

Application for a

Solid Waste Beneficial Use Determination

DEQ USE ONLY - BUSINESS OFFICE
Date Received:
Amount Received # 200000
Check No.: <u>2521368</u>
Deposit No.: 31053
Forward confirmation of fee payment for: Eastern Region to DEQ, The Dalles Northwestern Region to DEQ-NWR, Portland Western Region to DEQ, Salem

A. REFERENCE INFORMATION (/	Please type or i	print clearly.)
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Oregon Depa	artment of Trans	portation	Oregon Departmen	t of Transportation	
Legal name	of applicant		Business name of	applicant if different	
3500 Stewa	rt Parkway		Roseburg	Oregon	97470
Mailing add	ress		City	State	Zip
541-957-35	94	541-430-4916	kenny.l.camp@odo	t.state.or.us	
Phone		Mobile	E-mail		Fax
Oregon Depa	artment of Trans	oortation			
Generator o	f solid waste (ma	ay be same as applicant)			
100 Antelop	e Road		White City	Oregon	97503
Mailing add	ress		City	State	Zip
541-957-359	94	541-430-4916	kenny.i.camp@odoi	t.state.or.us	
Phone TYPE OF categorized	BENEFICIAL based on the f	Mobile USE DETERMINATI type of information and	kenny.l.camp@odot E-mail ON REQUESTED Be potential amount of work and fee system has bee	eneficial Use Detern	taff to review applica
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E.	REQUIRED ATTACHMENTS TO THIS APPLICATION (For an application to be complete, it must provide the required information for each listed item of the tier which is being applied for.)
	Tier 1
	 A description of the material, manner of generation, and estimated quantity to be used each year; A description of the proposed use; A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace;
	 A demonstration of compliance with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing; and Any other information that DEQ may require to evaluate the proposal.
	Tier 2
	 The information required for a Tier 1 application; Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable;
	 A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels; Location or type of land use where the material will be applied, consistent with the risk scenarios used to
	evaluate risk; Contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude); and
	A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.
	Tier 3
	 □ The information required for a Tier 1 & 2 application; □ A discussion of the justification for the proposal; □ An estimate of the expected length of time that would be required to complete the project, if it is a demonstration; and □ If it is a demonstration project, the methods proposed to ensure safe and proper management of the material.

F. PERFORMANCE CRITERIA (For all tiers - An application for a beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.)

The use is productive, including:

- There is an identified or reasonably likely use for the material that is not speculative;
- ♦ The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by DEQ, and does not constitute disposal; and
- ♦ The use is in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices.

The use will not create an adverse impact to public health, safety, welfare, or the environment, including:

- ♦ The material is not a hazardous waste under ORS 466.005;
- Until the time the material is used in accordance with a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions:
- Hazardous substances in the material do not significantly exceed the concentration in a comparable raw material or commercial product, or do not exceed naturally occurring background concentrations, or do not exceed acceptable risk levels, including evaluation of persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

The use will not result in the increase of a hazardous substance in a sensitive environment.

The use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions.

The use will comply with all applicable federal, state, and local regulations.

G. FEES (Must accompany the application for it to be considered complete)

	Tier 1 beneficial use determination	\$1,000
\boxtimes	Tier 2 beneficial use determination	\$2,000
	Tier 3 beneficial use determination	\$5,000

Make checks out to: Oregon DEQ

Total fees included:

\$2000.00

H. APPLICATION PROCEDURE

Step 1

Contact a DEQ staff person for assistance with the preparation of the application. DEQ staff will help with: 1) Determination of the eligibility for a beneficial use determination of a particular waste or process; and, 2) If eligible, establish the tier of beneficial use determination review required and associated fee to submit with the application.

Step 2

Mail the original signed application, all attachments, including the fee payment plus one extra copy to the appropriate regional office (see listing below.) Note that DEQ review work will not begin until a complete application packet is received. Incomplete applications may be returned. DEQ recommends the applicant keep a full copy of all application materials to guard against possible loss in transit.

Step 3

DEQ will contact the applicant, acknowledging receipt of the application, and will identify the staff person assigned to carryout the review. This staff person will contact the applicant if any additional information is needed.

Region	Counties Served	Address & Phone
Eastern Region	Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler	Eastern Region Department of Environmental Quality 400 E Scenic Drive, Ste 2.307 The Dalles, OR 97058 (541) 298-7255 ext. 221
Northwest Region	Clatsop, Clackamas, Columbia, Multnomah, Tillamook, and Washington	Northwest Region DEQ Solid Waste Programs 2020 SW Fourth Ave. Ste 400 Portland, OR 97201 (503) 229-5353
Western Region	Benton, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Polk, and Yamhill	Western Region DEQ Solid Waste Programs 750 Front St. NE Suite 120 Salem, OR 97301 (503) 378-5047

Level 2 Preliminary Site Investigation

OR 62: Corridor Solution Unit 2 Phase 1 Key#13994 Medford, Jackson County

September, 2011

Prepared by: Kenny Camp

Oregon Department of Transportation

Region 3 Environmental Unit Hazardous Materials Group

3500 Stewart Parkway Roseburg, OR 97470

Executive Summary

ODOT Geo/Environmental HazMat Group performed a Level 2 Preliminary Site Investigation (PSI) for the Project Site OR 62: Corridor Unit 2 Phase 1. ODOT HazMat concludes the following:

- Petroleum-contaminated soils were encountered along the former Medco Haul Road in probe holes, HM-U2P1-01, HM-U2P1-01B, HM-U2P1-01C, HM-U2P1-02B, HM-U2P1-03, HM-U2P1-05, HM-U2P1-14, HM-U2P1-16, HM-U2P1-25 HM-U2P1-26, HM-U2P1-27, HM-U2P1-30, HM-U2P1-31, HM-U2P1-35, and along Hwy 62 at the south end of the Project in probe hole HM-U2P1-36. See Appendix A, Figure-2 Sheets 1-6 for probe hole locations. In addition low level Pesticides were detected below residential levels in probe hole HM-U2P1-09, and surface sample location HM-U2P1-PB, PC and PD which are located along the proposed Airport Access alignment that crosses through the area of the Medco Road Former Orchard. See Appendix A, Figure 2 Sheet 2 for surface sample locations. Soil samples were collected in these locations at an average depth of 0 to 3 feet below ground surface (bgs). Pesticides were detected below Risk based concentration (RBC's) for residential standards. Chromium samples returned above RBC's for residential standards but below industrial standards. It appears that chromium levels are consistent with regional background levels. Options for excavated soils located along the proposed Airport Access alignment through the Medco Road Former Orchard should include placement of excavated soil in accordance with DEQs general conditions to manage these contaminated soils with a soil management plan on to the existing orchard property and not on to ODOT right of way to prevent future liability.
- Concentrations of petroleum contaminated soils located along the Medco Haul Road if excavated will be required to be disposed of at a permitted landfill, encapsulated within the Project or managed under a Solid Waste Letter of Authorization (SWLA) obtained from DEQ.
- The previous Corridor Study identified materials that will require special handling if disposed of during construction, including treated timbers, PCB light ballasts.

Based on the results of this assessment, ODOT HazMat recommends the following actions:

- Petroleum Contaminated soils excavated from the Medco Haul Road during construction will be required to be land filled at a permitted land fill facility, encapsulated with in the Project or managed under a (SWLA) obtained from DEQ.
- Pesticide contaminated soils encountered along the proposed Airport Access alignment should be placed onto the adjacent former Orchard property in accordance with DEQs general conditions to manage these contaminated soils with a soil management plan to prevent ODOT from future liability.
- Special provisions are required to ensure appropriate management of contaminated soils.

As the scope of the Project changes to include additional excavation or right of way acquisition, Addendums to the Project will be provided.

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1 Introduction

The Oregon Department of Transportation (ODOT) Region 3 Environmental HazMat Group has conducted a Level 2 Preliminary Site Investigation (PSI) for the Project:

OR62: Corridor Solution Unit 2 Phase 1 Project Medford, Jackson County Key#: 13994

This PSI is intended to confirm the presence or absence of potential contamination identified in the HazMat Corridor Study for this Project. The presence of contamination could affect worker safety, property value, and construction costs.

1.1 Site Description

The Project Corridor consists of construction of Highway 62 Bypass which will extend from Highway 62 at the south end of the Medford/Jackson County International Airport north to Vilas Road along the east side of the airport. The project is located in Medford, Oregon, as indicated on Figure 1. Proposed Project Corridor activities include:

- Property Acquisition
- Construction of the new Bypass highway alignment.

1.2 Previous Assessments

In January, 2008, ODOT conducted a Hazardous Materials Corridor Study of the Project Corridor to identify potential sources of contamination that could impact the Project. Findings of the Corridor Study indicated the following areas of concern:

- A Medco Road Former Orchard is located on tax lot 2500 along the northwest boundary of the Project. Oregon Department of Environmental Quality lists the site as an Environmental Cleanup Site (ECSI). Information in the DEO data base refers to a 59 acre subsection of tax lot 2500. This does not apply to the other 30 acres. The Medco Road Former Orchard site is a 49 acre industrial property located immediately northwest of the Medford Airport in Medford. The site is currently a vacant grassy field. Historical practices at the orchard included the use of agricultural chemicals including herbicides, pesticides, petroleum products, and fertilizers. In order to evaluate the potential for environmental impact, Agate Engineering, INC. conducted a Phase 1 and Phase 2 Environmental Site Assessment (ESA) in May of 2004. Arsenic was detected above Risk Base Concentrations (RBC's) but below background. Lead (Pb) was detected above background, but below appropriate RBC's. Dieldrin was present in soils above residential but below industrial standards. Therefore, risks at the site are managed with the following general conditions: (1.) No installation of wells on the property; (2.) No residential use of the property; (3.) Soil must be managed in accordance with a soil-management plan.
 - A former Medco Log Pond is located on the north eastern portion of the Project.
 - The former Medco Haul Road is located through out the project site.

Therefore, the HazMat Group recommended collecting subsurface samples at these locations to confirm the presence of contamination and develop associated project cost estimates.

1.3 DEQ File Review

ODOT HazMat conducted a review of DEQ files for select sites which the Corridor Study identified as having the potential to impact the Project Corridor. Details of these file reviews are set forth below:

• Medco Road Former Orchard- DEQ files indicate that this is an ECSI listed site. Agate Engineering, INC. conducted a Phase 1 and Phase 2 Environmental Site Assessment (ESA) in May of 2004. Arsenic was detected above Risk Base Concentrations (RBC's) but below background. Lead (Pb) was detected above background, but below appropriate RBC's. Dieldrin was present in soils above residential but below industrial standards. Therefore, Risks at the site are managed with the following general conditions: (1.) No installation of wells on the property; (2.) No residential use of the property; (3.) Soil must be managed in accordance with a soil-management plan.

2 Preliminary Site Assessment Activities

2.1 Scope of Work

ODOT HazMat prepared a Work Plan dated May 31st 2011 for the PSI activities, which included 2 surface soil samples and 39 probe holes. Appendix C contains the Work Plan which ODOT did not modify in the field.

ODOT prepared a site-specific Health and Safety (HASP) plan, a copy of which is available upon request. ODOT requested utility line marking through Oregon's Call-Before-You-Dig program.

2.2 Field Activities

Kenny Camp, ODOT Region 3 HazMat Coordinator oversaw the PSI assessment activities and collected soil samples from June 6th 2011 through June 8th 2011.

2.2.1 Surface Soil Samples

ODOT HazMat collected 2 surface soil samples in the area located south east of the former scale shack located along the Medco Haul Road at approximately 2 feet bgs, as shown in Appendix A, Figure 2 on sheet 2. Field staff collected the soil samples using a decontaminated steel shovel and screened them using a PID and the sheen method. Soil samples were collected in laboratory-prepared containers, labeled, placed in a cooler with ice and transported under chain-of-custody protocol to Pace Analytical (Pace) in Seattle, Washington for analysis.

2.2.2 Test Pits

ODOT HazMat did not excavate test pits.

2.2.3 Soil Borings

First Strike Environmental (FSE) advanced 39 probe hole borings with a Geo-Probe push probe sampling system and collected soil samples continuously in 3-foot long, disposable acetate liners. See Appendix A, Figure 2 Sheets 1-6 for probe hole locations. ODOT HazMat screened the soil samples using a PID meter, sheen method and emitted odor to select soil samples for laboratory analysis. Soil samples were collected in laboratory-prepared containers, labeled, placed in a cooler with ice and transported under chain-of-custody protocol to Pace Analytical for analysis. Appendix D contains boring logs, including geologic descriptions and field screening results.

2.2.4 Ground water Elevation Measurements

ODOT HazMat did not encounter groundwater in any of the probe hole borings. Therefore, it is assumed that the elevation of groundwater throughout the project area is below the bottom elevation of any one boring at the time of advancement.

2.3 Laboratory Analytical Methods

On 6/10/2011 ODOT submitted 86 soil samples to PACE for the following analyses:

- Gasoline range hydrocarbon quantification by NWTPH-Gx (if detected by NWTPH-HCID)
- Diesel range hydrocarbon quantification by NWTPH-Dx (if detected by NWTPH-HCID)
- Volatile Organic Compounds (VOCs) by EPA Method 8260B (if gasoline range hydrocarbons detected)
- Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method 8270SIM (if diesel range hydrocarbons detected)
- Total metals by EPA RCRA-8 methods
- Pesticides/Herbicides
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082

On 6/10/2011 ODOT submitted 2 surface soil samples to Pace Analytical for the following analyses:

- Total metals by EPA RCRA-8 methods
- Petroleum hydrocarbon identification by NWTPH-HCID

3 Results

3.1 Geology and Hydrogeology

3.2 Based on the Probe Hole Logs, soils at the project site consist of approximately 1.5 to 12.0 feet of Fill overlying either Bedrock or approximately 1.5 to 10.0 feet of colluvium and/or alluvium. The Fill generally consisted of Gravelly Sand, Sandy

Gravel and Clay. The Colluvium generally consisted of Clay to Sandy Clay. The Alluvium generally consisted of, Gravel, Sandy Gravel, Clayey Sandy Gravel to Sand, Gravelly Sand, Silty Sand and Clayey Sand. Bedrock consisted of Igneous Intrusive Rock, Sandstone or Mudstone. For a more detailed description and thickness of the soil units along with the depth to bedrock see the attached Probe Hole Logs in Appendix D. In areas where fill is present, bedrock was encountered as shallow as 5.5 feet below the ground surface (bgs) and as deep as 14.2 feet bgs. In areas where fill was not present bedrock was encountered as shallow as 1.5 feet bgs to greater than 12 feet bgs. The probe holes encountered refusal as shallow as 2.0 feet bgs and as deep as 14.2 feet bgs. Drilling refusal was either a result of encountering bedrock or dense alluvium. The probe holes did not encounter ground water. However, ground water is expected to vary based on depth to bedrock, proximity to surface water features and the time of year.

3.3 Analytical Data

Where appropriate, analytical results presented in the following sections are compared to appropriate risk levels and regulatory limits for the contaminants and media of concern.

3.3.1 Soil

Laboratory analyses detected petroleum hydrocarbons at concentrations on the former Medco Haul Road which will require soil if excavated to be disposed of at a certified landfill, encapsulated with in the road base or used on the Project under a SWLA obtained from the DEQ. Elevated levels of metals were found through out the Project. However, these levels are within regional background levels. 4,4 DDD, 4.4-DDE, 4,4 DDT and Dieldrin were detected in the Medco Road Former Orchard below RBC's residential standards. Tables 1, 2 and 3 summarize the target compounds detected in soil samples and Appendix E contains the laboratory analytical data packages. Based on the DEQ ECIS and the detection of low level pesticides, on 8/10/2011 ODOT collected 4 additional soil samples which were shipped to Pace Analytical and analyzed for Pesticides 8081 to confirm or denie the presents of pesticides in the Medco Road Former Orchard. Soil samples were collected from 0 to 2 ft bgs returned below RBC's residential levels.

Based on these results the Petroleum soil contamination appears to be limited to Hwy 62, the Medco Haul Road and low level pesticides with in the Medco Road Former Orchard area. Such contaminated soil will require special handling, if excavated during construction.

3.4 Investigation Derived Waste Management

Investigation derived wastes for this PSI included soil cuttings. This material was stored in labeled drums at the point of generation. Based on lab analysis of soil samples, the soil cuttings were transported to FSE for disposal.

4 Conclusions

ODOT Environmental HazMat Group performed a Level 2 Preliminary Site Investigation (PSI) for the Project Site OR 62: Corridor Unit 2 Phase 1. ODOT HazMat concludes the following:

- Petroleum-contaminated soils were encountered along the former Medco Haul Road in probe holes, HM-U2P1-01, HM-U2P1-01B, HM-U2P1-01C, HM-U2P1-02B, HM-U2P1-03, HM-U2P1-05, HM-U2P1-14, HM-U2P1-16, HM-U2P1-25 HM-U2P1-26, HM-U2P1-27, HM-U2P1-30, HM-U2P1-31, HM-U2P1-35, and along Hwy 62 at the south end of the Project in probe hole HM-U2P1-36. See Appendix A, Figure-2 Sheets 1-6 for probe hole locations. In addition low level Pesticides were detected below residential levels in probe hole HM-U2P1-09, and surface sample location HM-U2P1-PB, PC and PD which are located along the proposed Airport Access alignment that crosses through the area of the Medco Road Former Orchard. See Appendix A, Figure 2 Sheet 2 for surface sample locations. Soil samples were collected in these locations at an average depth of 0 to 3 feet below ground surface (bgs). Pesticides were detected below Risk based concentration (RBC's) for residential standards. Chromium samples returned above RBC's for residential standards but below industrial standards. It appears that chromium levels are consistent with regional background levels. Options for excavated soils located along the proposed Airport Access alignment through the Medco Road Former Orchard should include placement of excavated soil in accordance with DEQs general conditions to manage these contaminated soils with a soil management plan on to the existing orchard property and not on to ODOT right of way to prevent future liability.
- Concentrations of petroleum contaminated soils located along the Medco Haul Road if excavated will be required to be disposed of at a permitted landfill, encapsulated within the Project or managed under a Solid Waste Letter of Authorization (SWLA) obtained from DEQ.
- The previous Corridor Study identified materials that will require special handling if disposed of during construction, including treated timbers, PCB light ballasts.

Based on the results of this assessment, ODOT HazMat recommends the following actions:

- Petroleum Contaminated soils excavated during construction will be required to be land filled at a permitted land fill facility, encapsulated with in the Project or managed under a (SWLA) obtained from DEQ.
- Pesticide contaminated soils encountered along the proposed Airport Access
 alignment located in the Medco Road Former Orchard should be placed onto the
 adjacent former Orchard property in accordance with DEQ general conditions to
 manage these contaminated soils with a soil management plan to prevent ODOT
 from future liability.
- Special provisions are required to ensure appropriate management of contaminated soils.

5 Limitations

The HazMat Group conducted the work for this PSI report according to generally accepted environmental procedures as outlined in the American Association of State Highway and Transportation Officials (AASHTO) "Hazardous Waste Guide for Project Development" (1990) and the American Society for Testing and Materials (ASTM) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (ASTM E1903-00). This assessment is for internal ODOT use only and may not be relied upon by any other entity without the written permission of an authorized ODOT representative. This PSI is based on the ASTM and AASHTO standards; however, no environmental site assessment can eliminate all uncertainty. Any environmental sample (i.e. soil and groundwater samples) collected for analysis may or may not be representative of general Project Site conditions. The observations, findings, and conclusions in this PSI report are based solely on the Project Site conditions at the time of assessment and do not imply a warrantee or guarantee for the Project Site. Nothing in this PSI report constitutes a legal opinion or service and should not be relied on as such. ODOT is not responsible for the accuracy of information provided by third parties, which may be contained in this PSI report.

