloroothano	mg/kg	0.0213	0.0207	116	14-120	2.⊥0 2.27	20	WC6000099		
CIIIOLOCUIDIR	iiig/kg	0.0290	0.049/	TTO.	40-1/3	2.21	20	WG000099		

* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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L·A·B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

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July 12, 2012

Dec a la sta a	***** 1 to	Laborator	ry Control Sa	ample Duplic	ate	222	* 1 1 h	Det als
Analyte	Units	Result	Rei	%Rec	Limit	RPD	Limit	Batch
Chloroform	mq/kq	0.0255	0.0246	102.	76-122	3.51	20	WG600099
Chloromethane	mg/kg	0.0248	0.0244	99.0	49-143	1.47	20	WG600099
cis-1,2-Dichloroethene	mg/kg	0.0240	0.0238	96.0	73-123	0.820	20	WG600099
cis-1,3-Dichloropropene	mg/kg	0.0221	0.0223	88.0	73-126	1.16	20	WG600099
Di-isopropyl ether	mg/kg	0.0232	0.0231	93.0	64-131	0.380	20	WG600099
Dibromomethane	mg/kg	0.0227	0.0232	91.0	75-127	2.28	20	WG600099
Dichlorodifluoromethane	mg/kg	0.0255	0.0258	102.	30-177	1.17	20	WG600099
Ethylbenzene	mg/kg	0.0259	0.0253	104.	76-126	2.53	20	WG600099
Hexachloro-1,3-butadiene	mg/kg	0.0233	0.0221	93.0	71-134	5.14	20	WG600099
Isopropylbenzene	mg/kg	0.0273	0.0267	109.	70-128	2.53	20	WG600099
Methyl tert-butyl ether	mg/kg	0.0216	0.0222	86.0	66-127	2.76	20	WG600099
Methylene Chloride	mg/kg	0.0198	0.0197	79.0	67-124	0.590	20	WG600099
n-Butylbenzene	mg/kg	0.0288	0.0279	115.	71-133	2.95	20	WG600099
n-Propylbenzene	mg/kg	0.0268	0.0265	107.	76-126	0.980	20	WG600099
Naphthalene	mg/kg	0.0205	0.0205	82.0	68-136	0.0600	20	WG600099
p-Isopropyltoluene	mg/kg	0.0264	0.0258	106.	75-134	2.40	20	WG600099
sec-Butylbenzene	mg/kg	0.0267	0.0261	107.	75-132	2.03	20	WG600099
Styrene	mg/kg	0.0250	0.0243	100.	68-148	3.09	20	WG600099
tert-Butylbenzene	mg/kg	0.0262	0.0260	105.	75-132	0.610	20	WG600099
Tetrachloroethene	mg/kg	0.0254	0.0253	101.	70-131	0.380	20	WG600099
Toluene	mg/kg	0.0241	0.0239	96.0	74-155	0.900	20	WG600099
trans-1,2-Dichloroethene	mg/kg	0.0243	0.0239	97.0	63-126	1.57	20	WG600099
trans-1,3-Dichloropropene	mg/kg	0.0224	0.0224	90.0	68-126	0.0100	20	WG600099
Trichloroethene	mg/kg	0.0234	0.0228	94.0	75-121	2.71	20	WG600099
Trichlorofluoromethane	mg/kg	0.0273	0.0277	109.	48-170	1.64	20	WG600099
Vinyl chloride	mg/kg	0.0271	0.0259	108.	54-144	4.55	20	WG600099
Aylenes, Total	mg/kg	0.0/82	0.0763	104.	/0-120	2.53	20	WG600099
4-Bromoiluorobenzene				99.52	67-133			WG600099
Dibromofluoromethane				105.7	/2-135			WG600099
101uene-us				104.9	90-113			WG600099
a,a,a-iririuorocoruene				101.0	09-115			WG000099
1,2,4-Trichlorobenzene	mg/kg	0.257	0.259	77.0	48-87	0.974	20	WG600176
2,4,6-Trichlorophenol	mg/kg	0.266	0.264	80.0	50-98	0.889	20	WG600176
2,4-Dichlorophenol	mg/kg	0.285	0.283	86.0	56-96	0.649	20	WG600176
2,4-Dimethylphenol	mg/kg	0.343	0.322	103*	52-101	6.42	20	WG600176
2,4-Dinitrophenol	mg/kg	0.0329	0.0498	10.0	10-109	40.9*	39	WG600176
2,4-Dinitrotoluene	mg/kg	0.308	0.295	92.0	54-103	4.38	20	WG600176
2,6-Dinitrotoluene	mg/kg	0.299	0.289	90.0	53-99	3.43	20	WG600176
2-Chloronaphthalene	mg/kg	0.275	0.273	82.0	55-96	0.655	20	WG600176
2-Chlorophenol	mg/kg	0.261	0.263	78.0	52-88	0.891	20	WG600176
2-Nitrophenol	mg/kg	0.283	0.281	85.0	55-106	0.605	20	WG600176
3,3-Dichlorobenzidine	mg/kg	0.272	0.261	82.0	36-84	4.03	20	WG600176
4,6-Dinitro-2-methylphenol	mg/kg	0.179	0.170	54.0	24-98	5.08	32	WG600176
4-Bromophenyl-phenylether	mg/kg	0.300	0.284	90.0	58-111	5.64	20	WG600176
4-Chloro-3-methylphenol	mg/kg	0.323	0.318	97.0	58-98	1.75	20	WG600176
4-Chlorophenyl-phenylether	mg/kg	0.294	0.288	88.0	59-103	1.99	20	WG600176
4-Nitrophenol	mg/kg	0.235	0.232	71.0	34-101	1.66	26	WG600176
Acenaphthene	mg/kg	0.278	0.271	84.0	55-96	2.57	20	WG600176
Acenaphthylene	mg/kg	0.300	0.294	90.0	61-107	1.93	20	WG600176
Anthracene	mg/kg	0.335	0.315	100.	58-105	5.92	20	WG600176
Benzidine	mg/kg	0.0131	0.0116	4*	10-21	12.2	40	WG600176
Benzo(a)anthracene	mg/kg	0.299	0.293	90.0	56-103	1.91	20	WG600176
Benzo(a)pyrene	mg/kg	U.3UL	0.295	90.0	5/-103	2.12	20	WG600176
Benzo(g) iluorantnene	mg/kg	0.290	0.290	87.0	5Z-100	0.0245	20	WG6UU176
Denzo(g, II, I) perytene	mg/kg	0.205	0.201	00.0	4/-112 E2 104	1.30	20	WGGUUL/6
Bengylbutyl phthelete	mg/kg	0.305	0.292	94.U	55-104 61 110	4.44	20	WGOUUL/C
Denzyibulyi pilliaiale	IIIQ/KQ	0.540	0.551	90.0	01-110	0.940	20	WGUUUT/C

* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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- A · B S.C.I.E.N.C.E.S

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July 12, 2012

		y Control S	te					
Analyte	Units	Result	Ref	*Rec	Limit	RPD	Limit	Batch
Bis(2-chlorethoxy)methane	ma/ka	0.271	0.277	81.0	58-104	2.09	20	WG60017
Bis(2-chloroethyl)ether	ma/ka	0 234	0 248	70 0	51-103	5 71	20	WG60017
Bis(2-chloroisopropyl)ether	ma/ka	0 249	0 255	75.0	56-95	2 37	20	WG60017
Bis(2-ethylhexyl)phthalate	ma/ka	0.345	0 335	104	56-120	3 10	20	WG60017
Chrysene	ma/ka	0 310	0 305	93 0	55-102	1 63	20	WG60017
Di-n-butyl phthalate	ma/ka	0.354	0.337	106.	59-114	4.76	20	WG60017
Di-n-octyl phthalate	ma/ka	0.330	0.326	99.0	51-119	1.20	22	WG60017
Dibenz(a,h)anthracene	ma/ka	0.291	0.281	87.0	49-111	3.48	20	WG60017
Diethyl phthalate	ma/ka	0 321	0 319	96 0	61-105	0 407	20	WG60017
Dimethyl phthalate	ma/ka	0.307	0.306	92.0	60-106	0.486	20	WG60017
Fluoranthene	ma/ka	0 329	0 314	99 0	59-108	4 72	20	WG60017
Fluorene	ma/ka	0 302	0 294	91 0	59-100	2 60	20	WG60017
Hexachloro-1 3-butadiene	ma/ka	0 274	0 279	82 0	53-106	1 76	20	WG60017
Hexachlorobenzene	ma/ka	0.267	0.259	80.0	50-108	3 02	20	WG60017
Hexachlorocyclopentadiene	mg/kg	0 225	0.235	68 0	36-117	2 14	20	WG60017
Hexachloroethane	ma/ka	0.223	0.254	74 0	45-83	2.91	20	WG60017
Indeno(1, 2, 3-cd)pyrene	ma/ka	0 289	0 285	87 0	50-110	1 70	20	WG60017
Isophorone	ma/ka	0 235	0 234	70 0	51-99	0 497	20	WG60017
n-Nitrosodi-n-propylamine	mg/kg	0.239	0.280	84 0	52-103	0 199	20	WG60017
n-Nitrosodimethylamine	ma/ka	0.275	0.232	68 0	31-107	2 95	23	WG60017
n-Nitrosodinbenylamine	mg/kg	0.317	0.292	95.0	57-121	6 1 2	20	WG60017
Naphthalene	mg/kg	0.274	0.200	82 0	55-91	0.12	20	WG60017
Nitrobenzene	mg/kg	0.274	0.275	80.0	47-92	1 27	20	WG60017
Pentachlorophenol	ma/ka	0.195	0.163	58 0	10-89	17 4	28	WG60017
Dhenanthrene	mg/kg	0.308	0.296	92 0	55-103	3 85	20	WG60017
Dhenol	mg/kg	0.305	0.290	80.0	49-99	1 65	20	WG60017
Buropo	mg/kg	0.205	0.201	00.0	54-104	2 22	20	WC60017
2 4 6-Tribromophenol	llig/ rg	0.301	0.294	82 46	16-136	2.32	20	WG60017
2-Eluorobiphonul				94 62	27_110			WC60017
2-Fluorophonol				72 69	22-114			WC60017
Nitrobenzene-d5				78.38	20-114			WG60017
Dhonol_d5				78.76	26 127			WC60017
n-Ternhenyl-d14				88 18	15-174			WG60017
p reiphenyi dit				00.10	15 1/1			WG0001/
DCP 1016	ma/ka	0 159	0 155	95 0	64-120	2 20	20	WC60017
PCB 1010	mg/kg	0.174	0.155	104	72 120	2.39	20	WG60017
Pogoghlorohiphonyl	uig⊅kg	0.1/4	0.100	104. 04.66	10 0-115 0	4.04	20	WC60017
Tetrachlere musice				94.00	10.9-115.8			WGGOOT /
recraciiioro-iii-xytelle				03.24	51.0-115./			WGOUULI
Diesel Range Organics (DRO)	mg/kg	24.9	23.7	83.0	50-150	4.66	20	WG60017
Residual Range Organics (RRO)	mg/kg	21.2	20.3	71.0	50-150	4.63	20	WG60017
o-Terpnenyl				73.52	50-150			WG60017