6 Signatures of Environmental Professionals

Kenny Camp prepared this PSI Report	
Signature Signature	<u>9/33/11</u> Date
Nicholas Harris conducted a technical review of the state	this PSI Report 9/2 3/11 Date
Daniel Raker R.G. conducted a corporate review	of this PSI Report 9/14/11 Date

Oregon Registered Professional Geologist stamp:



Expires: 6/30/2012

Appendix-A

Figure 1 Project Site Location

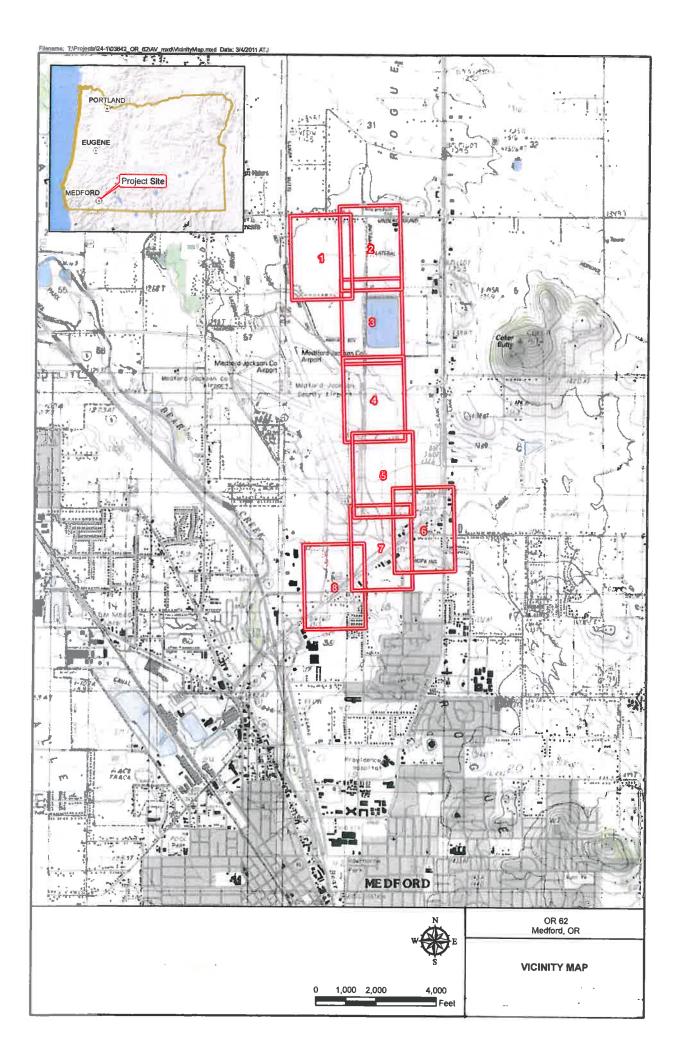
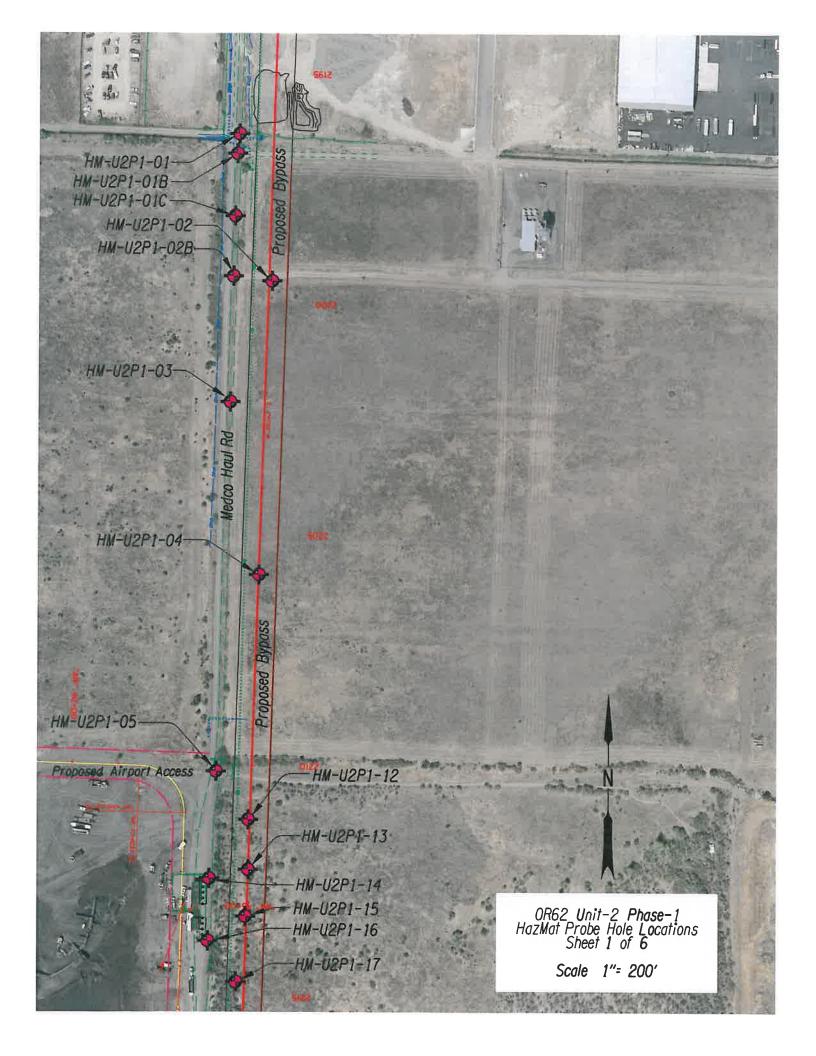
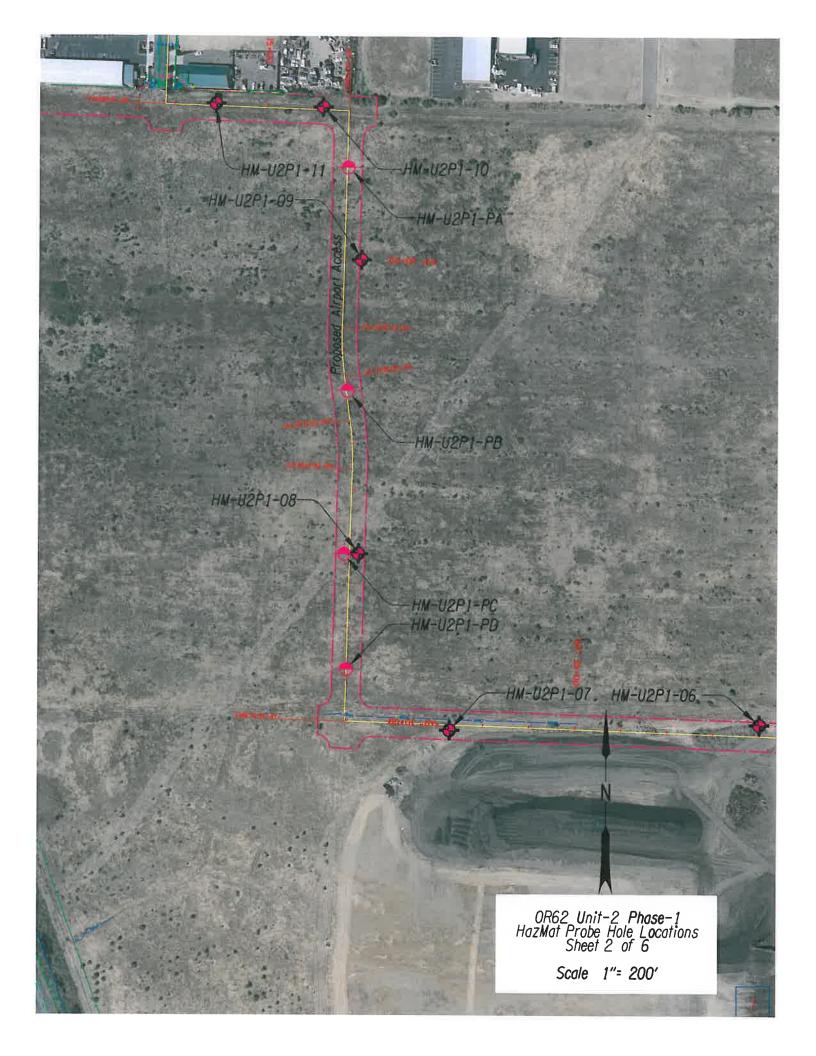
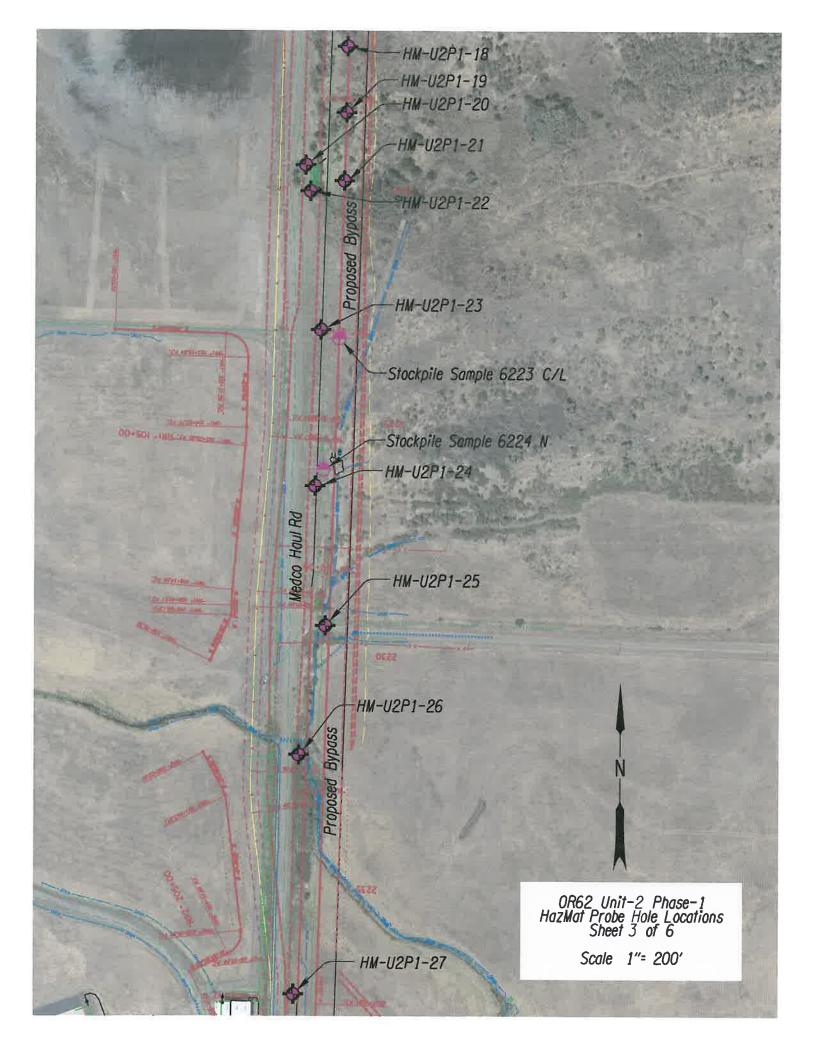
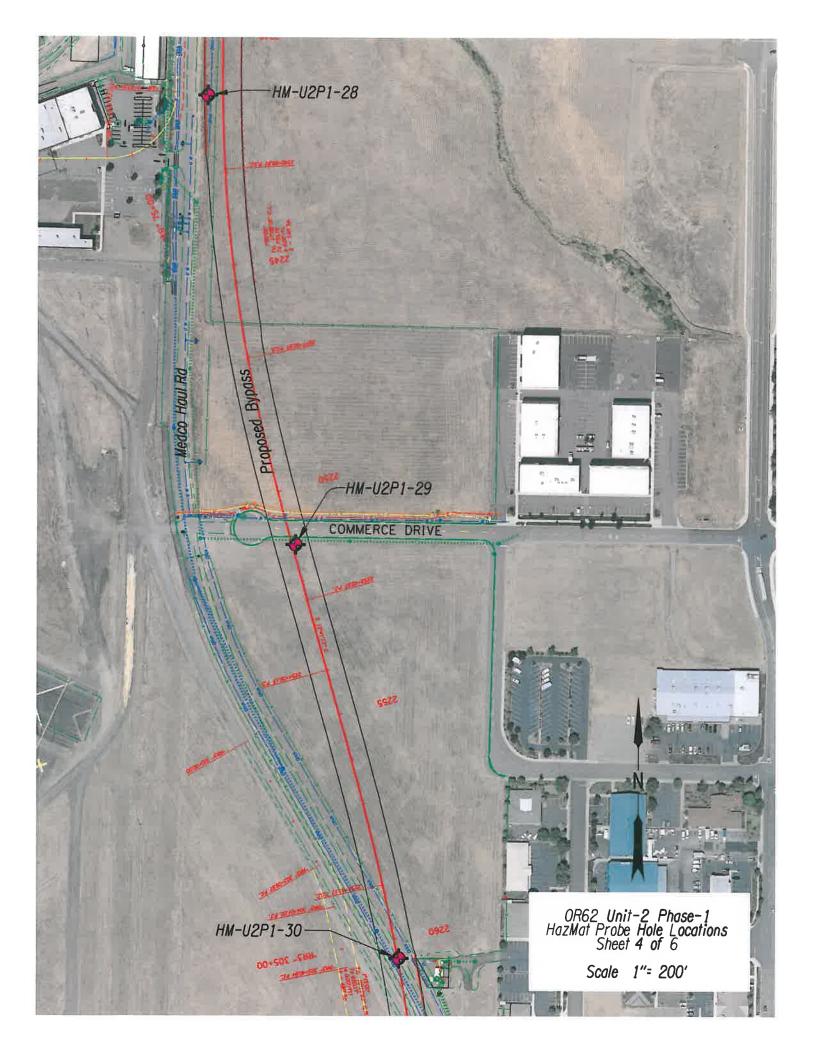


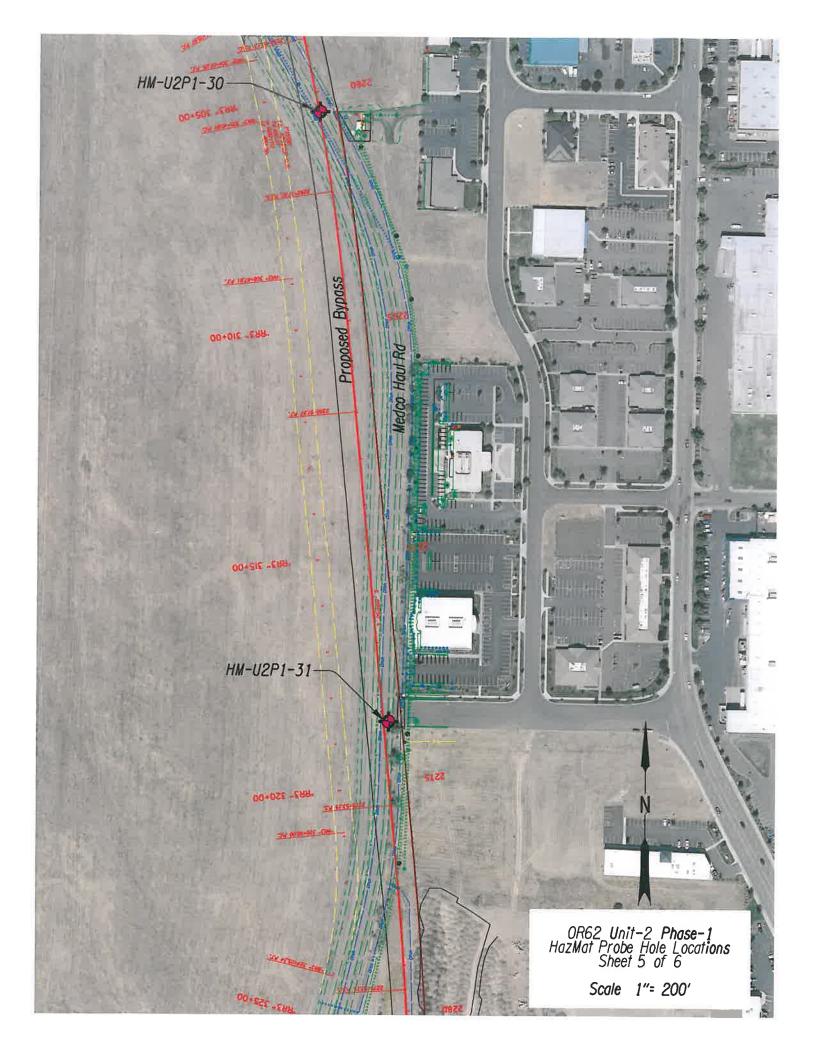
Figure 2 Probe Hole and Sample Location Sheets 1-6

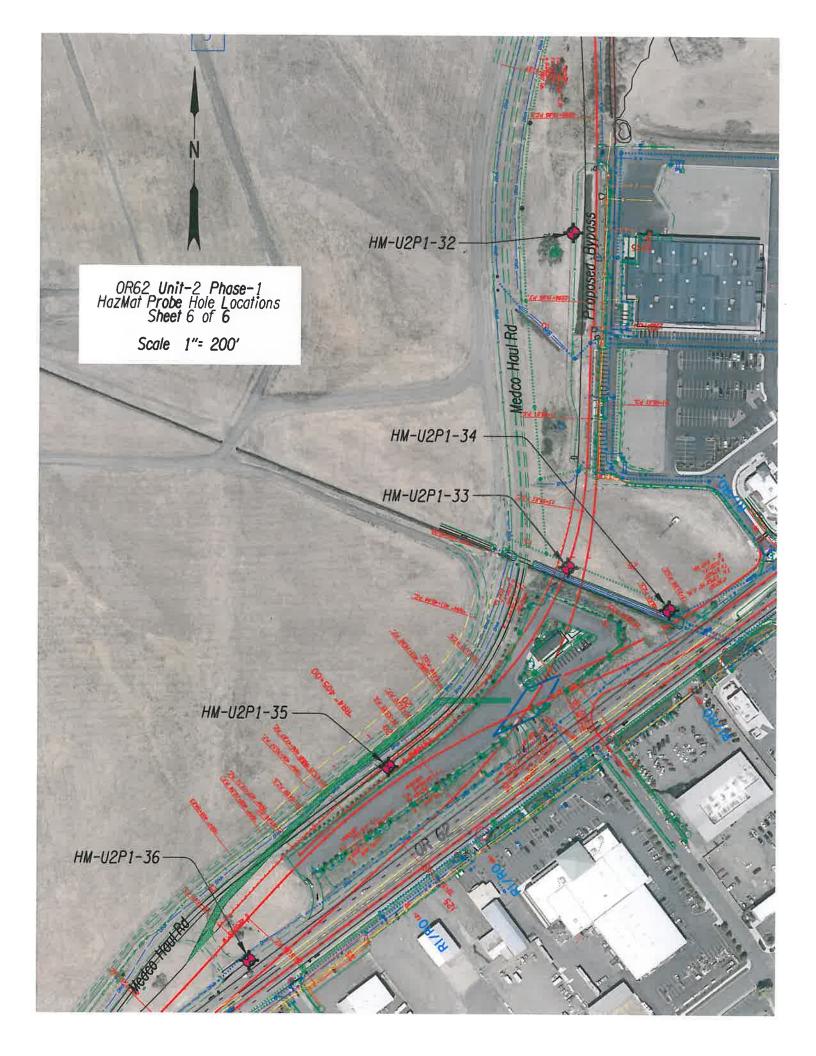












Appendix-B

Table 1 Soil Analytical Results

Soil Analytical Results HCID GX DX OR 62 Unit-2 Phase-1, Medford Table 1

			NWTPH-HCID	D	Gx	Dx	
Boring ID#	Depth	Gas	Diesel	Ю	Gas	Diesel	Oil
	(Feet bgs)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
6201	0-3	QN	Detect	Detect	QN	292	849
6201	3-5.5	QN	QN	ND	NA	NA	NA
6201B	0-3	QN.	Detect	Detect	NA	256	1300
6201B	4-5	QN	ND	QN	NA	NA	NA
6201B	5-6	ND	QN	ON.	NA	NA	NA
6201C	0-3	ND	Detect	Detect	NA	546	1780
6202	0-3	ND	QN	ND	NA	NA	NA
6202B	0-3	ND	Detect	Detect	NA	243	655
6203	1-2	ND	Detect	Detect	NA	181	385
6203	2-3	ND	Detect	Detect	NA	129	257
6203	3-6	QN	ND	ND	NA	NA	NA
6203	6-6.5	QN	QN.	ND ND	NA	NA	NA
6205	0-3	ND	Detect	Detect	NA	1460	2330
6205	4-5	QN	ON	N N	NA	NA	NA
,							

ND Compound not detected above laboratory detection limit

NA Sample not analyzed for that parameter

Analytes not listed in the table were not detected above the laboratory detection limit

Soil Analytical Results HCID GX DX OR 62 Unit-2 Phase-1, Medford

			NWTPH-HCID	9	త		Dx
Boring ID#	Depth	Ç	Diesel	1 00	Gas	Diesel	Oil
	(Feet bgs)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
6205	2-6	QX	£	QN.	NA	NA	NA
6205	6-8	QN QN	Q.	Q.	NA	NA	NA
6207	0-2.5	QN	QN	QN	NA	NA	NA
6212	0-3	QN.	QN	ND	NA	NA	NA
6213	4-5	QN	ND	ND	NA	NA	NA
6213	2-6	QN	QN	S S	NA	NA	NA
6214	0-3	QN ON	Detect	Detect	NA	324	937
6214	4-5	ND	CZ	ND	NA	NA	NA
6214	5-6	Ð	QN.	QN	NA	NA	NA
6214	8-9	QN	ND ND	ND	NA	NA	NA
6215	0-3	S S	QN	ND	NA	NA	NA
6216	0-3	ND ON	Detect	Detect	NA	208	427
6216	5-6	QN	QN	QN	NA	NA	NA
6216	7-8	Q.	QN	ND	NA	NA	NA
6217	2-3	QN	QX	2	NA	NA	NA.

ND Compound not detected above laboratory detection limit
NA Sample not analyzed for that parameter
Analytes not listed in the table were not detected above the laboratory detection limit

Soil Analytical Results HCID GX DX OR 62 Unit-2 Phase-1, Medford

			NWTPH-HCID	e	Š		Dx
Boring ID#	Depth	Gas	Diesel	Oil	Gas	Diesel	ĪŌ
	(Feet bgs)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
6217	4-5	QN	QN	QN	NA	NA	NA
6218	7-8	ΩN	QN	QN	NA	NA	NA
6219	0-3	QN	QN.	ND	NA	NA	NA
6219	3-6	QN	ND	ND	NA	NA	NA
6220	9-6	Ð	ND	Q.	NA	NA	NA
6220	6-8	QN	æ	ND	NA	NA	NA
6222	0-3	ND ND	QN	ND	NA	NA	NA
6222	4-5	N Q	QN.	ND	NA	NA	NA
6222	2-6	N Q	S.	ND	NA	NA	NA
6223	6-9	QN	Q _N	QN	NA	NA	NA
6224	3-6	SN SN	ND	ND	NA	NA	NA
6224	5.5-6.5	ND	£	ND	NA	NA	NA
6225	0-3	ND	Detect	Detect	NA	460	1230
6225	3-5	QN	QN	ND	NA	NA	NA
6226	0-3	QN	Detect	Detect	NA	131	684

ND Compound not detected above laboratory detection limit

NA Sample not analyzed for that parameter

Analytes not listed in the table were not detected above the laboratory detection limit

Soil Analytical Results HCID GX DX OR 62 Unit-2 Phase-1, Medford

Denth
ND
ND
ND
QN
QN
ND
ND
ND
ND
QN
ND
ND
QN
QN
ND

Compound not detected above laboratory detection limit Sample not analyzed for that parameter N A

Soil Analytical Results Metals OR 62 Unit-2 Phase-1, Medford

					Total RCRA Metals	Metals			
Boring ID#	Depth	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
	(Feet bgs)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Stockpile6223 C/L	2	QN	279	N ON	56.4	7.4	QX	QN	Q.
Stockpile6224 N	2	QN	619	QN	51.3	8.9	£	QX	QN.
6204	0-2	QN	172	QX	143	8.9	Ð	£	QX
6205	8-9	ND	83.7	ND	7.96	23.5	Ð	N QN	N ON
6206	2-3	ND	103	ND	35.6	4.4	Ð	Q.	Q2
6207	0-2.5	ND	272	ND	7.07	16.3	QN	S	ND
6208	0-3	ND	271	ND	78	11.1	QN.	S S	ND
6210	3-4	ON	242	ND	74.3	ND	Ð	S	2
6211	4-5	ND	92.6	ND	62.3	ND	QN	Q.	S
6212	3-4.3	ND	06	ND	76.9	ND	S.	2	N N
6216	2-6	ND	82	ND	75.7	ND	QN	S	N QN
6218	3-6	ND	901	QN	93.1	ND	QZ	QN	ND
6220	0-3	ND	86.3	ND	31.9	10	QN	ND	2
6221	3-4.3	ND	313	S	3	15.2	S	S S	ND
ND CIN	To have day of the	Lance Ballion Annual State							

Compound not detected above laboratory detection limit Sample not analyzed for that parameter 2 Z

OR 62 Unit-2 Phase-1, Medford Soil Analytical Results Metals Table 2

		4			Total RCRA Metals	Metals	3		
Boring ID#	Depth	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
	(Feet bgs)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	me/kg
6223	0-3	QN	256	QN	35.7	11.5	Q	CZ	CN
6226	5-6	QN	175	QN	82.6	7.6	QN	G Z	2 2
6229	0-3	QN	137	ND	30.8	5.5	2	2	E S
6230	4-5	ND	345	ND	29.6	9.9	2	QZ	2 5
6232	3-6	QN	231	ND ON	36.9	5.3	QN	E	2
6234	3-4	QN ON	98.6	ND	30.7	21.4	QZ	2	G K
6236	4-5	QN	85.2	ND	47.2	4.2	QZ	£	2
DEQ Residential Direct Contact RBC's	sct Contact RBC's	0.39	15,000	18,000	38*	400	NA AN	390	23
nstru	Worker RBC's	1	000'09	>Max	4,800*	800	NA	1,500	93
ND COMMINICATION	Cucia worker ABC s	:	60,000	>Max	4,800*	800	NA		1,500

Compound not detected above laboratory detection limit

Sample not analyzed for that parameter

Analytes not listed in the table were not detected above the laboratory detection limit
DEQ RBC's are the Risk Based Concentrations published by DEQ on their web site, current as of the publication date for this report
*RBC provided is for Chromium VI, which is a lower value than the Chromium III RBC.

OR 62 Unit-2 Phase-1, Medford Soil Analytical Results SVOCs / PAHs

				P	Polycyclic Aromatic Hydrocarbons	Aromatic Hydroca	rbons	;		Semi Volatile
Boring ED#	Depth	2. Methylnupthalen		Chrysene Benzo(b)fluoranthene	e Benzo(g,h,))perylene	Phenanthtrene	Pyrene	Fluoranthene	Benzo(a)pyrene	Bis(2-Ethylbexyl)phthalate
	(feet bgs)	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
6201	0-3	ND	QN	QN	QN	ND	Q	QN	ND	800
6202B	0-3	8.5	28.5	7.7	9.1	19.4	24.7	QN	QN	ND
6212	0-3	ND	ND	ND	ND	ND	S	QN	QN	ND
6213	0-3	CN CN	ND	ND	ND	ND	Ð	ND	QN	ND
6215	3-4.5	ND	ND	QN	ND	ND	QN	N	QN	ND
6221	0-3	ND	ND	QN	QN	ND	QN	12.2	QN QN	S
6222	11-12	ND	QN	N Q	QX QX	QN	QX	S	N ON	ND
6230	0-3	ND	30.7	13.3	13.4	14.3	12.3	ND	90	QN
6231	0-3	ND	23	8.4	14.5	QN	14.5	ND	9.4	ND
6235	0-3	QN	29.8	13.6	10.6	13.8	17.4	£	16.4	QN
DEQ Residential Direct Contact RBCs	ntial Direct RBCs	310,000*	15,000	150	NA	NA	1,700,000	2,300,000	15	35,000
DEQ Construction Worker RBCs	ction Worker	4,100,000* 2,100,000	2,100,000	21,000	NA	NA	6,700,000	8,900,000	21,000	1,200,000

Compound not detected above laboratory detection limit

NA Sample not analyzed for that parameter DEQ on their web site, current as of the publication date for this report (* EPA Preliminary Remediation Goals used where DEQ RBCs were not available).

Table includes only detect results: (for complete analytical results including non detected see analytical results in (Appendix C)

Table 4

Soil Analytical Results Herbicide and Pesticides OR 62 Unit-2 Phase-1, Medford

Depth	Chlorinated		Organo	Organochloride Pesticides (ug/kg)	es (ug/kg)	
	ug/kg	Total	4,4'-DDE	4,4".DDD	4,4'-DDT	Dieldrin
1	Non Detect	NA	AN	NA	NA AN	NA
	Non Detect	NA	NA	Ä	A Z	E Z
z	Non Detect	NA	NA	N.	₹N.	NA.
	NA	Detect	9.46	ND	Q.	QN
ž	Non Detect	NA	Z	NA	NA	NA
ž	Non Detect	NA	NA	N.	NA AN	NA.
No	Non Detect	NA	NA	NA	¥Z.	NA.
	NA	QN	2	QN.	Q2	QX
	NA	Detect	15.7	QN	Q	QX
	NA	Detect	302	9.27	86.6	19.5
	NA	Detect	16.9	QN	QN.	QN
			1,700	2,400	1,700	30
			58,000	83,000	58,000	1,000

D Compound not detected above laboratory detection limit

A Sample not analyzed for that parameter

DEQ RBCs are the Risk Based Concentrations published by DEQ on their web site, current as of the publication date for this report

Residential RBCs provide the most conservative value available, Construction Worker RBCs are directly applicable to activities at the site.

Table includes only detect results: (for complete analytical results including non detects see analytical results in (Appendix C)

Soil Analytical Results PCBs EPA Method 8082 OR 62 Unit-2 Phase-1, Medford Table 5

Boring ID#	Depth	PCB1016	PCB1221	PCB1232	PCB1242	PCB1248	PCB1254	PCB1260
	(Feet-bgs)	ng/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg
6205	0-3	QN	ND	QN	QN	QN	QN	ND
6216	0-3	QX	QN	QN	ND	ND	ND	ND
6235	0-3	QN	QN	ND	ND ND	ND	QN.	QN
CN	nound not detec	Compound not detected above taken to be and a factorial	· dotantion limit					

Compound not detected above laboratory detection limit 2

Appendix C

Work Plan

Oregon Department of Transportation HazMat Work Plan OR 62 Unit-2 Phase-1 Medford, Oregon Key Number: 13994

Prepared by Kenny Camp, on May 31st 2011

1. Introduction

The goal of this work is to identify potential contamination associated with the OR 62 Unit-2 Phase-1 Project. Site Activities

ODOT will conduct subsurface sampling at the locations indicated on the attached Site Plan, as follows:

- Collect 2 surface soil samples from 24 inches below grade and submit them for the analyses listed in Section 3
- Advance 39 soil borings to approximately 9 feet below ground surface (bgs) using a Geo-Probe drill rig.
- Collect subsurface soil samples every 3 feet below grade using 3-foot long vinyl acetate core liners.
- Screen soil samples using a photo-ionization detector (PID) / soil sheening / visual / odor.
- Select soil samples for laboratory analysis based on field screening/ specific depth and submit for analyses listed in Section 3.

Standard operating procedures for these activities are attached to the Generic HASP.

2. Sample Analysis

ODOT will submit soil samples for the following laboratory analyses:

Herbicides by EPA Method 8181, PCBs by 8082,.
 NWTPH-HCID; NWTPH-Gx and/or –Dx (if HCID positive); PAHs by 8270SIM (if Dx positive); VOCs by 8260B (if Gx positive), RCRA Metals 7000.

3. Personnel Requirements

Proposed Site activities will require a contract drill crew and at least one fully trained ODOT HazMat specialist. A Limited Trained Buddy or additional HazMat Specialist will be required for groundwater sampling.

Appendix D

Boring Logs

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Page 1 of 1 Hole No. HM-U2P1-01 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1313.6 ft Start Date June 6, 2011 End Date June 6, 2011 Tube Height Total Depth 6.0 ft Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved Sl - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Test Type, No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 50 P- 1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.6 From (0.0-3.6") AC. From (0.6-1.2") Base Rock, From (1.2-3.0") Sandy CLAY, CL; dark brown, low plasticity, moist. Colluvium. AC Push Probe (0'-6') 0.6 - 1.2 Base Rock PID= 0 Sheen= Slight 1.2 - 3.5 Sample submitted for lab test = 6201 (0'-3') Sandy CLAY, CL; Odor= Yes dark brown, low plasticity, molst; (P-2) PID= 0 (Colluvium) Sheen= Yes P2 84 P-2 (3.0-5.5) Odor= Yes From (3.0'-3.5') Sandy CLAY, CL; dark brown, low Bedrock Contact 3.5 plasticity, moist. Colluvium. From (3.5'-5.5') Intrusive Rock, brown, predominantly 3.5 - 6.0 Intrusive Rock, decomposed, extremely soft to very soft. Igneous Intrusive. brown, predominantly decomposed, Sample submitted for lab test = 6201 (3'-,5.') extremely soft to very 5 (P-3) PID= 0 soft; (Igneous Intrusive) Sheen≃ No P3 P- 3 (5.5-6.0) Intrusive Rock, brown, predominantly 100 Odor= No decomposed, extremely soft to very soft, Igneous Intrusive. Backfilled with; Bentonite Chips (6'-0.5') AC Cold Mix (0.5'-0') (6.0) Bottom of hole. 10 DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION

of 1 Page 1 Hole No. HM-U2P1-01B Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. **Jackson** 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1313.4 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 6.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer **Drilling Methods Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger I - Joint Pl - Planar P - Polished "C" - Core HS - Hollow Stem Auger WR - Water Return F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test U - Undulating B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity. Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Š Discontinuity I Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Test Type. ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 43 P-1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.5From (0*-0.5) AC. From (0.5-1.2') Base Rock. From (1.2*-3.0') Gravelly SAND with some silt, SP-SM; brown, low plasticity, damp. Fill. AC Push Probe (0'-6') 0.5 - 1.2 **Base Rock** PID= 0 1.2 - 3.0 Sheen= Yes Sample submitted for lab test = 6201B (0'-3') Odor= Yes **Gravelly SAND with** some silt, SP-SM; brown, low plasticity, damp; (FIII) P2 P-2 (3.0-6.0) 3.0 - 5.7 (P-2) PID= 0 From (3.0-5.7) CLAY, CH; dark brown, medium plasticity, moist. Colluvium. From (5.7-6.0) Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous CLAY, CH; dark Sheen= No brown, medium Odor= Slight plasticity, moist; (Colluvium) Sample submitted for lab test = 6201B (4'-5') Sample submitted for lab test = 6201B (5'-6') 5 Bedrock Contact 5.7 5.7 - 6.0 (6.0) Bottom of hole. Intrusive Rock, Backfilled with; brown, predominantly Bentonite Chips (6'-0.5') AC Cold Mix (0.5'-0') decomposed, extremely soft to very soft; (Igneous Intrusive) 10

MAN.GDT 09/03/11

DDOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-01C Project OR62 Corridor Solutions Unit-2 Phase-1 E.A. No. Purpose Level-2 HazMat Investigation PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1313.3 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 5.8 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer **Discontinuity** Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear lr - lıregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation ŝ Discontinuity 1 Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) 0.0 - 0.5 Drilling Method: 1"ID P- 1 (0.0-3.0) From (0'-0.5') AC. From (0.5'-1.5') Base Rock. From (1.5'-3.0') Gravelly SAND with some silt, SP-SM; brown, low plasticity, damp. Fill. AC Push Probe (0'-5.8') 0.5 - 1.5 (P-1) **Base Rock** PID= 0 Sheen= Yes Sample submitted for lab test = 6201C (0'-3') 1.5 - 3.0 Odor= Yes **Gravelly SAND with** some silt, SP-SM; brown, low plasticity, damp; (FIII) P2 3.0 - 5.5 CLAY, CH; 14 P-2 (3.0-5.8) Driller notes; soft from From (3.0'-5.5') No recovery, gravel in tip of shoe. (3'-5')Colluvium. From (5.5'-5.8') Intrusive Rock, brown, predominantly (Colluvium) decomposed, extremely soft to very soft. Igneous Driller notes; hard at 5 5.51. Bedrock contact 5.5° 5.5 - 5.8 (5.8) Bottom of hole. Intrusive Rock, Backfilled with; brown, predominantly Bentonite Chip (5.8'-0.5') decomposed, AC Cold Mix (0.5'-0') extremely soft to very soft; (Igneous Intrusive) MAN.GDT 09/03/12 10 DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT

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Hole No. HM-U2P1-02 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. Jackson 17188 Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: In field east of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1311.5 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 4.1 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods** "A" - Advancer **Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line "X" - Auger LW - Lost Water Pl - Planai J - Joint P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation R - Rough St - Stepped CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Iıтegular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation Test Type, No. Discontinuity 1 Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 50 P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, 0.0 - 3.1 CLAY, CH; dark Drilling Method: 1"ID moist, Colluvium. Push Probe (0'-4.1') brown, medium Sample submitted for lab test = 6202 (0'-3') PID= 0 plasticity, moist; (Colluvium) Sheen= No Odor= No (P-1) PID= 0 Sheen= No Odor= No P- 2 (3.0-4.1)
From (3.0'-3.1) CLAY, CH; dark brown, medium plasticity, moist. Colluvium.
From (3.1'-4.1') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous P2 80 Bedrock contact 3.1 3.1 - 4.1 Intrusive Rock, brown, predominantly decomposed, extremely soft to very Backfilled with; (4.1) Bottom of hole. soft; (Igneous Bentonite Chips (4.3'-0') 5 Intrusive) ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11 10