			Matrix Spil	ke				
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/kg	0.0820	0	.025	65.6	49-135	L582303-01	WG600099
1,1,1-Trichloroethane	mg/kg	0.0936	0	.025	74.8	43-142	L582303-01	WG600099
1,1,2,2-Tetrachloroethane	mg/kg	0.0805	0	.025	64.4	42-147	L582303-01	WG600099
1,1,2-Trichloroethane	mg/kg	0.0852	0	.025	68.2	51-134	L582303-01	WG600099
1,1,2-Trichlorotrifluoroethane	mg/kg	0.104	0	.025	83.0	25-156	L582303-01	WG600099
1,1-Dichloroethane	mg/kg	0.0911	0	.025	72.8	50-131	L582303-01	WG600099
1,1-Dichloroethene	mg/kg	0.0969	0	.025	77.5	29-145	L582303-01	WG600099
1,1-Dichloropropene	mg/kg	0.0934	0	.025	74.7	40-136	L582303-01	WG600099
1,2,3-Trichlorobenzene	mg/kg	0.0737	0	.025	58.9	13-142	L582303-01	WG600099
1,2,3-Trichloropropane	mg/kg	0.0844	0	.025	67.6	41-149	L582303-01	WG600099
1.2.3-Trimethylbenzene	ma/ka	0.0883	0	.025	70.6	33-146	L582303-01	WG600099

* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ELA-B S-C-I-E-N-C-E-S

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July 12, 2012

			Matrix Spi	ke				
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1 2 4-Trichlorobenzene	ma/ka	0 0936	0	025	74 9	12-140	T-582303-01	WG600099
1 2 4-Trimethylbenzene	mg/kg	0.0919	0	025	73 5	29-143	1.582303=01	WG600099
1 2-Dibromo-3-Chloropropane	mg/kg	0.051	0	025	52 1	29 145	1.582303-01	WG600099
1,2 Dibromoothano	mg/kg	0.0001	0	025	71 1	49-122	1592202-01	WC600000
1,2-Dichlorobongono	mg/kg	0.0803	0	.025	71.2	27-126	1582202-01	WC600093
1,2-Dichloroothano	mg/kg	0.0891	0	.025	71.2	40-121	1582303-01	WC600093
1,2 Dighleropropage	mg/kg	0.0874	0	.025	70.0	E0 122	1502303-01	WC6000095
1,2-Dichioropropane	mg/kg	0.0094	0	.025	72.2	20-132	1582303-01	WG600099
1,3,5-IIImethyiDenzene	ilig/kg	0.0910	0	.025	73.3	29-144	1502303-01	WG600099
1,3-Dichleropenzene	nig/kg	0.0896	0	.025	71.7	20-140	L582303-01	WG600099
1,3-Dichloropropane	nig/kg	0.0875	0	.025	70.0	50-126	L582303-01	WG600099
1,4-Dichlorobenzene	mg/kg	0.0950	0	.025	76.0	34-132	L582303-01	WG600099
2,2-Dichioropropane	mg/kg	0.0931	0	.025	74.5	35-148	L582303-01	WG600099
2-Butanone (MEK)	mg/kg	0.497	0	.125	79.5	40-149	L582303-01	WG600099
2-Chloroethyl vinyl ether	mg/kg	0.384	0	.125	61.5	10-173	L582303-01	WG600099
2-Chlorotoluene	mg/kg	0.0921	0	.025	73.6	34-136	L582303-01	WG600099
4-Chlorotoluene	mg/kg	0.0921	0	.025	73.7	31-137	L582303-01	WG600099
4-Methyl-2-pentanone (MIBK)	mg/kg	0.415	0	.125	66.4	37-153	L582303-01	WG600099
Acetone	mg/kg	0.540	0	.125	86.4	10-177	L582303-01	WG600099
Acrylonitrile	mg/kg	0.408	0	.125	65.2	33-159	L582303-01	WG600099
Benzene	mg/kg	0.0916	0	.025	73.3	44-131	L582303-01	WG600099
Bromobenzene	mg/kg	0.0892	0	.025	71.4	36-132	L582303-01	WG600099