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-02B Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. 17188 Jackson Hole Location Northing: Start Card No. Easting Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1314.1 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 6.4 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Remarks** "A" - Advancer Drilling Methods Discontinuity Shape Surface Roughness "X" - Auger WL - Wire Line LW - Lost Water Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, nstrumentation Test Type. No. Discontinuity
Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P-1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.5From (0-0.5') AC. From (0.5'-1.5') Base Rock. From (1.5'-3.0') Sandy Gravel with some silt, GP; brown, nonplastic, damp. Fill. Push Probe (0'-6.4') AC 0.5 - 1.5 PID= 0 **Base Rock** Sheen= Yes Sample submitted for lab test = 6202B (0'-3') 1.5 - 3.1 Odor= Yes Sandy Gravel with some silt, GP; brown, nonplastic, damp; Driller notes; soft from (Fill) (3.1'-5.8') P2 10 P-2 (3.0-6.0) Low Recovery, only gravel from upper fill, 3.1 - 5.8 gravel in tip of shoe. (P-2) PID= 0 CLAY, CH; (Colluvium) Sheen= No Odor= No 5 Driller notes; hard at Bedrock Contact 5.8 5.8 - 6.4 РЗ 100 P-3 (6.0-6.4) Intrusive Rock, brown, predominantly Intrusive Rock, decomposed, extremely soft to very soft. Igneous Intrusive. brown, predominantly Backfilled with; (6.4) Bottom of hole. decomposed, Bentonite Chip (6.4'-0.5') AC Cold Mix (0.5'-0') extremely soft to very soft; (Igneous Intrusive) DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11 10 ODOT

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Page 1 of 1 Hole No. HM-U2P1-03 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County 17188 Key No. Hole Location Start Card No. Northing: Easting: Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1316.4 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 6.5 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - lıregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Backfill/ Instrumentation Discontinuity I Or RQD% Š. Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance Test Type. ROCK: Rock Name, Color, Weathering, Hardness, Drilling Methods, and Remarks Depth (ft) Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. 70 P-1 (0.0-3.0) 0.0 - 0.5Drilling Method: 1"ID From (0.79-5.7) AC.
From (0.5'-1.5') Base Rock.
From (1.5'-3.0') Sandy Gravel to Gravelly SAND, GP, SP Push Probe (0'-6.5') AC 0.5 - 1.5(P-1) brown, nonplastic, damp. Fill. **Base Rock** PID= 0 Sheen= Yes Sample submitted for lab test = 6203 (1'-2') Sample submitted for lab test = 6203 (2'-3') 1.5 - 5.0 Odor= Yes Sandy Gravel to Gravelly SAND, GP, SP; brown, nonelastic, damp; P2 60 P-2 (3.0-6.0) PID= 0 Sheen= No From (3.0'-5.0') Sandy Gravel to Gravelly SAND, GP, SP; brown, nonplastic, damp. Fill. From (5.0'-6.0') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. Odor= Slight Driller notes; soft from (5'-6.3') Sample submitted for lab test = 6203 (3'-6') 5 5.0 - 6.3 PID= 0 CLAY, CH; dark Sheen= No brown, medium Odor= No plasticity, moist; P3 P- 3 (6.0-6.5) From (6.0'-6.3') CLAY, CH; dark brown, medium 100 - Bedrock Contact 6.3'. (Colluvium) plasticity, moist. Colluvium. From (6.3'-6.5') Intrusive Rock, brown, predominantly 6.3 - 6.5 Backfilled with; Intrusive Rock, decomposed, extremely soft to very soft. Igneous Bentonite Chip (6.4'-0.5') brown, predominantly AC Cold Mix (0.5'-0') decomposed. Sample submitted for lab test = 6203 (6'-6.5') extremely soft to ver (6,5) Bottom of hole. soft; (Igneous Intrusive) 10 62-U2-P1-HAZMAT.GPJ ODOT_ ODOT DRILL LOG

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of 1 Page 1 Hole No. HM-U2P1-04 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) Key No. County Jackson 17188 Hole Location Easting: Northing: Start Card No. Equipment (Geoprobe) Hole Location: In field east of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.1 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 2.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Test Type. No. Discontinuity I
Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-2.0) From (0'-1.5') CLAY, CH; dark brown, medium plasticity, Drilling Method: 1"ID 0.0 - 1.5 CLAY, CH; dark Push Probe (0'-2') moist, Colluvium, From (1.5'-2') Intrusive Rock, brown, predominantly (P-1) PID= 0 brown, medium Sheen= No plasticity, moist; decomposed, extremely soft to very soft. Igneous Odor= No (Colluvium) - Bedrock Contact 1.5' 1.5 - 2.0 Sample submitted for lab test = 6204 (0'-2') Intrusive Rock, (2.0) Bottom of hole. brown, predominantly Backfilled with; decomposed, Bentonite Chips (2'-0') extremely soft to very soft; (Igneous Intrusive) 5 10

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of 1 Page 1 Hole No. HM-U2P1-05 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1320.9 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 12.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line "X" - Auger I.W - Lost Water J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved Sl - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test U - Undulating B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Backfill/ Instrumentation ŝ Discontinuity I Size Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name P- 1 (0.0-3.0) From (0'-0.5') AC. From (0.5'-1.2') Base Rock. From (1.2'-3.0') Gravelly SAND with some silt, SP-SM; brown, nonplastic, damp. Fill. P1 43 0.0 - 0.5 Drilling Method: 1"ID Push Probe (0'-12') AC 0.5 - 1.2 PID= 0 **Base Rock** Sheen= Yes 1.2 - 10.1 Sample submitted for lab test = 6205 (0'-3') Odor= Yes Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; brown to dark brown, nonplastic to medium P2 100 P- 2 (3.0-6.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; brown to dark brown, nonplastic to (P-2) PID= 0 plasticity, damp to moist; (Fili) medium plasticity, damp to moist. Fill. Sheen= No Odor= Slight Sample submitted for lab test = 6205 (4'-5') Sample submitted for lab test = 6205 (5'-6') 5 P- 3 (6.0-9.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; brown to dark brown, nonplastic to P3 100 (P-3) PID= 0 medium plasticity, damp to moist. Fill. Sheen= Slight Odor= Slight Sample submitted for lab test = 6205 (8'-9') N- 4 (9.0-12.0)
From (9.0'-10.1') Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH: brown to dark brown, nonplastic to medium plasticity, damp to moist. Fill.
From (10.1-12.0') CLAY, CH: dark brown to gray, medium plasticity, moist. Colluvium. N4 93 (P-4) PID= 0 Sheen= No 10 Odor= No ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_ 10.1 - 12.0 CLAY, CH; dark brown to gray, medium plasticity, moist; (Colluvium) (12.0) Bottom of hole. Backfilled with; Bentonite Chip (12'-0,5') AC Cold Mix (0.5'-0')

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Page 1 of 1 Hole No. HM-U2P1-06 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1308.3 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 3.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, ģ Instrumentation Discontinuity I Or RQD% Water Level/ Date Texture, Cementation, Structure, Origin. Graphic Log Test Type, 1 ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) From (0'-2.2') CLAY with trace sand, CH; dark brown. Drilling Method: 1"ID 0.0 - 2.2 **CLAY** with trace Push Probe (0'-3') medium plasticity, moist. Colluvium. From (2.2'-3.0') Intrusive Rock, brown, predominantly sand, CH; dark decomposed, extremely soft to very soft. Igneous Intrusive. brown, medium PID= 0 plasticity, moist; Sheen= No (Colluvium) Odor= No Sample submitted for lab test = 6206 (1'-2') Sample submitted for lab test = 6206 (2'-3') Bedrock Contact 2.2' 2.2 - 3.0 Intrusive Rock, brown, predominantly (3.0) Bottom of hole. decomposed, Backfilled with; extremely soft to very Bentonite Chips (3'-0') soft; (Igneous Intrusive) 5 MAN.GDT 09/03/11 10 ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-07 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) 17188 County Jackson Key No. Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Recorder Dan Raker Project Geologist Kenny Camp Reg-3 HazMat Coordinator Ground Elev. 1304.8 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 2.5 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure St - Stepped R - Rough "U" - Undisturbed Sample Fo - Foliation CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample VR - Very Rough S - Shear Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation Discontinuity I Or RQD% Test Type. No. Size Water Level/ Date Texture, Cementation, Structure, Origin. Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-2.5) From (0'-1.5') CLAY with trace sand and gravel, CH; dark P1 0.0 - 1.5 Drilling Method: 1"ID CLAY with trace sand Push Probe (0'-2.5') brown, medium plasticity, moist. Colluvium. From (1.5'-2.5') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous Intrusive. (P-1) PID= 0 and gravel, CH; dark Sheen= No brown, medium Odor= No plasticity, moist; Bedrock Contact 1.5 (Colluvium) Sample submitted for lab test = 6207 (0'-2.5') 1.5 - 2.5 Intrusive Rock, brown, predominantly (2.5) Bottom of hole. Backfilled with; decomposed, Bentonite Chips (2.5'-0') extremely soft to very soft; (Igneous Intrusive) 5 10

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Hole No. HM-U2P1-08 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. Jackson 17188 Northing: Hole Location Easting: Start Card No. Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1304.7 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 6.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer **Drilling Methods Drilling Remarks** Discontinuity Shape Surface Roughness "X" - Auger WL - Wire Line LW - Lost Water Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved Sl - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - lıregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Š. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Test Type. 1 ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, Drilling Method: 1"ID 0.0 - 3.8 CLAY , CH; dark moist. Colluvium. Push Probe (0'-6') brown, medium Sample submitted for lab test = 6208 (0'-3') plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No P2 100 (P-2) From (0-1.5') CLAY, CH; dark brown, medium plasticity, moist, Colluvium. PID= 0 Sheen= No From (1.5'-2.5') Sandy GRAVEL with some day, GP; brown, low plasticity, moist, Alluvium. 3.8 - 6.0 Odor= No Sandy GRAVEL with Sample submitted for lab test = 6208 (4'-5') some clay, GP; brown, low plasticity, 5 moist; (Alluvium) (6.0) Bottom of hole. Backfilled with; Bentonite Chips (6'-0') 10

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Hole No. HM-U2P1-09 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. **Jackson** 17188 Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1305.2 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 7.8 ft Tube Height **Typical Drilling Abbreviations** Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity <u>Shape</u> Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color U - Undulating "N" - Standard Penetration Test B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Iıregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation ŝ Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity. Drilling Method: 1"ID 0.0 - 4.5 CLAY, CH; dark Push Probe (0'-7.8') brown, medium Sample submitted for lab test = 6209 (0'-3') plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No P2 73 (P-2) PID= 0 From (3.0"-4.5") CLAY, CH; dark brown, medium plasticity, moist. Colluvium. From (4.5"-6.0") Silty SAND, SM; light brown, low plasticity, moist, Alluvium. Sheen= No Odor= No Sample submitted for lab test = 6209 (3'-4') Silty SAND, SM; light 5 brown, low plasticity, moist; (Alluvium) (P-3) PID= 0 P3 100 P-3 (6.0-7.8) Sheen= No From (6.0-6.8') Silty SAND, SM; light brown, low plasticity, moist, Alluvium. From (6.7-8,") Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous Odor= No Bedrock Contact 6.8' 6.8 - 7.8 Intrusive Rock, brown, predominantly decomposed, (7.8) Bottom of hole. extremely soft to very Backfilled with: Bentonite Chips (7.8'-0') soft; (Igneous Intrusive) 10

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DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-10 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1304.0 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 6.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line "X" - Auger LW - Lost Water J - Joint Pl - Planaı P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock Data SOIL: Soil Name, USCS, Color, Plasticity, Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation Test Type. No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, 60 0.0 - 4.0 Drilling Method: 1"ID CLAY, CH; dark Push Probe (0'-6') brown, medium Sample submitted for lab test = 6210 (0'-3') (P-1) plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No (3.0-6.0)From (3.0'-4.0') CLAY, CH; dark brown, medium PID= 0 plasticity, moist, Colluvium. Sheen= No From (4.0'-5.4') Silty SAND with trace gravel, SM; light Odor= No brown, low plasticity, moist, Alluvium, 4.0 - 5.4 From (5.4'-6.0') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous Silty SAND with trace gravel, SM; light Intrusive 5 brown, low plasticity, moist; (Alluvium) Sample submitted for lab test = 6210 (3'-4') Bedrock Contact 5.4 5.4 - 6.0 Intrusive Rock, (6.0) Bottom of hole. brown, predominantly Backfilled with; decomposed, Bentonite Chips (6'-0') extremely soft to very soft; (Igneous Intrusive) DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11 10

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Page 1 of 1 Hole No. HM-U2P1-11 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County 17188 Jackson Key No. Hole Location Start Card No. Northing: Easting: Equipment (Geoprobe) Hole Location: On proposed airport access alignment Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker 1302.7 ft Ground Elev. Start Date June 7, 2011 End Date June 7, 2011 Total Depth 6.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Backfill/ Instrumentation Test Type. No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. Pi P- 1 (0.0-3.0) CLAY with trace sand and gravel, CH; dark brown, medium plasticity, moist. Colluvium. 60 0.0 - 3.6 Drilling Method: 1"ID **CLAY** with trace sand Push Probe (0'-6') and gravel , CH; dark brown, medium Sample submitted for lab test = 6211 (0'-3') PID= 0 plasticity, moist; Sheen= No (Colluvium) Odor= No P2 100 P- 2 (3.0-6.0)From (3.0'-3.6') CLAY with trace sand and gravel , CH; (P-1) PID= 0 Sheen= No dark brown, medium plasticity, moist, Colluvium. From (3.6'-5.8') SAND with trace gravel some silt, Odor= No 3.6 - 5.8 SAND with trace SP-SM; light brown, nonplastic to low plasticity, moist, Alluvium.
From (5.8'-6.0') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous gravel some silt, ŠP-SM; light brown, 5 nonplastic to low plasticity, moist; Sample submitted for lab test = 6211 (4'-5') (Alluvium) Bedrock Contact 5.8'. 5.8 - 6.0 (6.0) Bottom of hole. Intrusive Rock, Backfilled with; brown, predominantly Bentonite Chips (6'-0') decomposed, extremely soft to ver soft; (Igneous Intrusive) 10

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OREGON DEPARTMENT OF TRANSPORTATION

of 1 Page 1 Hole No. HM-U2P1-12 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.2 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 4.3 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished "C" - Core HS - Hollow Stem Auger WR - Water Return F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test U - Undulating B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Test Type. No. Discontinuity I Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P-1 (0.0-3.0) 0.0 - 2.5 CLAY, CH; dark Drilling Method: 1"ID From (0-2.5') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. Push Probe (0'-4.3') brown, medium From (2.5'-3') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No Sample submitted for lab test = 6212 (0'-3') Bedrock Contact 2.5' 2.5 - 4.3 Intrusive Rock, P2 100 P- 2 (3.0-4.3) Intrusive Rock, brown, predominantly brown, predominantly decomposed, extremely soft to very soft. Igneous Intrusive. PID= 0 decomposed, Sheen= No extremely soft to very Odor= No Sample submitted for lab test = 6213 (3'-4.3') soft; (Igneous (4.3) Bottom of hole. Intrusive) Backfilled with; Bentonite Chips (4.3'-0') 5 10

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-13 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County 17188 Jackson Key No. Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.1 ft Start Date June 7, 2011 Tube Height End Date June 7, 2011 Total Depth 6.0 ft Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advance Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure Fo - Foliation "U" - Undisturbed Sample St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample VR - Very Rough S - Shear Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Test Type. No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 33 P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, moist. Colluvium. 0.0 - 4.5 Drilling Method: 1"ID Push Probe (0'-6') CLAY, CH; dark brown, medium plasticity, moist; Sample submitted for lab test = 6213 (0'-3') PID= 0 (Colluvium) Sheen= No Odor= No P- 2 (3.0-6.0) From (3'-4.5') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. From (4.5'-6') Intrusive Rock, brown, predominantly P2 100 PID= 0 Sheen= No Odor= No decomposed, extremely soft to very soft. Igneous Intrusive. Bedrock Contact 4.5' 45-60 Sample submitted for lab test = 6213 (4'-5') Intrusive Rock, 5 Sample submitted for lab test = 6213 (5'-6') brown, predominantly decomposed, extremely soft to very (6.0) Bottom of hole. soft; (Igneous Backfilled with; Intrusive) Bentonite Chips (6'-0') 10

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Hole No. HM-U2P1-14 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Key No. Jackson 17188 Hole Location Northing: Easting! Start Card No. Hole Location: On Medco Haul Rd. (Scale Shack) Equipment (Geoprobe) Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1321.9 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 12.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer Drilling Methods **Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished "C" - Core HS - Hollow Stem Auger WR - Water Return F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear lг - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Š Instrumentation Discontinuity
Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. Date P1 53 P- 1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.5From (0'-0.5') AC. From (0.5'-1.2') Base Rock. From (1.2'-3.0') Sandy GRAVEL to Gravelly SAND, GP, SP; brown, nonplastic, damp. Fill. AC Push Probe (0'-12') 0.5 - 1.5 **Base Rock** PID= 0 Sheen= NA Sample submitted for lab test = 6214 (0'-3') 1.5 - 12.0 Odor= Yes Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; brown to dark brown P2 100 P-2 (3.0-6.0) Sandy GRAVEL to Gravelly SAND, GP. and gray-green, (P-2) PID= 0 SP and CLAY, CH; brown to dark brown and gray-green nonplastic to medium plasticity, damp to moist. Fill. nonplastic to medium Sheen= NA plasticity, damp to Odor= Yes Sample submitted for lab test = 6214 (4'-5') Sample submitted for lab test = 6214 (5'-6') moist; (Fill) 5 P3 100 P-3 (6.0-9.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; brown to dark brown and gray-green, nonplastic to medium plasticity, damp to moist. Fill. PID= 0 Sheen= NA Odor= No Sample submitted for lab test = 6214 (8'-9') P4 100 P- 4 (9.0-12.0) Sandy GRAVEL to Gravelly SAND, GP, (P-4) PID= 0 SP and CLAY, CH; brown to dark brown and gray-green, nonplastic to medium plasticity, damp to moist. Fill. Sheen= NA 10 Odor= No (12.0) Bottom of hole. Backfilled with; Bentonite Chip (12'-0.5') AC Cold Mix (0.5'-0')

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ODOT DRILL LOG

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-15 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator 1311.8 ft Recorder Dan Raker Ground Elev. Start Date June 8, 2011 End Date June 8, 2011 Total Depth 4.5 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger Pl - Planaı J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough DR - Drill Rate CA - Casing Advancer "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, P1 0.0 - 3.5 Drilling Method: 1"ID CLAY, CH; dark Push Probe (0'-4.5') brown, medium Sample submitted for lab test = 6215 (0'-3') (P-1) plasticity, moist; (Colluvium) PID= 0 Sheen= No Odor= No (P-2) PID= 0 Sheen= No P2 100 From (3'-3.5') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. Odor= No - Bedrock Contact 3.5' 3.5 - 4.5 From (3.5'-4.5') Intrusive Rock, brown, predominantly Intrusive Rock, decomposed, extremely soft to very soft. Igneous Intrusive. brown, predominantly decomposed, Sample submitted for lab test = 6215 (3'-4.5') (4.5) Bottom of hole. extremely soft to very Backfilled with; 5 Bentonite Chips (4.5'-0') soft; (Igneous Intrusive) 10

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION of 1 Page 1 Hole No. HM-U2P1-16 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. (Scale Shack) Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1322.7 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 12.0 ft Tube Height Typical Drilling Abbreviations Test Type **Rock Abbreviations** Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color U - Undulating "N" - Standard Penetration Test B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear lr - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock Data SOIL: Soil Name, USCS, Color, Plasticity, Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Š Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.5 From (0-0.5') AC. From (0.5'-1.2') Base Rock. From (1.2'-3.0') Sandy GRAVEL, GP; brown, nonplastic, damp. Fill. AC Push Probe (0'-12') 0.5 - 1.5 Base Rock PID= 0 Sheen= Yes Sample submitted for lab test = 6216 (0'-3') 1.5 - 12.0 Odor= Yes **CLAY** with some sand and gravel, CH; dark brown to green, medium plasticity, P2 P- 2 (3.0-6.0) CLAY with some sand and gravel, CH; 100 moist; (Fill) (P-2) dark brown, medium plasticity, moist. Fill. PID= 0 Sheen= No Sample submitted for lab test = 6216 (5'-6') Odor= No 5 Р3 P-3 (6.0-9.0) CLAY with some sand and gravel, CH; dark brown to green, medium plasticity, moist. Fill. 100 PID= 0 Sheen= No Sample submitted for lab test = 6216 (7'-8') Odor= No