Bromodichloromethane	mg/kg	0.0791	0	.025	63.3	48-134	L582303-01	WG600099
Bromoform	mg/kg	0.0725	0	.025	58.0	34-141	L582303-01	WG600099
Bromomethane	mg/kg	0.111	0	.025	89.1	19-173	L582303-01	WG600099
Carbon tetrachloride	mg/kg	0.0834	0	.025	66.7	36-140	L582303-01	WG600099
Chlorobenzene	mg/kg	0.0927	0	.025	74.2	42-133	L582303-01	WG600099
Chlorodibromomethane	ma/ka	0.0786	0	.025	62.8	45-135	L582303-01	WG600099
Chloroethane	ma/ka	0.116	0	.025	93.0	16-178	1582303-01	WG600099
Chloroform	ma/ka	0.0915	0	.025	73.2	52-130	1.582303-01	WG600099
Chloromethane	ma/ka	0.0943	0	.025	75.4	28-147	1582303-01	WG600099
cis-1.2-Dichloroethene	ma/ka	0.0915	0	.025	73.2	52-128	L582303-01	WG600099
cis-1.3-Dichloropropene	ma/ka	0 0830	0	025	66 4	46-131	1.582303-01	WG600099
Di-isopropyl ether	ma/ka	0 0857	0	025	68 5	46-134	1.582303-01	WG600099
Dibromomethane	ma/ka	0 0859	0	025	68 7	51-133	1.582303-01	WG600099
Dichlorodifluoromethane	mg/kg	0.00000	0	025	78.8	12-179	1.582303=01	WG600099
Ethylbongono	mg/kg	0.0901	0	025	75.4	29-120	1592202-01	WC600000
Heyachloro-1 2-butadiono	mg/kg	0.0943	0	.025	50 7	10-147	1582303-01	WC600093
Teopropulbongono	mg/kg	0.0747	0	.025	70 1	24 127	1502505-01	WCG000099
Mothul tort butul other	mg/kg	0.0970	0	.025	62 1	34-137 4E 124	L302303-01	WGGOOOD99
Methylene Chlevide	ilig/kg	0.0792	0	.025	53.4	40-104	1502303-01	WG600099
methylene chioride	nig/kg	0.0680	0	.025	54.4	41-133	L582303-01	WG600099
n-Butyibenzene	nig/kg	0.0991	0	.025	79.2	19-149	1582303-01	WG600099
n-Propyidenzene	mg/kg	0.0955	0	.025	76.4	27-142	L582303-01	WG600099
Naphthalene	mg/kg	0.0751	0	.025	60.1	19-146	L582303-01	WG600099
p-Isopropyltoluene	mg/kg	0.0931	0	.025	74.5	21-150	L582303-01	WG600099
sec-Butylbenzene	mg/kg	0.0924	0	.025	73.9	25-148	L582303-01	WG600099
Styrene	mg/kg	0.0884	0	.025	70.7	30-156	L582303-01	WG600099
tert-Butylbenzene	mg/kg	0.0911	0	.025	72.9	32-146	L582303-01	WG600099
Tetrachloroethene	mg/kg	0.0941	0	.025	75.3	35-139	L582303-01	WG600099
Toluene	mg/kg	0.0911	0	.025	72.9	43-127	L582303-01	WG600099
trans-1,2-Dichloroethene	mg/kg	0.0901	0	.025	72.1	41-132	L582303-01	WG600099
trans-1,3-Dichloropropene	mg/kg	0.0857	0	.025	68.5	43-129	L582303-01	WG600099
Trichloroethene	mg/kg	0.0881	0	.025	70.5	42-136	L582303-01	WG600099
Trichlorofluoromethane	mg/kg	0.103	0	.025	82.7	20-178	L582303-01	WG600099
Vinyl chloride	mg/kg	0.105	0	.025	84.0	30-157	L582303-01	WG600099
Xylenes, Total	mg/kg	0.278	0	.075	74.1	38-137	L582303-01	WG600099
4-Bromofluorobenzene					97.04	67-133		WG600099
Dibromofluoromethane					109.0	72-135		WG600099
Toluene-d8					102.9	90-113		WG600099
a,a,a-Trifluorotoluene					99.67	89-115		WG600099

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ELA-B S-C-I-E-N-C-E-S

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

			Matrix Spike					
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1.2.4-Trichlorobenzene	ma/ka	0.270	0	. 333	81.2	27-118	1582315-01	WG600176
2.4.6-Trichlorophenol	mg/kg	0.292	0	.333	87.7	18-140	L582315-01	WG600176
2.4-Dichlorophenol	ma/ka	0.309	0	.333	92.8	30-134	L582315-01	WG600176
2.4-Dimethylphenol	ma/ka	0 323	0	333	97 0	13-147	1.582315-01	WG600176
2.4-Dinitrophenol	ma/ka	0 0380	0	333	11 4	10-110	1582315-01	WG600176
2.4-Dinitrotoluene	ma/ka	0 310	0	333	93 0	12-146	1582315-01	WG600176
2 6-Dinitrotoluene	mg/kg	0.308	0		92.4	10-150	1.582315-01	WG600176
2-Chloronaphthalene	mg/kg	0.201	0	333	87 4	31-127	1.582315-01	WG600176
2-Chlorophonol	mg/kg	0.272	0		91 7	26-120	1502315-01	WC600176
2-Nitrophonol	mg/kg	0.272	0	. 3 3 3	02.0	10-156	1502315-01	WC600176
2 - Niciophenoi	mg/kg	0.313	0		53.9	10 127	TE0221E 01	WG600176
4 6 Dimiture 2 methylphenel	nig/kg	0.194	0	. 3 3 3	58.1 40 C	10-12/	1582315-01	WG600176
4,6-DINICFO-2-MECHYIPHENOI	nig/kg	0.165	0	. 3 3 3	49.0	10-124	1582315-01	WG600176
4-Bromopnenyl-pnenyletner	mg/kg	0.263	0	. 3 3 3	78.9	27-150	L582315-01	WG600176
4-Chloro-3-methylphenol	mg/kg	0.326	0	.333	97.9	24-140	L582315-01	WG600176
4-Chlorophenyl-phenylether	mg/kg	0.275	0	.333	82.7	27-142	L582315-01	WG600176
4-Nitrophenol	mg/kg	0.242	0	.333	72.7	10-166	L582315-01	WG600176
Acenaphthene	mg/kg	0.286	0	.333	85.9	30-132	L582315-01	WG600176
Acenaphthylene	mg/kg	0.303	0	.333	91.1	31-144	L582315-01	WG600176
Anthracene	mg/kg	0.309	0	.333	92.7	27-140	L582315-01	WG600176
Benzidine	mg/kg	0	0	.333	0*	10-55	L582315-01	WG600176
Benzo(a)anthracene	mg/kg	0.267	0	.333	80.1	22-139	L582315-01	WG600176
Benzo(a)pyrene	mg/kg	0.258	0	.333	77.6	16-148	L582315-01	WG600176
Benzo(b)fluoranthene	mg/kg	0.250	0	.333	75.0	13-152	L582315-01	WG600176
Benzo(g,h,i)perylene	mg/kg	0.168	0	.333	50.6	10-137	L582315-01	WG600176
Benzo(k)fluoranthene	mg/kg	0.253	0	.333	75.9	15-152	L582315-01	WG600176
Benzylbutyl phthalate	mg/kg	0.281	0	.333	84.3	20-168	L582315-01	WG600176
Bis(2-chlorethoxy)methane	ma/ka	0.292	0	.333	87.7	32-141	L582315-01	WG600176
Bis(2-chloroethyl)ether	ma/ka	0.253	0	.333	75.9	25-139	L582315-01	WG600176
Bis(2-chloroisopropyl)ether	ma/ka	0.266	0	. 333	79.8	32-128	1582315-01	WG600176
Bis(2-ethylhexyl)phthalate	ma/ka	0.257	0	.333	77.0	20-163	L582315-01	WG600176
Chrysene	ma/ka	0.286	0	.333	85.9	20-139	L582315-01	WG600176
Di-n-butyl phthalate	ma/ka	0 304	0	333	91 3	24-149	1.582315-01	WG600176
Di-n-octyl phthalate	ma/ka	0 255	0	333	76 5	14-164	L582315-01	WG600176
Dibenz(a h)anthracene	ma/ka	0 193	0	333	58 0	10-137	T-582315-01	WG600176
Diethyl phthalate	ma/ka	0 336	0	333	101	28-142	1.582315-01	WG600176
Dimethyl phthalate	mg/kg	0.331	0		99 4	31-142	1.582315-01	WG600176
Fluoranthene	mg/kg	0.320	0 0590		78.2	24-145	1.582315-01	WG600176
Fluoropo	mg/kg	0.320	0.0550		90.2	24 145	1502315-01	WC600176
Howashlana 1.2 butadiana	mg/kg	0.299	0		09.0	20 126	TE0021E 01	WC600176
Nexaciii010-1, 5-bucadiene	ilig/kg	0.272	0		01.7	29-130	1502515-01	WG600176
Hexaciiloropenzene	nig/kg	0.228	0	. 3 3 3	00.5	20-130	1582315-01	WG600176
Hexachiorocyclopentadiene	mg/kg	0.0994	0	. 3 3 3	29.9	10-124	L582315-01	WG600176
Hexachloroethane	mg/kg	0.280	0	.333	84.0	21-107	L582315-01	WG600176
Indeno(1,2,3-cd)pyrene	mg/kg	0.190	0	.333	56.9	10-139	L582315-01	WG600176
Isophorone	mg/kg	0.241	0	.333	72.3	26-134	L582315-01	WG600176
n-Nitrosodi-n-propylamine	mg/kg	0.281	0	.333	84.3	24-141	L582315-01	WG600176
n-Nitrosodimethylamine	mg/kg	0.249	0	.333	74.8	18-126	L582315-01	WG600176
n-Nitrosodiphenylamine	mg/kg	0.313	0	.333	93.9	16-128	L582315-01	WG600176
Naphthalene	mg/kg	0.422	0.0780	.333	103.	31-124	L582315-01	WG600176
Nitrobenzene	mg/kg	0.293	0	.333	88.0	22-122	L582315-01	WG600176
Pentachlorophenol	mg/kg	0.215	0	.333	64.6	10-124	L582315-01	WG600176
Phenanthrene	mg/kg	0.345	0.0570	.333	86.6	25-139	L582315-01	WG600176
Phenol	mg/kg	0.262	0	.333	78.7	22-129	L582315-01	WG600176
Pyrene	mg/kg	0.292	0.0440	.333	74.6	23-145	L582315-01	WG600176
2,4,6-Tribromophenol					87.16	16-136		WG600176
2-Fluorobiphenyl					88.46	37-119		WG600176
2-Fluorophenol					78.22	22-114		WG600176
Nitrobenzene-d5					85.74	20-114		WG600176
Phenol-d5					79.55	26-127		WG600176
p-Terphenyl-d14					77.54	15-174		WG600176

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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YOUR LAB OF CHOICE