09/03/17 DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT P4 P- 4 (9.0-12.0) CLAY with some sand and gravel, CH; dark brown to green, medium plasticity, moist. Fill. 33 (P-4) PID= 0 Sheen= No Odor= No 10 (12,0) Bottom of hole. Backfilled with; Bentonite Chip (12'-0.5') AC Cold Mix (0.5'-0')

OREGON DEPARTMENT OF TRANSPORTATION of 1 Page 1 Hole No. HM-U2P1-17 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1311.2 ft Start Date June 8, 2011 End Date June 8, 2011 Total Depth 5.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density. Backfill/ Instrumentation Test Type. No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance Depth (ft) ROCK: Rock Name, Color, Weathering, Hardness, Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P-1 (0.0-3.0)
From (0'-2.5') CLAY, CH; dark brown, medium plasticity, moist, Colluvium. 50 0.0 - 2.5 Drilling Method: 1"ID CLAY, CH; dark Push Probe (0'-5') brown, medium From (2.5'-3.0') Intrusive Rock, brown, predominantly (P-1) PID= 0 plasticity, moist; decomposed, extremely soft to very soft. Igneous Intrusive. (Colluvium) Sheen= No Odor= No Sample submitted for lab test = 6217 (2'-3') Bedrock Contact 2.5'. 2.5 - 5.0 Intrusive Rock, P2 50 P-2 (3.0-5.0) Intrusive Rock, brown, predominantly (P-2) PID= 0 brown, predominantly decomposed, extremely soft to very soft. Igneous decomposed, Sheen= No extremely soft to very Odor= No Sample submitted for lab test = 6217 (4'-5') soft; (Igneous Intrusive) 5 (5.0) Bottom of hole. Backfilled with; Bentonite Chips (5'-0') 10

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-18 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Start Card No. Hole Location Northing: Easting Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1313.0 ft Start Date June 8, 2011 End Date June 8, 2011 Total Depth 9.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line "X" - Auger LW - Lost Water Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger "C" - Core WR - Water Return F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation R - Rough St - Stepped CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Discontinuity I Or RQD% Test Type. No. Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance Depth (ft) ROCK: Rock Name, Color, Weathering, Hardness, Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) From (0'-2.5') CLAY with some sand and gravel. CH; dark P1 Drilling Method: 1"ID Push Probe (0'-9') 33 0.0 - 2.5 **CLAY** with some sand brown, low to medium plasticity, moist. Fill. From (2.5'-3.0') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. and gravel, CH; dark (P-1) PID= 0 brown, low to medium plasticity, Sheen= No moist; (Fill) Odor= No 2.5 - 7.0 CLAY, CH; dark P2 93 P- 2 (3.0-6.0) CLAY, CH; dark brown, medium plasticity, brown, medium moist. Colluvium. PIDÉ 0 plasticity, moist; Sheen= No Sample submitted for lab test = 6218 (3'-6') (Colluvium) Odor= No 5 (P-3) P3 100 PID= 0 From (6.0-7.0) CLAY, CH; dark brown, medium plasticity, moist. Colluvium. From (7.0'-9.0') Intrusive Rock, brown, predominantly decomposed, extremely soft to very soft. Igneous Sheen= No Odor= No Bedrock Contact 7'. 7.0 - 9.0 Intrusive Rock, brown, predominantly Sample submitted for lab test = 6218 (7'-8') decomposed, extremely soft to very soft; (Igneous Intrusive) (9.0) Bottom of hole, Backfilled with; Bentonite Chips (9'-0') 10

DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-19 Project OR62 Corridor Solutions Unit-2 Phase-1 E.A. No. Purpose Level-2 HazMat Investigation PE001522

	Traject Oxoz Odridor Golddons Omt-2 Frase-1								-Z TIBZIV	nat investigation	E	.A. 190.	PE00 1522	
	Highway Crater Lake Hwy No. 22 (OR62)							County Jackson			K	ey No.	17188	
	Hole Location Northing: Easting:										S	Start Card No.		
	Equipment (Geoprobe) Hole Location: In Me						ledco Log Pond.	Driller FSE V	r FSE Wes Harper MW# 10528		В	Bridge No.		
	Project Geologist Kenny Camp Reg-3 Haz					HazMat	Coordinator	Recorder Dan Raker		G	round Elev.	1313.4 ft		
	Start Date June 8, 2011					End D	Pate June 8, 2011	Total Depth 6.4 ft		Т	ube Height			
Test Type "A" - Advancer "X" - Auger "C" - Core "N" - Standard Penetration Test "U" - Undisturbed Sample "D" - Oversize Split Spoon Sample				on Test		J - Join F - Far B - Be	nt Pl - Planar ult C - Curved edding U - Undulating oliation St - Stepped	· ·				rilling Abbreviations Drilling Remarks LW - Lost Water WR - Water Return WC - Water Color DP - Down Pressure DR - Drill Rate DA - Drill Action		
	Depth (ft)	Test Type. No.	Percent Recovery	Driving 52 Resistance 100	Discontinuity Data & Or RQD%	Percent Natural Moisture	Material Descript SOIL: Soil Name, USCS, Color, Pl Moisture, Consistency/Re Texture, Cementation, St ROCK: Rock Name, Color, Weath Discontinuity Spacing, Jo Core Recovery, Formatio	lasticity, elative Density, ructure, Origin. ering, Hardness, pint Filling,	U	Unit Description	Graphic Log	Drilling Methods, Size and Remarks	Water Level/ Date	Backfill/ Instrumentation
	0	P1	60				P- 1 (0.0-3.0) CLAY with some sand dark brown, low to medium plasticity, Sample submitted for lab test = 6219	moist. Fill.	and brow med	6.3 Y with some sand gravel, CH; dark m, low to ium plasticity, st; (Fill)		Drilling Met Push Proba (P-1) PID= 0 Sheen= No Odor= No	thod: 1"ID e (0'-6.4')	
	- 5 -	P2	100				P- 2 (3.0-6.0) CLAY with some sand dark brown, low to medium plasticity, Sample submitted for lab test = 6219	moist, Fill.				(P-2) PID= 0 Sheen= No Odor= No (P-3) PID= 0 Sheen= No Odor= No		
DALL LOG OZ-OZ-T T-TALMATICTO ODO - MANAGOTI	- 10 -	P3	100				P- 3 (6.0-6.4) From (6.0'-6.3') CLAY with some sand dark brown, low to medium plasticity, From (6.3'-6.4') Intrusive Rock, brown decomposed, extremely soft to very s Intrusive. (6.4) Bottom of hole.	i, predominantly	brow deco extre	6.4 sive Rock, m, predominantly emposed, emely soft to very (Igneous sive)		Backfilled v	Contact 6.3'. vith; :hips (6.4'-0')	
3	,-													

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-20 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. (Log Dump Station)riller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1320.7 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 9.0 ft Tube Height Test Type Typical Drilling Abbreviations Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape 5 contracts Surface Roughness WL - Wire Line "X" - Auger LW - Lost Water J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault S1 - Slickensided C - Curved DF - Drill Fluid "N" - Standard Penetration Test WC - Water Color B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Š nstrumentation Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P-1 (0.0-3.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; light brown to dark brown, nonplastic P1 Drilling Method: 1"ID 0.0 - 9.0 Sandy GRAVEL to Push Probe (0'-12') to medium plasticity, damp to moist, Fill. Gravelly SAND, GP, SP and CLAY with (P-1) PID= 0 Sample submitted for lab test = 6220 (0'-3') trace gravel, CH; light Sheen= No brown to dark brown, Odor= No nonplastic to medium plasticity, damp to moist; (Fill) P2 100 P-2 (3.0-6.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; light brown to dark brown, nonplastic (P-2) PID= 0 to medium plasticity, damp to moist. Fill. Sheen= No Odor= No Sample submitted for lab test = 6220 (5'-6') 5 P3 100 P-3 (6.0-9.0) CLAY with trace gravel, CH; dark brown, (P-3) medium plasticity, damp to moist. Fill, PID= 0 Sheen= No Sample submitted for lab test = 6220 (8'-9') Odor= No (9.0) Bottom of hole. Backfilled with; Bentonite Chips (9'-0') 10

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ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-21 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: In Medco Log Pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.2 ft Start Date June 8, 2011 End Date June 8, 2011 Total Depth 4.3 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods** "A" - Advancer **Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Test Type. No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Size Water Level/ Date Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P-1 (0.0-3.0) CLAY with some sand and gravel, CH; ligh brown to dark brown, low to medium plasticity, moist. Fill. 0.0 - 4.3 Drilling Method: 1"ID **CLAY** with some sand Push Probe (0'-4.3') and gravel and Sample submitted for lab test = 6221 (0'-3') **ORGANIC DEBRIS of** PID= 0 wood and bark, CH, Sheen= No PT; light brown to Odor= No dark brown, low to medium plasticity, moist; (Fill) $\dot{P}ID=0$ Sheen= No P2 92 P-2 (3.0-4.3) Odor= No CLAY with some sand and gravel and ORGANIC DEBRIS of wood and bark, CH. PT; light brown to dark brown, low to medium plasticity, moist. Fill. Drilling refusal at 4.3 likely woody debris. Sample submitted for lab test = 6221 (3'-4.3')
(4.3) Bottom of hole, Backfilled with; Bentonite Chips (4.3'-0') 5 10

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OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-22 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. (Log Dump Station)riller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1320.8 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 15.3 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer **Drilling Methods** Drilling Remarks Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planaı P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger "U" - Undisturbed Sample DP - Down Pressure Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Soil Unit Description Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation Š Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Size Water Level/ Date Graphic Log Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, **Test** Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) Sandy GRAVEL to Gravelly SAND, GP. 43 0.0 - 11.0 Drilling Method: 1"ID SP and CLAY, CH; light brown to dark brown, nonplastic Sandy GRAVEL to Push Probe (0'-15.3') to medium plasticity, damp to moist. Fill. Gravelly SAND, GP, (P-1) PID= 0 SP and CLAY, CH; Sample submitted for lab test = 6222 (0'-3') light brown to dark Sheen= No Odor= No brown and green, nonplastic to medium plasticity, damp to moist; (Fill) P- 2 (3.0-6.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; light brown to dark brown, nonplastic to medium plasticity, damp to moist, Fill. P2 100 (P-2) PID= 0 Sheen= No Odor= No Sample submitted for lab test = 6222 (4'-5') Sample submitted for lab test = 6222 (5'-6') 5 P3 100 P-3 (6.0-9.0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH; light brown to dark brown, nonplastic to medium plasticity, damp to moist. Fill. PID= 0 Sheen= No Odor= No P4 100 P-4 (9.0-12.0) (P4) From (9.0'-11'0) Sandy GRAVEL to Gravelly SAND, GP, SP and CLAY, CH: light brown to dark brown and green, nonplastic to medium plasticity, damp to moist, Fill. PID= 0 Sheen= No 10 Odor= No From (11.0'-12.0') CLAY with some gravel, CH; dark brown, medium plasticity, moist. Colluvium. Sample submitted for lab test = 6222 (11'-12') 11.0 - 14.2 Clay with some gravel, CH; dark P5 100 (P5) PID= 0 brown, medium From (12.0°-14.2') CLAY, CH; dark brown, medium plasticity, moist. Colluvium.
From (14.2'-15.0') Intrusive Rock, green, predominantly plasticity, moist; Sheen= No (Colluvium) Odor= No decomposed, extremely soft to very soft. Igneous Bedrock Contact 14.2 - 15.3 14.2'. Intrusive Rock, green, 15 predominantly P6 100 P- 6 (15.0-15.3) Intrusive Rock, green, predominantly decomposed, extremely soft to very soft. Igneous decomposed, Backfilled with; Intrusive. extremely soft to very (15.3) Bottom of hole. **Bentonite Chips** soft; (Igneous (15.3'-0')Intrusive)

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Page 1 Hole No. HM-U2P1-23 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. (Adjacent fill piles Priller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1319.7 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 10.5 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, nstrumentation Š Discontinuity I Size Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance Test Type. ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 83 P-1 (0.0-3.0) CLAY with some sand and gravel, CH; Drilling Method: 1"ID 0.0 - 8.0 dark brown, medium plasticity, moist. Fill. CLAY with some sand and gravel, CH; dark Push Probe (0'-10.5') Sample submitted for lab test = 6223 (0'-3') (P-1) PID= 0 brown, medium plasticity, moist; (FIII) Sheen= No Odor= No P2 37 P-2 (3.0-6.0) CLAY with some sand and gravel, CH; (P-1) dark brown, medium plasticity, moist, Fill. PID= 0 Sheen= No Odor= No 5 P-3 (6.0-9.0) From (6.0'-8.0') CLAY with some sand and gravel, CH; dark brown, medium plasticity, moist. Fill. From (8.0'-9.0') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. P3 37 (P-3) PID= 0 Sheen= No Odor= No Sample submitted for lab test = 6223 (6'-9') 8.0 - 10.4 CLAY, CH; dark brown, medium plasticity, moist; P4 50 F-4 (9.0-10.4) CLAY. CH; dark brown, medium plasticity, moist. Coliuvium.
From (10.4'-10.5') MUDSTONE/SANDSTONE, light (Colluvium) 10 brown to gray, moderately weathered, very soft, tuffaceous. Bedrock Contact 10.4 (10.4) Bottom of hole. 10.4 - 10.5 MUDSTONE/ Backfilled with; Bentonite Chips (10.5'-0') SANDSTONE, light brown to gray, moderately weathered, very soft, tuffaceous.; (Eocene Sediments)

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Page 1 of 1 Hole No. HM-U2P1-24 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. (Adjacent fill piles) priller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1318.3 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 7.5 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planaı J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation ŝ Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance Test Type. ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) Sandy GRAVEL to CLAY with some sand and gravel, GP. CH; brown to dark brown, nonplastic to medium plasticity, moist. Fill. 0.0 - 5.5 Drilling Method: 1"ID Sandy GRAVEL to Push Probe (0'-7.5') CLAY with some sand (P-1) and gravel, GP, CH; PID= 0 brown to dark brown, Sheen= No nonplastic to medium Odor= No plasticity, moist; (Fill) P2 100 P-2 (3.0-6.0) r-2 (3.0-0.0) From (3.0-5.5') Sandy GRAVEL to CLAY with some sand and gravel, GP. CH; brown to dark brown, nonplastic to medium plasticity, moist. Fill. From (6.5'-6.0') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. (P-1) PID= 0 Sheen= No Odor= No Sample submitted for lab test = 6224 (3'-6') 5 (P-3) PID= 0 5.5 - 7.0 CLAY, CH; dark P3 P- 3 (6.0-7.5) From (6.0'-7.0') CLAY, CH; dark brown, medium 100 brown, medium Sheen= No Odor= No plasticity, moist; plasticity, moist. Colluvium. From (7.0'-7.5') MUDSTONE/SANDSTONE, light brown (Colluvium) Bedrock Contact 7'. to gray, moderately weathered, very soft, tuffaceous. 7.0 - 7.5 MUDSTONE/ Sample submitted for lab test = 6224 (5.5'-6.5') (7.5) Bottom of hole. **SANDSTONE**, light Backfilled with; brown to gray, Bentonite Chips (7.5'-0') moderately weathered, very soft, tuffaceous.; (Eocene Sediments) 10

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ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-25 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Hole Location: On Medco Haul Rd. (Coker Butte side Spitie Rd.) FSE Wes Harper MW# 10528 Equipment (Geoprobe) Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev, 1317.2 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 5.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity <u>Shape</u> Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planai P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test U - Undulating B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Test Type, No. Instrumentation Discontinuity I Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. 60 P- 1 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.5 From (0.0-5.5) AC.
From (0.5'-1.5') Base Rock.
From (1.5'-3.0') Sandy GRAVEL, GP; brown, nonplastic, AC Push Probe (0'-5') 0.5 - 1.5 **Base Rock** PID= 0 Sheen= No Odor= Slight Sample submitted for lab test = 6225 (0'-3') 1.5 - 5.0 Sandy GRAVEL to Gravelly SAND and CLAY, GP, SP, CH; light brown to dark P2 (P-2) 100 P-2 (3.0-5.0) brown, nonplastic to Sandy GRAVEL to Gravelly SAND and CLAY, GP, SP, CH; light brown to dark brown, nonplastic to medium PID= 0 medium plasticity, Sheen= No damp to moist; (Fill) plasticity, damp to moist. Fill. Odor= No Sample submitted for lab test = 6225 (3'-5') Driller notes: hard at 4.9 Basalt gravel in shoe. 5 (5.0) Bottom of hole. Backfilled with; Bentonite Chip (5'-0.5') AC Cold Mix (0.5'-0') ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

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Page 1 Hole No. HM-U2P1-26 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Start Card No. Equipment (Geoprobe) Hole Location: East shoulder of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.5 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 9.1 ft Tube Height **Typical Drilling Abbreviations** Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear lr - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Test Type, No. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) Sandy GRAVEL, GP; brown, nonplastic, P1 0.0 - 3.0 Drilling Method: 1"ID Sandy GRAVEL, GP; Push Probe (0'-9.1') brown, nonplastic, Sample submitted for lab test = 6226 (0'-3') (P-1) damp; (Fill) PID= 0 Sheen= No Odor= No P2 P-2 (3.0-6.0) CLAY, CH; dark brown, medium plasticity 100 3.0 - 9.0 PID= 0 CLAY, CH; dark brown, medium Sheen= No Sample submitted for lab test = 6226 (5'-6') Odor= No plasticity, moist; (Colluvium) 5 (6.0-9.0) CLAY, CH; dark brown, medium plasticity, moist, PID≐ 0 Sheen= No Odor= No Bedrock Contact 9 (9.0-9.1) MUDSTONE/SANDSTONE, light brown to gray, 9.0 - 9.1 moderately weathered, very soft, tuffaceous. MUDSTONE/ Backfilled with; (9.1) Bottom of hole. SANDSTONE, light Bentonite Chips (9.1'-0') 10 brown to gray, moderately weathered, very soft, tuffaceous.; (Eocene Sediments)

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DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION Page 1 Hole No. HM-U2P1-27 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: East shoulder of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.6 ft Start Date June 7, 2011 End Date June 7, 2011 Total Depth 6.3 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods **Drilling Remarks** "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger I - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Discontinuity Data Or RQD% Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Instrumentation Test Type. No. Size Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 50 P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, Drilling Method: 1"ID 0.0 - 6.1 moist, Colluvium. Push Probe (0'-6.3') CLAY, CH; dark brown, medium Sample submitted for lab test = 6227 (0'-3') plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No P2 100 P- 2 (3.0-6.0) CLAY, CH; dark brown, medium plasticity, (P-2) PIDÉ 0 Sheen= No Sample submitted for lab test = 6227 (4'-5') Sample submitted for lab test = 6227 (5'-6') Odor= No 5 P- 3 (6.0-6.3) From (6.0-6.1') CLAY, CH; dark brown, medium plasticity, moist. Colluvium From (6.1-6.3') SAND, SP; gray-brown, nonplastic, moist. P3 100 Hard Drilling 6.1' 6.1 - 6.3 SAND, SP; Backfilled with: gray-brown, Bentonite Chips (6.3'-0') Alluvium. (6.3) Bottom of hole nonplastic, moist; (Alluvium) 10

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Hole No. HM-U2P1-28 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Northing: Hole Location Easting. Start Card No. Equipment (Geoprobe) Hole Location: East shoulder of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1312.8 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 5.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer **Drilling Methods Drilling Remarks** Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished "C" - Core HS - Hollow Stem Auger WR - Water Return F - Fault C - Curved Sl - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock Data SOIL: Soil Name, USCS, Color, Plasticity, Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Test Type. No. Texture, Cementation, Structure, Origin. Graphic Log Water Level/ ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) CLAY, CH; dark brown, medium plasticity, P1 47 0.0 - 5.0 CLAY, CH; dark Drilling Method: 1"ID moist. Colluvium. Push Probe (0'-5') brown, medium Sample submitted for lab test = 6228 (0'-3') plasticity, moist; PID= 0 (Colluvium) Sheen= No Odor= No P2 100 P-2 (3.0-5.0) CLAY, CH; dark brown, medium plasticity. (P-2) PID= 0 moist. Colluvium. Sheen= No Sample submitted for lab test = 6228 (4'-5') Odor= No 5 (5.0) Bottom of hole. Backfilled with; Bentonite Chips (5'-0') 10

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION of 1 Page 1 Hole No. HM-U2P1-29 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: South shoulder of Commerce Dr. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1317.2 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 5.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer Drilling Methods Drilling Remarks Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Š. Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level Test Type. Driving Resistance Depth (ft) ROCK: Rock Name, Color, Weathering, Hardness, Drilling Methods, and and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0)
From (0'-1.7') CLAY with trace sand and gravel, CH; dark 0.0 - 1.7 Drilling Method: 1"ID CLAY with trace sand Push Probe (0'-5') brown, medium plasticity, moist. Colluvium. From (1.7'-3') SAND with some gravel and silt, SP-SM; and gravel, CH; dark (P-1) brown, nonplastic, moist. Alluvium. brown, medium PID= 0 plasticity, moist; Sheen= No Sample submitted for lab test = 6229 (0'-3') (Colluvium) Odor= No 1.7 - 3.4 SAND with some gravel and silt, SP-SM; brown, P2 66 (P-2) nonplastic, moist; From (3'-3.4') SAND with some gravel and silt, SP-SM; PID≐ 0 (Alluvium) brown, nonplastic, moist. Bench Gravel. From (3.4'-5') Clayey Sandy GRAVEL, GC; gray-brown, Sheen= No 3.4 - 5.0 Odor= No Clayey Sandy GRAVEL, GC; low to medium plasticity, moist. Alluvium. Sample submitted for lab test = 6229 (4'-5') gray-brown, low to 5 (5.0) Bottom of hole. medium plasticity, moist; (Alluvium) Backfilled with; Bentonite Chips (5'-0') 10

MAN.GDT 09/03/11 ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-30 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose E.A. No. Level-2 HazMat Investigation PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Start Card No. Easting: Equipment (Geoprobe) Hole Location: West shoulder of Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1325.1 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 6.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth DP - Down Pressure SA - Solid Auger "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density, Backfill/ Instrumentation ŝ Discontinuity I Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance Test Type. ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) 60 0.0 - 0.3 Drilling Method: 1"ID From (0:0-3:) AC. From (0:0-3:) AC. From (0:3:-3:0') Sandy GRAVEL with some silt, GP-GM; brown, nonplastic, damp. Alluvium. Push Probe (0'-5') AC 0.3 - 5.0 Sandy GRAVEL with PID= 0 Sample submitted for lab test = 6230 (0'-3') some silt, GP-GM; Sheen= Slight brown, nonplastic, Odor= No damp; (Alluvium) P- 2 (3.0-6.0) From (3.0'-5.0') Sandy GRAVEL with some silt, GP-GM; P2 100 PID= 0 brown, nonplastic, damp. Alluvium. From (5.0'-6.0') MUDSTONE, light brown, slightly weathered, very soft. Eocene Sediments. Sheen= No Odor= No Sample submitted for lab test = 6230 (4'-5') 5 Bedrock Contact 5', 5.0 - 6.0 **MUDSTONE**, light brown, slightly weathered, very soft; (6.0) Bottom of hole. (Hornbrook Fm) Backfilled with; Bentonite Chip (5'-0.5') AC Cold Mix (0.5'-0') ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11 10

DRILL LOG OREGON DEPARTMENT OF TRANSPORTATION of 1 Page 1 Hole No. HM-U2P1-31 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County **Jackson** Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: East shoulder of Medco Haul Rd. FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1334.7 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 3.1 ft Tube Height Typical Drilling Abbreviations Rock Abbreviations Test Type **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity <u>Shape</u> Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planai P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color U - Undulating "N" - Standard Penetration Test B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Unit Description Material Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Test Type, No. Discontinuity | Or RQD% Texture, Cementation, Structure, Origin. Graphic Log Water Level/ Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P60 P- 60 (0.0-3.0) Drilling Method: 1"ID 0.0 - 0.4From (0:0-3.4) AC From (0:0-4.4) AC From (0.4-1.0') Base Rock From (1.0-2.8') CLAY, CH; dark brown, medium plasticity, moist. Colluvium. From (2.8'-3.0') Sandy GRAVEL with some silt, GP-GM; brown, nonplastic, damp. Alluvium. AC Push Probe (0'-3.1') 0.4 - 1.0 Base Rack PID= 0 Sheen= Slight Odor= No 1.0 - 2.8 CLAY, CH; dark brown, medium Sample submitted for lab test = 6231 (0'-3') plasticity, moist; (Colluvium) Drilling refusal at 3.1 2.8 - 3.1 P100 P- 100 (3.0-3.1) Sandy GRAVEL with some silt, GP-GM: Sandy GRAVEL with brown, nonplastic, damp. Alluvium. (3.1) Bottom of hole. Backfilled with; some silt, GP-GM; Bentonite Chip (3.1'-0.5') AC Cold Mix (0.5'-0') brown, nonplastic, damp; (Alluvium) 5 DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11 10

ODOT

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-32 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Easting: Hole Location Northing: Start Card No. Equipment (Geoprobe) Hole Location: West of Sportsman Warehouse pond. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1341.4 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 10.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods "A" - Advancer **Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planai P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular VR - Very Rough HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Instrumentation Š Discontinuity I Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance rest Type. ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, and Remarks Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) Clayey SAND with trace gravel, SC; light brown, low plasticity, moist. Alluvium. P1 0.0 - 2.5 Drilling Method: 1"ID Clayey SAND with Push Probe (0'-10') trace gravel, SC; light brown, low plasticity, moist; (Alluvium) PID= 0 Sheen= No Odor= No 2.5 - 5.5 **Gravelly SAND with** P2 P- 2 (3.0-6.0) Gravelly SAND with trace silt, SP; light brown, nonplastic, Alluvium. 40 (P-2) trace silt, SP; light PID= 0 brown, nonplastic; Sheen= No Sample submitted for lab test = 6232 (3'-6') (Alluvium) Odor= No 5 5.5 - 10.0 CLAY, CL; light gray, P3 P- 3 (6.0-9.0) CLAY, CL; light gray, low to medium plasticity, moist. Alluvium. 100 (P-3) low to medium PID= 0 plasticity, moist; Sheen= No (Alluvium) Odor= No PID= 0 Sheen= No P4 100 P- 4 (9.0-10.0) CLAY, CL; light gray, low to medium plasticity, moist. Alluvium. Odor= No Drilling refusal at 10 10 (10.0) Bottom of hole. Backfilled with: Bentonite Chips (10'-0')

ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_MAN.GDT 09/03/11

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-33 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: NW Bank of Lone Pine Cr Canal Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1330.9 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 4.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger J - Joint Pl - Planar P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Natural Moisture Percent Recovery Moisture, Consistency/Relative Density. Test Type. No. Discontinuity I
Or RQD% Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Backfill/ Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P1 P- 1 (0.0-3.0) CLAY with some sand, CH; dark brown, 60 0.0 - 3.4 Drilling Method: 1"ID medium plasticity, moist, Colluvium. **CLAY** with some Push Probe (0'-4') sand, CH; dark Sample submitted for lab test = 6233 (0'-3') (P-1) brown, medium PID= 0 plasticity, moist; Sheen= No (Colluvium) Odor= No PID= 0 Sheen= No P2 100 P-2 (3.0-4.0) From (3.0'-3.4') CLAY with some sand, CH Odor= No Graph (Chart Will some sand, CHart Will some sand, CHart Will some sand, CHart Will some sand, light gray to brown, nonplastic, moist, Alluvium.

From (3.4'-3.7') MUDSTONE, light brown, slightly weathered, very soft. Hornbrook Formation.

(4.0) Bottom of hole. 3.4 - 3.7 Bedrock Contact 3.7' Quartzite GRAVEL with some sand, light Backfilled with: gray to brown, Bentonite Chips (4'-0') nonplastic, moist; 5 (Alluvium) 3.7 - 4.0 **MUDSTONE**, light brown, slightly weathered, very soft. (Hornbrook Fm) 09/03/11 MAN.GDT 10 ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

OREGON DEPARTMENT OF TRANSPORTATION Page 1 of 1 Hole No. HM-U2P1-34 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting Start Card No. Equipment (Geoprobe) Hole Location: NE Bank of Lone Pine Cr Canal Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1331.9 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 5.3 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations Drilling Methods Drilling Remarks "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test U - Undulating B - Bedding Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough DR - Drill Rate CA - Casing Advancer "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Unit Description Material Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density, Backfill/ Instrumentation Discontinuity I
Or RQD% Test Type, No. Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) CLAY with some sand, CH; dark brown, medium plasticity, moist. Colluvium. 93 0.0 - 3.1 Drilling Method: 1"ID **CLAY** with some Push Probe (0'-5.3') sand, CH; dark Sample submitted for lab test = 6234 (0'-3') (P-1) brown, medium PID= 0 plasticity, moist; Sheen= No (Colluvium) Odor= No (P-2) PID= 0 Sheen= No P2 87 3.1 - 3.6 Odor= No From (3.0'-3.1') CLAY with some sand, CH; dark brown, Quartzite GRAVEL medium plasticity, moist. Colluvium. From (3.1'-3.6') Quartzite GRAVEL with some sand, light -Bedrock Contact 3.6' with some sand, light gray to brown, nonplastic, moist. Alluvium. From (3.6'-5.3') MUDSTONE, light brown, moderately gray to brown, nonplastic, moist; weathered, very soft. Hornbrook Formation (Alluvium) 5 Sample submitted for lab test = 6234 (3'-4') 3.6 - 5.3 MUDSTONE, light (5.3) Bottom of hole. brown, moderately Backfilled with; Bentonite Chips (5.3'-0') weathered, very soft; (Hornbrook Fm) MAN.GDT 09/03/11 10 ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

OREGON DEPARTMENT OF TRANSPORTATION

Page 1 of 1 Hole No. HM-U2P1-35 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: On Medco Haul Rd. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1335.0 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 12.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations **Drilling Methods Drilling Remarks** "A" - Advancer Discontinuity Surface Roughness Shape WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved SI - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample R - Rough Fo - Foliation St - Stepped CA - Casing Advancer DR - Drill Rate "D" - Oversize Split Spoon Sample S - Shear VR - Very Rough Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density. Backfill/ Instrumentation ŝ Discontinuity I Or RQD% Size Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Test Type. Driving Resistance ROCK: Rock Name, Color, Weathering, Hardness, Depth (ft) Drilling Methods, Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. P- 1 (0.0-3.0) From (0'-0.2') AC From (0.2'-1.5') Base Rock From (1.5'-3.0') Sandy GRAVEL with some silt, GP; brown, nonplastic, damp. Fill. P1 57 Drilling Method: 1"ID 0.0 - 0.2 Push Probe (0'-12') AC 0.2 - 1.5 (P-1) PID= 0 **Base Rock** Sheen= Yes Sample submitted for lab test = 6235 (0'-3') 1.5 - 5.0 Odor= Yes Sandy CLAY, CL; brown, medium plasticity, moist; (Alluvium) P2 67 P- 2 (3.0-6.0) Sandy CLAY, CL; brown, medium plasticity, moist. Alluvium. (P-2) PID= 0 Sheen= No Sample submitted for lab test = 6235 (3'-6') Odor= No 5 5.0 - 12.0 Sandy SILT with trace clay, ML; light brown, low plasticity, moist; P3 100 P-3 (6.0-9.0) Sandy SILT with trace day, ML; light (P-3) PID= 0 (Alluvlum) brown, low plasticity, moist, Alluvium, Sheen= No Sample submitted for lab test = 6235 (6'-9') Odor= No P4 100 P- 4 (9.0-12.0) Sandy SILT with trace day, ML; light (P-4) PID= 0 brown, low plasticity, moist. Alluvium. Sheen= No 10 Odor= No DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT (12.0) Bottom of hole. Backfilled with; Bentonite Chip (12'-0.5') AC Cold Mix (0.5'-0')

09/03/11

MAN.GDT

OREGON DEPARTMENT OF TRANSPORTATION of 1 Hole No. HM-U2P1-36 Project OR62 Corridor Solutions Unit-2 Phase-1 Purpose Level-2 HazMat Investigation E.A. No. PE001522 Highway Crater Lake Hwy No. 22 (OR62) County Jackson Key No. 17188 Hole Location Northing: Easting: Start Card No. Equipment (Geoprobe) Hole Location: North shoulder of Hwy 62. Driller FSE Wes Harper MW# 10528 Bridge No. Project Geologist Kenny Camp Reg-3 HazMat Coordinator Recorder Dan Raker Ground Elev. 1331.8 ft Start Date June 6, 2011 End Date June 6, 2011 Total Depth 8.0 ft Tube Height Typical Drilling Abbreviations Test Type Rock Abbreviations "A" - Advancer **Drilling Methods Drilling Remarks** Discontinuity Shape Surface Roughness WL - Wire Line LW - Lost Water "X" - Auger Pl - Planar J - Joint P - Polished HS - Hollow Stem Auger WR - Water Return "C" - Core F - Fault C - Curved S1 - Slickensided DF - Drill Fluid WC - Water Color "N" - Standard Penetration Test B - Bedding U - Undulating Sm - Smooth SA - Solid Auger DP - Down Pressure "U" - Undisturbed Sample Fo - Foliation St - Stepped R - Rough CA - Casing Advancer DR - Drill Rate VR - Very Rough "D" - Oversize Split Spoon Sample S - Shear Ir - Irregular HA - Hand Auger DA - Drill Action Material Description Unit Description Soil Rock SOIL: Soil Name, USCS, Color, Plasticity, Data Percent Recovery Percent Natural Moisture Moisture, Consistency/Relative Density. Backfill/ Instrumentation Discontinuity I Or RQD% Test Type, No. Size Texture, Cementation, Structure, Origin. Water Level/ Date Graphic Log Driving Resistance Depth (ft) ROCK: Rock Name, Color, Weathering, Hardness, Drilling Methods, and Remarks Discontinuity Spacing, Joint Filling, Core Recovery, Formation Name. 50 P- 1 (0.0-3.0) 0.0 - 0.5 Drilling Method: 1"ID From (0'-0.5') AC From (0.2'-3.0') Base Rock Push Probe (0'-8') AC 0.5 - 3.0 Sample submitted for lab test = 6236 (0'-3') **Base Rock** PID= 0 Sheen= No Odor= No P2 100 P- 2 (3.0-6.0) Clayey SAND, SC; tan, low plasticity, moist. Alluvium. 3.0 - 8.0 (P-2) Clayey SAND, SC; PID= 0 tan, low plasticity, moist; (Alluvium) Sheen= No Sample submitted for lab test = 6236 (4'-5') Odor= No 5 P- 3 (6.0-8.0) Clayey SAND, SC; tan, low plasticity, moist. Alluvium. P3 100 (P-3) PID= 0 Sheen= No Odor= No Drilling refusal at 8' (8.0) Bottom of hole. MAN.GDT 09/03/11 Backfilled with; Bentonite Chip (8'-0.5') AC Cold Mix (0.5'-0') 10 ODOT DRILL LOG 62-U2-P1-HAZMAT.GPJ ODOT_

Appendix E

Laboratory Analytical Data

State of Oregon Sample Chain of Custody

Agency Authorized Purchas	ser or Agent:			Confra	ct ah	oratory	Contract Laboratory Name:	1 sh Soloction Criteria:	ioi	Turn Around Time.
DODOT				PACE				Downing (if TAT < 72 hrs.)	72 hre)	Y 10 days (etd.)
Sand Lab Banart To: ODOT				t ob Rotch #:	tob #:				· / £ 1113)	A loudys (stat.)
Send Lab Report 10: ODO!				Lab be	ICU #:			☐ Prior work on same project	e project	☐ 5 days
Address: 3500 S	3500 Stewart Parkway	ay 7470		Invoice To:	:0 10:			X	ated	72 hours
	Nosebulg, Olegoli 37470	2		Address:	S:	SAME		analyses)	ified or unable	48 hours
—————————————————————————————————————				‡ 				to perform requested services	led services	24 hours
Project Name	Hwy	Hwy 62 Phase-1	7	÷	ľ		Sample Breconvetive	L Emergency work	1	
Project #:				2.2						
Sampler Name:	Ken	Kenny Camp		2-4	37	_ds	Requested Analyses	laiyses	Τ	
Sample ID#	Collection Matrix Date/Time	Matrix	Number of Contain	HOT WIN		11 11m± 2015				Comments
Sport 19.12 6223 C/L	8:50 6/7	Soil	1		×					
Stack wile bazzen	8:32 47	4	/		×					
6201 0-3866	12:50 4/6	16	/	×		×				
6201 3-5.5806	12:55 46	11	/	×						
6201B 0-386L	1:57 6/6	11	/	×						
6301B 4"-5" BGL	2:02 6/6	"	/	×						
62018 5.4 861	2:02 4/6	"	1	X						
6201 C 0'-3 BGL	3:18 6/6	-	1	×						
10202 0-38cc	1.72 6/4	"	1	×						
62038 6-3861	1/0 Sh:E	11	/	×		×				
6203 1-2866	3:16 6/6	//	/	×						
6203 2.3'864	3:16 6/6	11	/	×						
Notes:										
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6205 5-6 866		4:12 6/4	11	,	×								
6205 8-9 BGL		4:16 6/6	11		×	×							
6206 1-2,866		12:38 6/7	11	1				-					
6206 2'-3 BGL		13:28 6/7	//	1		×							
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6209 0-3 1366	1:19 6/7	1.05	,				×					1
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6210 3-4 866	1:57 617	4	1		×		-					
6211 0-3 BGC	2:09 6/7	11	_				×					
6211 4"-5" BGL	2:15 617	11	_		×							
6212 0-3 BGL	2:49 6/7	*	_	×		×						
6212 3-4.3 866	2:52 6/7	ţ	1		×	\dashv						
6213 0-3 BEL	2:39 6/7	1	/			×						
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6215 0-3'66-6	7:59 6/8	4	//	×							
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State of Oregon Sample Chain of Custody

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Sample ID# Collection Matrix Number Processing Sample ID# Collection Matrix Number Processing States of Collection Matrix Collection States of Collection States o	Sampler Name:	Kenny C	amp	Ma	+	Requested Ana	lyses		
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State of Oregon Sample Chain of Custody