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Bend, OR 97701

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

			Matrix	Spike					
Analyte	Units	MS Res	Ref 1	Res TV	% Rec	Limit		Ref Samp	Batch
Diesel Range Organics (DRO)	ma/ka	28 5	0	30	94 9	50-150	า	1.582318-10	WG600178
Residual Range Organics (RRO)	mg/kg	29.2	0	30	97.2	50-150)	L582318-10	WG600178
o-Terphenyl		2012	Ū	50	103.8	50-150	5	2002010 10	WG600178
Applyto	Unita	Mat	rix Spik	e Duplicate	Timit	מתת	Timit	Dof Comp	Datab
Analyte	UNILS	MSD	Rel	*Rec		RPD	LIMIL	Rei Samp	Baten
1,1,1,2-Tetrachloroethane	mg/kg	0.104	0.0820	83.4	49-135	24.0*	23	L582303-01	WG600099
1,1,1-Trichloroethane	mg/kg	0.119	0.0936	95.5	43-142	24.2*	24	L582303-01	WG600099
1,1,2,2-Tetrachloroethane	mg/kg	0.106	0.0805	84.7	42-147	27.2*	25	L582303-01	WG600099
1,1,2-Trichloroethane	mg/kg	0.111	0.0852	88.8	51-134	26.2*	21	L582303-01	WG600099
1,1,2-Trichlorotrifluoroethane	mg/kg	0.130	0.104	104.	25-156	22.5	29	L582303-01	WG600099
1,1-Dichloroethane	mg/kg	0.124	0.0911	99.0	50-131	30.4*	21	L582303-01	WG600099
1,1-Dichloroethene	mg/kg	0.123	0.0969	98.0	29-145	23.4	28	L582303-01	WG600099
1,1-Dichloropropene	mg/kg	0.123	0.0934	98.0	40-136	27.0*	24	L582303-01	WG600099
1,2,3-Trichlorobenzene	mg/kg	0.0942	0.0737	75.4	13-142	24.5	33	L582303-01	WG600099
1,2,3-Trichloropropane	mg/kg	0.111	0.0844	88.6	41-149	27.0	28	L582303-01	WG600099
1,2,3-Trimethylbenzene	mg/kg	0.115	0.0883	91.8	33-146	26.0	27	L582303-01	WG600099
1,2,4-Trichlorobenzene	mg/kg	0.114	0.0936	91.2	12-140	19.7	32	L582303-01	WG600099
1,2,4-Trimethylbenzene	mg/kg	0.113	0.0919	90.3	29-143	20.5	30	L582303-01	WG600099
1,2-Dibromo-3-Chloropropane	mg/kg	0.0955	0.0651	76.4	29-151	37.9*	31	L582303-01	WG600099
1,2-Dibromoethane	mg/kg	0.113	0.0889	90.5	48-133	23.9*	22	L582303-01	WG600099
1,2-Dichlorobenzene	mg/kg	0.118	0.0891	94.6	37-136	28.2*	25	L582303-01	WG600099
1,2-Dichloroethane	mg/kg	0.121	0.0874	96.5	49-131	31.9*	20	L582303-01	WG600099
1,2-Dichloropropane	mg/kg	0.119	0.0894	95.1	50-132	28.3*	21	L582303-01	WG600099
1,3,5-Trimethylbenzene	mg/kg	0.113	0.0916	90.0	29-144	20.5	30	L582303-01	WG600099
1,3-Dichlorobenzene	mg/kg	0.115	0.0896	92.2	26-140	25.0	28	L582303-01	WG600099
1,3-Dichloropropane	mg/kg	0.113	0.0875	90.2	50-126	25.2*	22	L582303-01	WG600099
1,4-Dichlorobenzene	mg/kg	0.119	0.0950	94.8	34-132	22.1	26	L582303-01	WG600099
2,2-Dichloropropane	mg/kg	0.125	0.0931	99.9	35-148	29.1*	26	L582303-01	WG600099
2-Bulanone (MEK)	nig/kg	0.678	0.497	108.	40-149	30.7*	27	L582303-01	WG600099
2-Chioroechyi Vinyi echer	mg/kg	0.495	0.384	79.3	24 126	25.3	33	L582303-01	WG600099
2-Chiorotoluene	mg/kg	0.112	0.0921	92.0	21 127	23.0	20	1502303-01	WGGOOOD99
4 Mothul 2 pontonone (MTRK)	mg/kg	0.113	0.0921	90.0	27 152	20.0	27	L502303-01	WG600099
Actors	mg/kg	0.372	0.415	122	10-177	25.2*	27	1582202-01	WC600099
Acrylonitrile	mg/kg	0.557	0.340	123. 89 1	33-159	31.0*	20	1.582303-01	WG600099
Benzene	mg/kg	0.122	0.400	97 4	44-131	28.2*	21	1.582303-01	WG600099
Bromobenzene	mg/kg	0.115	0.0910	91 6	36-132	24.8	26	1.582303-01	WG600099
Bromodichloromethane	mg/kg	0 106	0 0791	84 5	48-134	28.7*	20	1.582303-01	WG600099
Bromoform	ma/ka	0.0965	0.0725	77.2	34-141	28.3*	24	L582303-01	WG600099
Bromomethane	ma/ka	0.143	0.111	114.	19-173	24.9	25	L582303-01	WG600099
Carbon tetrachloride	ma/ka	0.109	0.0834	87.2	36-140	26.6*	26	L582303-01	WG600099
Chlorobenzene	ma/ka	0.115	0.0927	92.4	42-133	21.9	24	L582303-01	WG600099
Chlorodibromomethane	mq/kq	0.103	0.0786	82.5	45-135	27.1*	23	L582303-01	WG600099
Chloroethane	mq/kq	0.140	0.116	112.	16-178	18.7	25	L582303-01	WG600099
Chloroform	mg/kg	0.122	0.0915	97.9	52-130	28.8*	21	L582303-01	WG600099
Chloromethane	mg/kg	0.121	0.0943	96.5	28-147	24.5*	23	L582303-01	WG600099
cis-1,2-Dichloroethene	mg/kg	0.122	0.0915	97.6	52-128	28.6*	21	L582303-01	WG600099
cis-1,3-Dichloropropene	mg/kg	0.109	0.0830	87.4	46-131	27.4*	21	L582303-01	WG600099
Di-isopropyl ether	mg/kg	0.119	0.0857	95.5	46-134	32.9*	20	L582303-01	WG600099
Dibromomethane	mg/kg	0.117	0.0859	93.5	51-133	30.6*	21	L582303-01	WG600099
Dichlorodifluoromethane	mg/kg	0.123	0.0984	98.3	12-179	22.1	27	L582303-01	WG600099
Ethylbenzene	mg/kg	0.118	0.0943	94.3	38-139	22.3	27	L582303-01	WG600099
Hexachloro-1,3-butadiene	mg/kg	0.0913	0.0747	73.0	10-147	20.0	37	L582303-01	WG600099
Isopropylbenzene	mg/kg	0.119	0.0976	95.3	34-137	19.8	29	L582303-01	WG600099
Methyl tert-butyl ether	mg/kg	0.111	0.0792	89.0	45-134	33.7*	22	L582303-01	WG600099
Methylene Chloride	mg/kg	0.0964	0.0680	77.1	41-133	34.5*	28	L582303-01	WG600099
n-Butylbenzene	mg/kg	0.123	0.0991	98.1	19-149	21.3	32	L582303-01	WG600099