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6225 0-3 1866	8:07 6/7	1 1	×			
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6226 0-3 866	7:34 47 11	1 /	×			:
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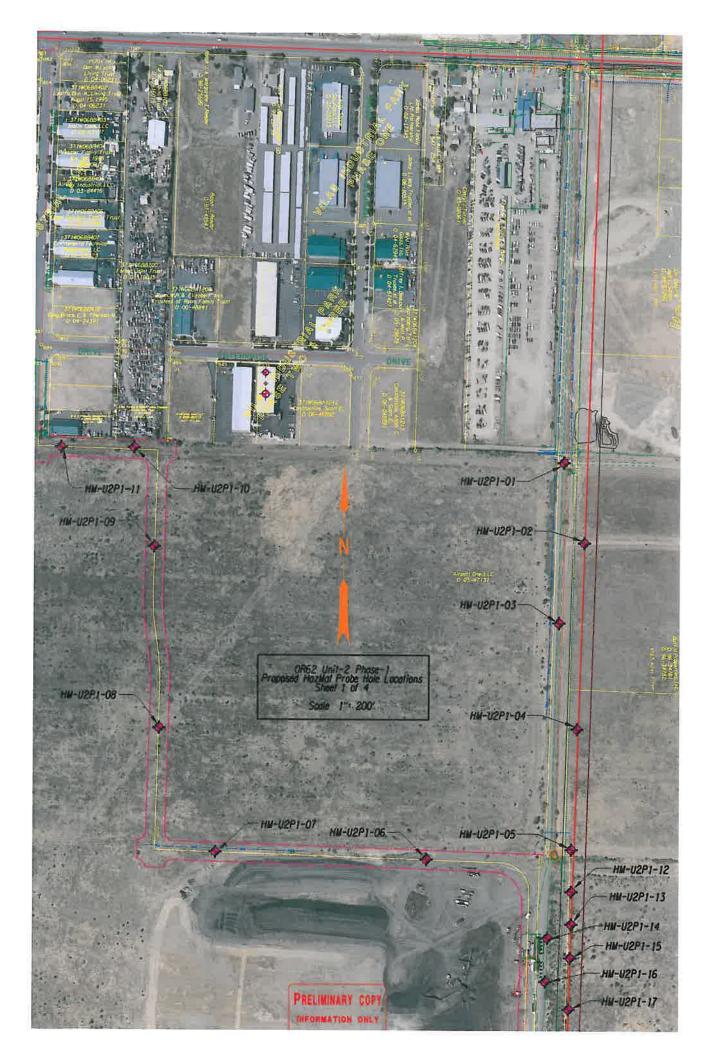
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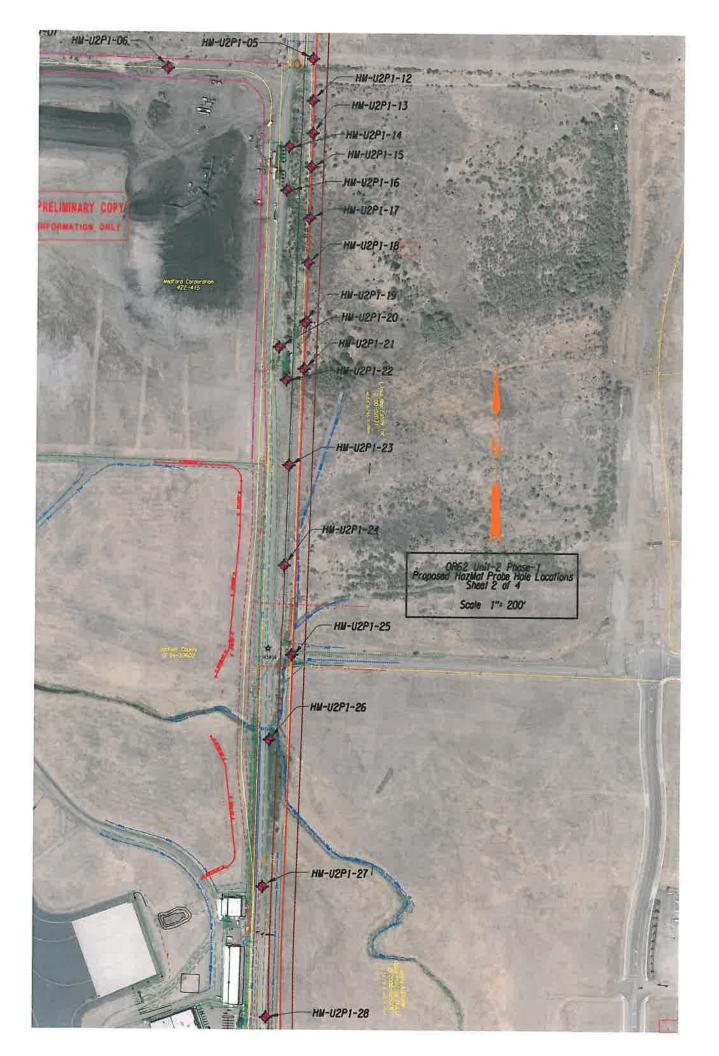
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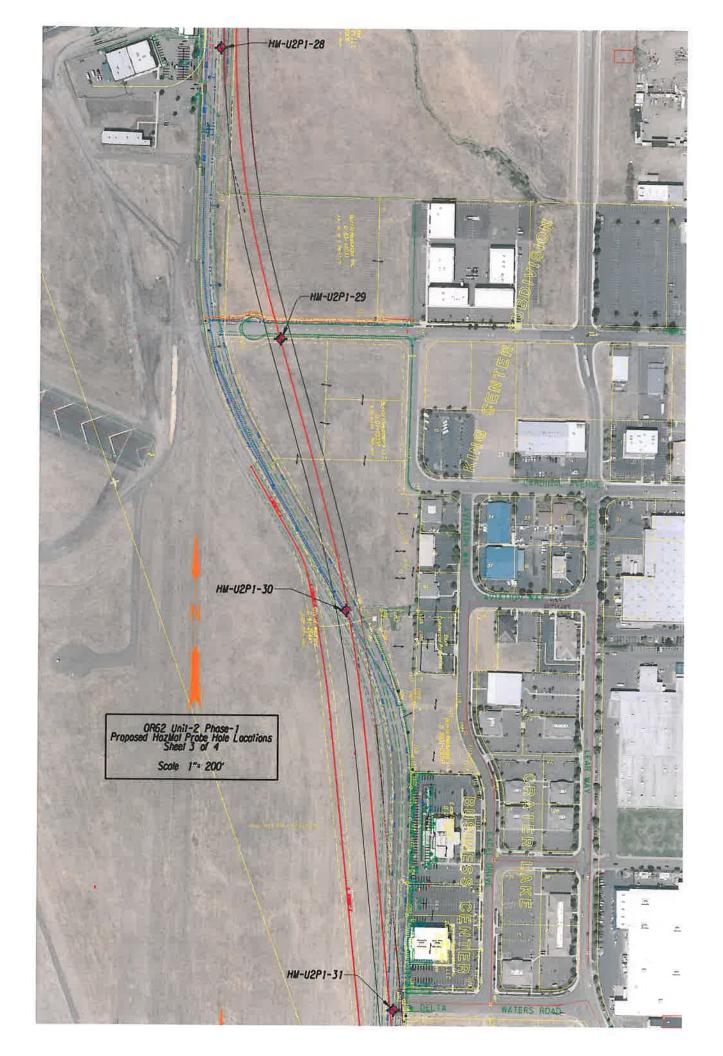
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6230 4'-5 866	10:45 6/6	77	-	×	~				
6431 0.3 866	9:55 6/6	1	_	×		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
6232 3-6 866	1/9 8/16	//	-		×				
6233 0-3BGL	8:51 6/6	4	-	×	_				
6234 0-3B6L	8:24 6/6	//	_	×	-				
6234 3-4 B6L	8:30 6/6	1	-		×				
6235 0-3,1364	7:55 66	//	,	X		X			,
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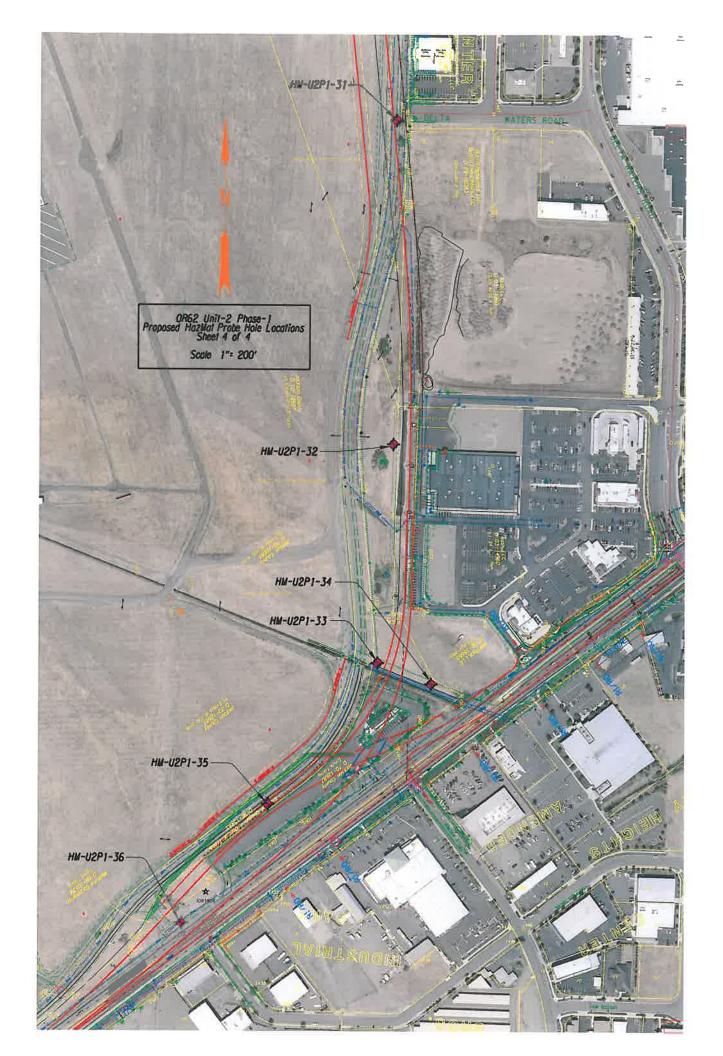
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Sampler Name:	Ken	Kenny Camp			£	Re	Requested Analyses	Analyse	S				
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June 24, 2011

Kenny Camp ODOT 3500 NW Stewart Pkwy Roseburg, OR 97470

RE: Project: Hwy 62 Phase - 1

Pace Project No.: 258066

Dear Kenny Camp:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Andy Brownfield

Anoy Brownfuld

andy.brownfield@pacelabs.com

Project Manager

Enclosures

cc: Jennie Armstrong, ODOT





Pace Analytical Services, Inc. 940 South Hamey Seattle, WA 98108 (206)767-5060

CERTIFICATIONS

Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108
Alaska CS Certification #: UST-025
Alaska Drinking Water VOC Certification #: WA01230
Alaska Drinking Water Micro Certification #: WA01230

California Certification #: 01153CA Florida/NELAP Certification #: E87617 Oregon Certification #: WA200007 Washington Certification #: C1229





Project:

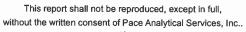
Hwy 62 Phase - 1

Pace Project No.: 258066

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
258066001	Stockpile 6223 C/L	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066002	Stockpile 6224 N	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066003	6201 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		EPA 8270	ERB	72	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066004	6201 3'-5.5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066005	6201B 0'-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066006	6201B 4'-5' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066007	6201B 5'-6' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066008	6201C 0'-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066009	6202 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066010	6202B 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066011	6203 1-2 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066012	6203 2'-3' BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066013	6203 3'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066014	6203 6'-6.5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066015	6204 0'-2 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066016	6205 0'-3' BGL	EPA 8082	ERB	9	PASI-S
		NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066017	6205 4'-5' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066018	6205 5'-6' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066019	6205 8'-9' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S

REPORT OF LABORATORY ANALYSIS

Page 3 of 71







Project:

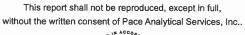
Hwy 62 Phase - 1

Pace Project No.: 258066

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	KJ1	1	PASI-S
258066020	6206 1'-2' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066021	6206 2'-3' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066022	6207 0'-2.5 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066023	6208 0'-3' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066024	6208 4'-5' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066025	6209 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066026	6209 3-4' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066027	6210 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066028	6210 3-4 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066029	6211 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066030	6211 4'-5' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066031	6212 0-3 BGL	EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066032	6212 3'-4.3 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066033	6213 0-3 BGL	EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066034	6213 4'-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066035	6213 5'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066036	6214 0-3' BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066037	6214 4-5' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066038	6214 5'-6' BGL	ASTM D2974-87	KJ1	1	PASI-S

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Project:

Hwy 62 Phase - 1

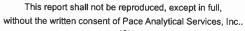
Pace Project No.:

258066

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
258066039	6214 8'-9' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066040	6215 0-3' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066041	6215 3'-4.5 BGL	EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066042	6216 0-3' BGL	EPA 8082	ERB	9	PASI-S
		NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066043	6216 5-6' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066044	6216 7'-8' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066045	6217 2'-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066046	6217 4-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066047	6218 3'-6 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066048	6218 7-8' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066049	6219 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066050	6219 3'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066051	6220 0-3 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066052	6220 5'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066053	6220 8-9 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066054	6221 0-3 BGL	EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066055	6221 3-4.3 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066056	6222 0-3' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066057	6222 4-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066058	6222 5'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066059	6222 11'-12' BGL	EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S

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Project:

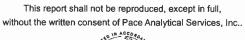
Hwy 62 Phase - 1

Pace Project No.: 258066

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
258066060	6223 0-3 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066061	6223 6-9 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066062	6224 3'-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066063	6224 5.5-6.5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066064	6225 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066065	6225 3'-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066066	6226 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066067	6226 5-6 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066068	6227 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066069	6227 4-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066070	6227 5-6 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066071	6228 0-3' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066072	6228 4-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066073	6229 0-3 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066074	6229 4'-5 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066075	6230 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	48	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066076	6230 4'-5 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066077	6231 0-3 BGL	NWTPH-Dx	AY1	4	PASI-S
		EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066078	6232 3-6 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	KJ1	1	PASI-S
258066079	6233 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066080	6234 0-3 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066081	6234 3-4' BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066082	6235 0-3' BGL	EPA 8082	ERB	9	PASI-S
		NWTPH-Dx	AY1	4	PASI-S
		EPA 8270 by SIM	ERB	20	PASI-S
		EPA 8270	ERB	54	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066083	6235 3-6' BGL	ASTM D2974-87	KJ1	1	PASI-S
258066084	6235 6-9 BGL	ASTM D2974-87	KJ1	1	PASI-S
258066085	6236 0-3' BGL	NWTPH-Dx	AY1	4	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S
258066086	6236 4-5 BGL	EPA 6010	BGA	7	PASI-S
		EPA 7471	BGA	1	PASI-S
		ASTM D2974-87	KJ1	1	PASI-S





Project:

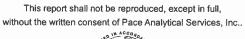
Hwy 62 Phase - 1

Pace Project No.: 258066									
Sample: Stockpile 6223 C/L	Lab ID: 25806	6001	Collected:	06/07/1	1 08:50	Received: 06	6/10/11 09:50 I	Matrix: Solid	
Results reported on a "dry-we	ight" basis								
Parameters	Results	Units	Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method	d: EPA 60	010 Prepara	tion Meth	nod: EPA	A 3050		•	
Arsenic	ND mg/k	g		13.1	5	06/16/11 07:52	06/17/11 10:06	7440-38-2	
Barium	279 mg/k	-		26.2	1		06/17/11 12:04		
Cadmium	ND mg/k	g		6.6	5	06/16/11 07:52	06/17/11 10:06	7440-43-9	
Chromium	56.4 mg/k	g		1.3	1	06/16/11 07:52	06/17/11 12:04	7440-47-3	
Lead	7.4 mg/k	g		1.3	1	06/16/11 07:52	06/17/11 12:04	7439-92-1	
Selenium	ND mg/k	g		6.6	5	06/16/11 07:52	06/17/11 10:06	7782-49-2	
Silver	ND mg/k	g		6.6	5	06/16/11 07:52	06/17/11 10:06	7440-22-4	D3
7471 Mercury	Analytical Method	d: EPA 74	71 Prepara	tion Meth	nod: EPA	A 7471			
Mercury	ND mg/k	g		0.13	1	06/20/11 15:17	06/21/11 11:32	7439-97-6	
Percent Moisture	Analytical Method	d: ASTM	D2974-87						
Percent Moisture	27.4 %			0.10	1		06/13/11 16:19	ı	
Sample: Stockpile 6224 N	Lab ID: 25806	6002	Callagtad	06/07/4	4.00.22	Danisada 00	140/44 00:50 B	death Calle	
Results reported on a "dry-well		0002	Collected:	06/07/1	1 08:32	Received: 06	/10/11 09:50 1	Matrix: Solid	
Parameters	Results	Units	Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method	d: FPA 60			od: FP/				
Arsenic	•		To Tropara				00/47/44 40:40	7440.00.0	
Barium	ND mg/k 619 mg/k	-		12.5 125	5 5		06/17/11 10:10		
Cadmium	ND mg/k	_		6.3	5 5		06/17/11 10:10 06/17/11 10:10		
Chromium	51.3 mg/k	-		1.3	1		06/17/11 10:10		
Lead	6.8 mg/k	_		6.3	5		06/17/11 10:10		
Selenium	ND mg/k	-		6.3	5		06/17/11 10:10		
Silver	ND mg/k	-		6.3	5		06/17/11 10:10		D3
7471 Mercury	Analytical Method	d: EPA 74	71 Preparat	tion Meth	od: EPA	A 7471			
Mercury	ND mg/k	g	·	0.090	1	06/20/11 15:17	06/21/11 11:34	7439-97-6	
Percent Moisture	Analytical Method	- d: ASTM (D2974-87						
Percent Moisture	27.4 %			0.10	1		06/13/11 16:19		
Sample: 6201 0-3 BGL Results reported on a "dry-wei	Lab ID: 25806	6003	Collected:	06/06/1	1 12:50	Received: 06	/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-wei Parameters	gnt" basis Results	Units	Report	t I imit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method	_					- Alialy260		
	•		г-ох гтераг						
Diesel Range	292 mg/k	~		78.6	5		06/18/11 04:20		
Motor Oil Range	849 mg/kg	g		314	5		06/18/11 04:20		
n-Octacosane (S)	103 %			50-150	5	06/17/11 10:15	06/18/11 04:20	630-02-4	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6201 0-3 BGL