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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L·A·B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Mat	riv Snike	Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
n-Propylbenzene	ma/ka	0.117	0.0955	93.8	27-142	20.5	2.9	1582303-01	WG600099
Naphthalene	ma/ka	0.0987	0.0751	79.0	19-146	27.2	30	L582303-01	WG600099
p-Isopropyltoluene	ma/ka	0.113	0.0931	90.1	21-150	19.0	31	L582303-01	WG600099
sec-Butylbenzene	ma/ka	0.112	0.0924	89.8	25-148	19.3	31	L582303-01	WG600099
Styrene	ma/ka	0.114	0.0884	91.2	30-156	25.3	26	L582303-01	WG600099
tert-Butylbenzene	ma/ka	0.111	0.0911	88.8	32-146	19.7	30	L582303-01	WG600099
Tetrachloroethene	ma/ka	0 113	0 0941	90.2	35-139	18 0	27	1.582303-01	WG600099
Toluene	ma/ka	0.116	0.0911	93.0	43-127	24.2*	21	L582303-01	WG600099
trans-1.2-Dichloroethene	ma/ka	0 118	0 0901	94 2	41-132	26 6*	23	L582303-01	WG600099
trans-1,3-Dichloropropene	ma/ka	0.112	0.0857	89.7	43-129	26.8*	23	L582303-01	WG600099
Trichloroethene	ma/ka	0 113	0.0881	90.0	42-136	24 3*	23	1.582303-01	WG600099
Trichlorofluoromethane	ma/ka	0 133	0 103	106	20-178	25 2	30	1582303-01	WG600099
Vinyl chloride	ma/ka	0 129	0 105	103	30-157	20 3	24	1.582303-01	WG600099
Xvlenes. Total	ma/ka	0 346	0 278	92.2	38-137	21 8	26	1582303-01	WG600099
4-Bromofluorobenzene		0.510	0.270	98 18	67-133	21.0	20	1001000 01	WG600099
Dibromofluoromethane				108 3	72-135				WG600099
Toluene-d8				104 5	90-113				WG600099
a,a,a-Trifluorotoluene				98.49	89-115				WG600099
1 2 4-Trichlorobenzene	ma/ka	0 270	0 270	81 0	27-118	0 182	23	1.582315-01	WG600176
2 4 6 Trichlerenhanel	mg/kg	0.270	0.270	01.0	10 140	0.102	25	1502515-01 TE0221E 01	WC600176
2,4,6-IIICIIOIOpileiloi	mg/kg	0.290	0.292	07.0	20-124	0.725	20	1582315-01	WC600176
2,4-Dichiolophenol	mg/kg	0.307	0.309	102	12 147	6.000	23	1502515-01 TE0221E 01	WC600176
2,4-Dimitrophonol	mg/kg	0.344	0.323	103. 7 19*	10-110	0.20	27 40	1502315-01 1502315-01	WC600176
2,4-Dinitrotoluono	mg/kg	0.0239	0.0380	7.10"	12 146	45.4"	25	L502515-01	WC600176
2,4-Dinitrotoluene	mg/kg	0.320	0.310	90.4	10 150	4.24	20	L302315-01	WG600176
2,0-Dilitiototuelle	mg/kg	0.321	0.308	90.3 00 E	21 127	4.24	23	L302315-01	WG600176
2-Chlorophonol	mg/kg	0.295	0.291	94 4	26-120	2 22	23	1582315-01	WC600176
2-CHIOrophenol	mg/kg	0.201	0.272	04.4	20-120	3.22	24	1502515-01	WG600176
2-Nitrophenoi	mg/kg	0.315	0.313	94.5	10-150	0.710	24 40	L582315-01	WG600176
4 6 Dinitro 2 methylphonel	mg/kg	0.134	0.194	40.0	10 124	21.0	40	L502515-01	WC600176
4, 0-DINICIO-2-mechyphenoi	mg/kg	0.134	0.105	40.3	27 150	20.0	20	L502515-01	WG600176
4 Chlore 2 methylphonel	mg/kg	0.272	0.203	101	27-130	2.30	20	L302315-01	WG600176
4 Chlorophonyl phonylether	mg/kg	0.335	0.320	20 4	24-140	2.75	22	L502515-01	WC600176
4-Chiorophenyi-phenyiether	mg/kg	0.290	0.275	69.4	27-142	1.75	25	L302315-01	WG600176
4-NICLOPHENOL	liig/kg	0.232	0.242	09.0	20 122	4.33	22	1502515-01	WG600176
Acenaphthelene	mg/kg	0.297	0.200	09.2	21 144	1.06	24	L502515-01	WC600176
Acenaphichytene	mg/kg	0.319	0.303	95.7	31-144	4.90	24	1582315-01	WG600176
Bongidino	mg/kg	0.317	0.309	95.I 0*	27-140 10 EE	2.40	20	L302315-01	WG600176
	mg/kg	0 075	0 267	0	10-55	0	20	1502515-01	WG600176
Benzo (a) antifracene	mg/kg	0.275	0.267	82.0	22-139	3.14	22	L582315-U1	WG600176
Benzo(a) pyrelle	liig/kg	0.208	0.256	00.4	10-140	3.55	21	1502515-01	WG600176
Benzo(D) I luoranthene	mg/kg	0.267	0.250	42 6	10 127	0.59	24	L582315-01	WG600176
Benzo(g, II, I) per yielle	mg/kg	0.145	0.100	43.0	10-137	11 1	22	1502515-01	WG600176
Benzulkutul phthalata	mg/kg	0.282	0.253	84./ 07 E	15-152	11.1 2 72	22	L582315-01	WG600176
Benzyibutyi philalate	mg/kg	0.291	0.201	07.5	20-100	3.75	20	1502315-01	WG600176
Bis(2-chiorethoxy)methane	liig/kg	0.296	0.292	88.8	32-141	1.30	20	L582315-01	WG600176
Bis(2-chioroethyi)ether	liig/kg	0.201	0.253	/8.4	25-139	3.21	20	1582315-01	WG600176
Bis(2-chioroisopropyi)ether	liig/kg	0.272	0.200	81.0	32-128	2.23	22	L582315-01	WG600176
Bis(2-ethymexy))philialate	liig/kg	0.271	0.257	81.3	20-103	5.43	24	1582315-01	WG600176
Chrysene Die beteil ebthalata	liig/kg	0.292	0.286	87.0	20-139	1.99	23	L582315-01	WG600176
Di-n-butyi phthalate	mg/kg	0.313	0.304	94.1	24-149	3.07	24	L582315-01	WG600176
Di-m-octyl phthalate	mg/kg	0.264	0.255	/9.4	10 127	3.08	24	L502315-U1	WG6UU176
Didenz(a,II)anunracene	mg/kg	U.1/3	0.193	52.U 100	10-13/	1 40	29 22	L002315 01	WGOUUL/6
Diethyl phthalate	mg/kg	0.341	0.330	102.	20-142	1.42	23	L502315-U1	WG6UU176
Dimetnyi phinalate	mg/kg	0.337	0.331	101.	31-142	1.85	22	L582315-U1	WG6UU176
Fluoranthene	mg/kg	0.309	0.320	/5.0	∠4-145 20 120	3.40	29 22	L302315-U1	WG6UU176
Fluorene	mg/kg	0.307	0.299	92.2	3U-138	2.69	22	L082315-U1	WG600176
Hexaciiioro-1,3-Dutadiene	mg/kg	0.2/9	0.2/2	03.0	29-130	2.00	22	T2073T2-0T	WGOUUT/6

* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ESC IVE NICIES

YOUR LAB OF CHOICE

Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L582318

July 12, 2012

		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Hexachlorobenzene	mg/kg	0.241	0.228	72.3	26-136	5.49	20	L582315-01	WG600176
Hexachlorocyclopentadiene	mg/kg	0.115	0.0994	34.4	10-124	14.2	33	L582315-01	WG600176
Hexachloroethane	mg/kg	0.289	0.280	86.8	21-107	3.38	27	L582315-01	WG600176
Indeno(1,2,3-cd)pyrene	mg/kg	0.169	0.190	50.7	10-139	11.6	32	L582315-01	WG600176
Isophorone	mg/kg	0.249	0.241	74.6	26-134	3.23	20	L582315-01	WG600176
n-Nitrosodi-n-propylamine	mg/kg	0.290	0.281	87.1	24-141	3.31	20	L582315-01	WG600176
n-Nitrosodimethylamine	mg/kg	0.234	0.249	70.4	18-126	6.15	27	L582315-01	WG600176
n-Nitrosodiphenylamine	mg/kg	0.321	0.313	96.5	16-128	2.65	25	L582315-01	WG600176
Naphthalene	mg/kg	0.467	0.422	117.	31-124	10.2	25	L582315-01	WG600176
Nitrobenzene	mg/kg	0.290	0.293	87.2	22-122	0.899	20	L582315-01	WG600176
Pentachlorophenol	mg/kg	0.186	0.215	56.0	10-124	14.4	34	L582315-01	WG600176
Phenanthrene	mg/kg	0.351	0.345	88.2	25-139	1.58	25	L582315-01	WG600176
Phenol	mg/kg	0.267	0.262	80.3	22-129	1.97	25	L582315-01	WG600176
Pyrene	mg/kg	0.284	0.292	72.1	23-145	2.92	30	L582315-01	WG600176
2,4,6-Tribromophenol				87.76	16-136				WG600176
2-Fluorobiphenyl				91.31	37-119				WG600176
2-Fluorophenol				76.97	22-114				WG600176
Nitrobenzene-d5				85.99	20-114				WG600176
Phenol-d5				79.59	26-127				WG600176
p-Terphenyl-d14				75.84	15-174				WG600176
Diesel Range Organics (DRO)	mg/kg	27.5	28.5	91.6	50-150	3.60	20	L582318-10	WG600178
Residual Range Organics (RRO)	mg/kg	28.1	29.2	93.5	50-150	3.89	20	L582318-10	WG600178
o-Terphenyl				96.32	50-150				WG600178

Batch number /Run number / Sample number cross reference

WG600099: R2231413: L582318-08 WG600176: R2234913: L582318-06 07 WG600177: R2235933: L582318-06 07 WG600199: R2236217: L582318-06 07 WG600201: R2238576: L582318-11 12 13 14 WG6000178: R2240913: L582318-01 02 03 04 05 06 07 09 10 11 12 13 14

* Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Oregon Dept of Transportation - ODOT Ryan Franklin (ODOT) 63034 O.B. Riley Rd

Bend, OR 97701

Quality Assurance Report Level II

L582318

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 12, 2012

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Appendix J

Contaminated Soil Removal Cost Estimate

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15409 US97: J Street Intersection (Madras South Y) Sec. Jefferson County Estimated Contaminated Soil Cleanup Cost Tax Lot 11.13.11DD Lot 6901

Item	Unit Price	Unit	Quantity	Total
Item 1: Hazardous Substance Health and Safety Plan (HSHSP)				
Hazardous Substance Health and Safety Plan	\$2,500.00	LS	1	\$2,500.00
	It	tem 1 Tota	l (unit = LS)	\$2,500.00
Item 2: Contaminated Soil Mobilization				
Mob/Demob	\$1,500.00	LS	1	\$1,500.00
	It	tem 2 Tota	l (unit = LS)	\$1,500.00
Item 3: Contaminated Soil Removal				
Excavator	\$110.00	Hr.	8	\$880.00
Excavator Operator	\$50.00	Hr.	8	\$400.00
Laborer	\$40.00	Hr.	8	\$320.00
Trucking (to landfill)	\$75.00	Hr.	2	\$150.00
Landfill Tipping Fee	\$50.00	Ton	10	\$500.00
Per Diem (2 workers)	\$300.00	Day	1	\$300.00
Soil Characterization (Lab Analyses)	\$300.00	LS	1	\$300.00
	It	tem 3 Tota	l (unit = LS)	\$2,850.00

Total Contaminated Soil Cleanup Estimate \$6,850.00