Lab ID: 258066003

Collected: 06/06/11 12:50 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS	Analytical Met	hod: NWTPH-	Dx Preparation Me	ethod: l	EPA 3546			
o-Terphenyl (S)	104 %		50-150	5	06/17/11 10:15	06/18/11 04:20	84-15-1	
8270 MSSV Semivolatiles	Analytical Met	hod: EPA 8270	Preparation Meth	nod: EF	PA 3546			
Acenaphthene	ND ug	g/kg	344	1	06/14/11 15:15	06/21/11 02:13	83-32-9	
Acenaphthylene	ND ug	g/kg	344	1	06/14/11 15:15	06/21/11 02:13	208-96-8	
Anthracene	ND ug	g/kg	344	1	06/14/11 15:15	06/21/11 02:13	120-12-7	
Benzo(a)anthracene	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	56-55-3	
Benzo(a)pyrene	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	50-32-8	
Benzo(b)fluoranthene	ND ug	_	344	1		06/21/11 02:13		
Benzo(g,h,i)perylene	ND ug		344	1		06/21/11 02:13		
Benzo(k)fluoranthene	ND ug	-	344	1		06/21/11 02:13		
Benzoic acid	ND ug	-	1720	1		06/21/11 02:13		
Benzyl alcohol	ND ug		344	1		06/21/11 02:13		
4-Bromophenylphenyl ether	ND ug		344	1		06/21/11 02:13		
Butylbenzylphthalate	ND ug	_	344	1		06/21/11 02:13		
I-Chloro-3-methylphenol	ND ug	•	344	1				
l-Chloroaniline	ND ug	-	344	1		06/21/11 02:13		
ois(2-Chloroethoxy)methane						06/21/11 02:13		
is(2-Chloroethyl) ether	ND ug		344	1		06/21/11 02:13		
• • • •	ND ug		344	1		06/21/11 02:13		
is(2-Chloroisopropyl) ether	ND ug	•	344	1		06/21/11 02:13		
-Chloronaphthalene	ND ug	-	344	1		06/21/11 02:13		
-Chlorophenol	ND ug		344	1		06/21/11 02:13		
-Chlorophenylphenyl ether	ND ug	_	344	1		06/21/11 02:13		
Chrysene	ND ug	-	344	1		06/21/11 02:13		
ibenz(a,h)anthracene	ND ug	-	344	1	06/14/11 15:15	06/21/11 02:13	53-70-3	
Dibenzofuran	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	132-64-9	
,2-Dichlorobenzene	ND ug	•	344	1	06/14/11 15:15	06/21/11 02:13	95-50-1	
,3-Dichlorobenzene	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	541-73-1	
,4-Dichlorobenzene	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	106-46-7	
,3'-Dichlorobenzidine	ND ug	ı/kg	344	1	06/14/11 15:15	06/21/11 02:13	91-94-1	
,4-Dichlorophenol	ND ug	/kg	344	1	06/14/11 15:15	06/21/11 02:13	120-83-2	
Piethylphthalate	ND ug	/kg	344	1	06/14/11 15:15	06/21/11 02:13	84-66-2	
,4-Dimethylphenol	ND ug	/kg	344	1	06/14/11 15:15	06/21/11 02:13	105-67-9	
Dimethylphthalate	ND ug	/kg	344	1	06/14/11 15:15	06/21/11 02:13	131-11-3	
Pi-n-butylphthalate	ND ug	/kg	344	1		06/21/11 02:13		
,6-Dinitro-2-methylphenol	ND ug	/kg	344	1		06/21/11 02:13		
,4-Dinitrophenol	ND ug		699	1		06/21/11 02:13		
4-Dinitrotoluene	ND ug	•	344	1		06/21/11 02:13		
,6-Dinitrotoluene	ND ug		344	1		06/21/11 02:13		
pi-n-octylphthalate	ND ug		344	1		06/21/11 02:13		
is(2-Ethylhexyl)phthalate	800 ug	-	344	1		06/21/11 02:13		
luoranthene	ND ug	•	344	1		06/21/11 02:13		
luorene	ND ug	-	344	1		06/21/11 02:13		
lexachloro-1,3-butadiene	ND ug	-	344	1				
lexachlorobenzene	ND ug	-				06/21/11 02:13		
CAGOINOUDENZENE	ug עמו	/NY	344	1	00/14/11 15:15	06/21/11 02:13	118-74-1	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6201 0-3 BGL Lab ID: 258066003 Collected: 06/06/11 12:50 Received: 06/10/11 09:50 Matrix: Solid Results reported on a "dry-weight" basis **Parameters** Results Units Report Limit Prepared Analyzed CAS No. Qual 8270 MSSV Semivolatiles Analytical Method: EPA 8270 Preparation Method: EPA 3546 Hexachloroethane ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 67-72-1 Indeno(1,2,3-cd)pyrene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 193-39-5 Isophorone ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 78-59-1 1-Methylnaphthalene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 90-12-0 2-Methylnaphthalene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 91-57-6 2-Methylphenol(o-Cresol) ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 95-48-7 ND ug/kg 3&4-Methylphenol(m&p Cresol) 344 1 06/14/11 15:15 06/21/11 02:13 Naphthalene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 91-20-3 1 ND ug/kg 2-Nitroaniline 344 06/14/11 15:15 06/21/11 02:13 88-74-4 3-Nitroaniline ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 99-09-2 4-Nitroaniline ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 100-01-6 Nitrobenzene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 98-95-3 2-Nitrophenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 88-75-5 4-Nitrophenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 100-02-7 N-Nitroso-di-n-propylamine ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 621-64-7 N-Nitrosodiphenylamine ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 86-30-6 Pentachlorophenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 87-86-5 Phenanthrene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 85-01-8 Phenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 108-95-2 Pyrene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 129-00-0 1,2,4-Trichlorobenzene ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 120-82-1 2,4,5-Trichlorophenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 95-95-4 2,4,6-Trichlorophenol ND ug/kg 344 06/14/11 15:15 06/21/11 02:13 88-06-2 Nitrobenzene-d5 (S) 75 % 40-138 06/14/11 15:15 06/21/11 02:13 4165-60-0 2-Fluorobiphenyl (S) 46-118 06/14/11 15:15 06/21/11 02:13 321-60-8 80 % Terphenyl-d14 (S) 80 % 41-137 06/14/11 15:15 06/21/11 02:13 1718-51-0 Phenol-d6 (S) 78 % 44-120 06/14/11 15:15 06/21/11 02:13 13127-88-3 2-Fluorophenol (S) 77 % 37-117 06/14/11 15:15 06/21/11 02:13 367-12-4 2,4,6-Tribromophenol (S) 80 % 26-135 06/14/11 15:15 06/21/11 02:13 118-79-6 **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 4.2 % 0.10 1 06/13/11 16:20 Sample: 6201 3'-5.5 BGL Lab ID: 258066004 Collected: 06/06/11 12:55 Received: 06/10/11 09:50 Matrix: Solid Results reported on a "dry-weight" basis **Parameters** Units Report Limit DF Prepared Analyzed CAS No. Qual **Percent Moisture** Analytical Method: ASTM D2974-87

Date: 06/24/2011 04:23 PM

Percent Moisture

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0.10

1

06/13/11 16:20

8.0 %





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6201B 0'-3 BGL

Lab ID: 258066005

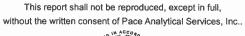
Collected: 06/06/11 13:57 Received: 06/10/11 09:50 Matrix: Solid

Sample: 6201B 0'-3 BGL	Lab ID: 258	066005	Collected:	06/06/1	1 13:57	Received: 06	6/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Metl	hod: NWTPl	H-Dx Prepar	ration Me	thod: E	PA 3546			
Diesel Range	256 mg	g/kg		82.9	5	06/17/11 10:15	06/18/11 04:37		
Motor Oil Range	1300 mg	g/kg		332	5	06/17/11 10:15	06/18/11 04:37	64742-65-0	
n-Octacosane (S)	108 %			50-150	5	06/17/11 10:15	06/18/11 04:37	630-02-4	
o-Terphenyl (S)	104 %			50-150	5	06/17/11 10:15	06/18/11 04:37	84-15-1	
Percent Moisture	Analytical Metl	hod: ASTM [02974-87						
Percent Moisture	9.3 %			0.10	1		06/13/11 16:21		
Sample: 6201B 4'-5' BGL	Lab ID: 258	066006	Collected:	06/06/1	1 14:02	Received: 06	6/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Meth	hod: ASTM [02974-87						
Percent Moisture	28.6 %			0.10	1		06/13/11 16:22		
Sample: 6201B 5'-6' BGL	Lab ID: 258	066007	Collected:	06/06/1	1 14:02	Received: 06	6/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Meth	hod: ASTM [02974-87				*		
Percent Moisture	26.2 %			0.10	1		06/13/11 16:22		
Sample: 6201C 0'-3 BGL	Lab ID: 258	066008	Collected:	06/06/1	1 14:18	Received: 06	6/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Meth	hod: NWTPH	l-Dx Prepar	ation Me	thod: El	PA 3546	•		
Diesel Range	546 mg	g/kg		84.4	5	06/17/11 10:15	06/18/11 04:53		
Motor Oil Range	1780 mg	• •		337	5		06/18/11 04:53	64742-65-0	
n-Octacosane (S)	112 %			50-150	5		06/18/11 04:53		
o-Terphenyl (S)	105 %			50-150	5	06/17/11 10:15	06/18/11 04:53	84-15-1	
Percent Moisture	Analytical Meth	hod: ASTM E	2974-87						
Percent Moisture	8.0 %			0.10	1		06/13/11 16:23		

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

Percent Moisture

258066

Sample: 6202 0-3 BGL

Lab ID: 258066009 Collected: 06/06/11 13:12 Received: 06/10/11 09:50 Matrix: Solid

1

06/13/11 16:24

06/14/11 15:15 06/21/11 03:20 111-44-4

Results reported on a "dry-weight" basis

Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual

Percent Moisture Analytical Method: ASTM D2974-87

0.10

31.1 %

Sample: 6202B 0-3 BGL	Lab ID: 258066010	Collected: 06/06/1	1 14:45	Received: 06	6/10/11 09:50 I	Matrix: Solid	
Results reported on a "dry-weig	ht" basis						
Parameters	Results Unit	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS	Analytical Method: NW	TPH-Dx Preparation Me	thod: E	PA 3546			
Diesel Range	243 mg/kg	79.6	5	06/17/11 10:15	06/18/11 05:25		
Motor Oil Range	655 mg/kg	318	5	06/17/11 10:15	06/18/11 05:25	64742-65-0	
n-Octacosane (S)	100 %	50-150	5	06/17/11 10:15	06/18/11 05:25	630-02-4	
o-Terphenyl (S)	102 %	50-150	5	06/17/11 10:15	06/18/11 05:25	84-15-1	
8270 MSSV PAH by SIM	Analytical Method: EPA	8270 by SIM Preparation	on Meth	nod: EPA 3546			
Acenaphthene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	83-32-9	
Acenaphthylene	ND ug/kg	7.2	1		06/15/11 17:30		
Anthracene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	120-12-7	
Benzo(a)anthracene	ND ug/kg	7.2	1		06/15/11 17:30		
Benzo(a)pyrene	ND ug/kg	7.2	1		06/15/11 17:30		
Benzo(b)fluoranthene	7.7 ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	205-99-2	
Benzo(g,h,i)perylene	9.1 ug/kg	7.2	1		06/15/11 17:30		
Benzo(k)fluoranthene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	207-08-9	
Chrysene	28.5 ug/kg	7.2	1		06/15/11 17:30		
Dibenz(a,h)anthracene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	53-70-3	
Fluoranthene	ND ug/kg	7.2	1		06/15/11 17:30		
Fluorene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	86-73-7	
ndeno(1,2,3-cd)pyrene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	193-39-5	
1-Methylnaphthalene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	90-12-0	
2-Methylnaphthalene	8.5 ug/kg	7.2	1		06/15/11 17:30		
Naphthalene	ND ug/kg	7.2	1	06/14/11 15:15	06/15/11 17:30	91-20-3	
Phenanthrene	19.4 ug/kg	7.2	1		06/15/11 17:30		
^o yrene	24.7 ug/kg	7.2	1		06/15/11 17:30		
2-Fluorobiphenyl (S)	76 %	31-131	1		06/15/11 17:30		
Terphenyl-d14 (S)	80 %	30-133	1	06/14/11 15:15	06/15/11 17:30	1718-51-0	
3270 MSSV Semivolatiles	Analytical Method: EPA	8270 Preparation Metho	od: EP/	A 3546			
Benzoic acid	ND ug/kg	1760	1	06/14/11 15:15	06/21/11 03:20	65-85-0	
Benzyl alcohol	ND ug/kg	352	1		06/21/11 03:20		
1-Bromophenylphenyl ether	ND ug/kg	352	1		06/21/11 03:20		
Butylbenzylphthalate	ND ug/kg	352	1		06/21/11 03:20		
1-Chloro-3-methylphenol	ND ug/kg	352	1		06/21/11 03:20		
1-Chloroaniline	ND ug/kg	352	1		06/21/11 03:20		
ois(2-Chloroethoxy)methane	ND ug/kg	352	1		06/21/11 03:20		
h!+(0 Oblass -4b.sl) -4b-ss	ND "	050		00111111111	20/2/// 20/20		

Date: 06/24/2011 04:23 PM

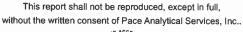
bis(2-Chloroethyl) ether

REPORT OF LABORATORY ANALYSIS

352

ND ug/kg

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6202B 0-3 BGL

Lab ID: 258066010

Collected: 06/06/11 14:45 Received: 06/10/11 09:50 Matrix: Solid

resuns reported	on a	ary-weignt	Dasis
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Meth	nod: EPA 827	0 Preparation Met	nod: EF	PA 3546			
bis(2-Chloroisopropyl) ether	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	39638-32-9	
2-Chloronaphthalene	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	91-58-7	
2-Chlorophenol	ND ug	/kg	352	1		06/21/11 03:20		
4-Chlorophenylphenyl ether	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	7005-72-3	
Dibenzofuran	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	132-64-9	
1,2-Dichlorobenzene	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	95-50-1	
1,3-Dichlorobenzene	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	541-73-1	
1,4-Dichlorobenzene	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	106-46-7	
3,3'-Dichlorobenzidine	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	91-94-1	
2,4-Dichlorophenol	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	120-83-2	
Diethylphthalate	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	84-66-2	
2,4-Dimethylphenol	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	105-67-9	
Dimethylphthalate	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	131-11-3	
Di-n-butylphthalate	ND ug		352	1	06/14/11 15:15	06/21/11 03:20	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	534-52-1	
2,4-Dinitrophenol	ND ug	/kg	715	1	06/14/11 15:15	06/21/11 03:20	51-28-5	
2,4-Dinitrotoluene	ND ug	/kg	352	1		06/21/11 03:20		
2,6-Dinitrotoluene	ND ug		352	1		06/21/11 03:20		
Di-n-octylphthalate	ND ug		352	1		06/21/11 03:20		
bis(2-Ethylhexyl)phthalate	ND ug	/kg	352	1		06/21/11 03:20		
Hexachloro-1,3-butadiene	ND ug	/kg	352	1		06/21/11 03:20		
Hexachlorobenzene	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	118-74-1	
Hexachlorocyclopentadiene	ND ug	/kg	352	1		06/21/11 03:20		
Hexachloroethane	ND ug	/kg	352	1	06/14/11 15:15	06/21/11 03:20	67-72-1	
Isophorone	ND ug	/kg	352	1		06/21/11 03:20		
2-Methylphenol(o-Cresol)	ND ug/	/kg	352	1		06/21/11 03:20		
3&4-Methylphenol(m&p Cresol)	ND ugi	/kg	352	1	06/14/11 15:15			
2-Nitroaniline	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	88-74-4	
3-Nitroaniline	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	99-09-2	
4-Nitroaniline	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	100-01-6	
Nitrobenzene	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	98-95-3	
2-Nitrophenol	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	88-75-5	
4-Nitrophenol	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	100-02-7	
N-Nitroso-di-n-propylamine	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	621-64-7	
N-Nitrosodiphenylamine	ND ug/	/kg	352	1	06/14/11 15:15	06/21/11 03:20	86-30-6	
Pentachlorophenol	ND ug/	/kg	352	1		06/21/11 03:20		
Phenol	ND ug/	/kg	352	1		06/21/11 03:20		
1,2,4-Trichlorobenzene	ND ug/	/kg	352	1		06/21/11 03:20		
2,4,5-Trichlorophenol	ND ug/	/kg	352	1		06/21/11 03:20		
2,4,6-Trichlorophenol	ND ug/		352	1		06/21/11 03:20		
Nitrobenzene-d5 (S)	86 %	-	40-138	1		06/21/11 03:20		
2-Fluorobiphenyl (S)	93 %		46-118	1		06/21/11 03:20		
Terphenyl-d14 (S)	93 %		41-137	1		06/21/11 03:20		
Phenol-d6 (S)	88 %		44-120	1		06/21/11 03:20		
							00 0	
2-Fluorophenol (S)	87 %		37-117	1	06/14/11 15:15	06/21/11 03:20	367-12-4	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6202B 0-3 BGL

Lab ID: 258066010

Collected: 06/06/11 14:45

Received: 06/10/11 09:50

Prepared

Prepared

Matrix: Solid

Results reported on a "dry-weight" basis

Parameters

Results

Units Report Limit DF

Prepared Analyzed CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture

7.4 %

0.10 1 06/13/11 16:24

Sample: 6203 1-2 BGL

Lab ID: 258066011

Report Limit

Analyzed

Results

Collected: 06/06/11 15:16 Received: 06/10/11 09:50

DF

1

1

DF

1

1

1

DF

1

Matrix: Solid

Qual

Qual

CAS No.

Results reported on a "dry-weight" basis

Parameters

NWTPH-Dx GCS Analytical Method: NWTPH-Dx Preparation Method: EPA 3546

Diesel Range 181 mg/kg Motor Oil Range 385 mg/kg n-Octacosane (S) 108 %

o-Terphenyl (S) 106 % **Percent Moisture**

Analytical Method: ASTM D2974-87

0.10 1

16.3

65.3

50-150

50-150

06/13/11 16:24

Analyzed

06/17/11 10:15 06/18/11 05:58 64742-65-0

06/17/11 10:15 06/18/11 05:58 630-02-4

06/17/11 10:15 06/18/11 05:58 84-15-1

06/17/11 10:15 06/18/11 05:41 64742-65-0

06/17/11 10:15 06/18/11 05:41 630-02-4

06/17/11 10:15 06/18/11 05:41 84-15-1

Sample: 6203 2'-3' BGL

Percent Moisture

Lab ID: 258066012

Results

5.8 %

Collected: 06/06/11 15:16

16.0

63.9

50-150

50-150

Report Limit

Received: 06/10/11 09:50

06/17/11 10:15 06/18/11 05:58

06/17/11 10:15 06/18/11 05:41

CAS No.

Results reported on a "dry-weight" basis

Parameters

NWTPH-Dx GCS Analytical Method: NWTPH-Dx Preparation Method: EPA 3546 Diesel Range 129 mg/kg

Motor Oil Range 257 mg/kg n-Octacosane (S) 107 % o-Terphenyl (S) 101 %

Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture 7.6 %

0.10

06/13/11 16:25

Sample: 6203 3'-6 BGL

Results reported on a "dry-weight" basis **Parameters**

Lab ID: 258066013

Results

Collected: 06/06/11 15:21

Report Limit

Received: 06/10/11 09:50

Prepared

Matrix: Solid

CAS No.

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Percent Moisture

7.1 %

0.10

06/13/11 16:29

Analyzed

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS This report shall not be reproduced, except in full.

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Qual







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis

Sample: 6203 6'-6.5 BGL

Lab ID: 258066014

Collected: 06/06/11 15:25

Report Limit

Received: 06/10/11 09:50

Prepared

Qual

CAS No.

Parameters

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture Percent Moisture

30.7 %

Results

0.10 1 06/13/11 16:29

Analyzed

Sample: 6204 0'-2 BGL

Lab ID: 258066015

Matrix: Solid

Collected: 06/06/11 13:35

Received: 06/10/11 09:50

Report Limit DF Prepared

Results reported on a "dry-weight" basis

Parameters Results

1

5

DF

Analyzed

06/16/11 07:52 06/17/11 10:19 7440-38-2

06/16/11 07:52 06/17/11 12:16 7440-39-3

06/16/11 07:52 06/17/11 10:19 7440-22-4

CAS No. Qual

D3

6010 MET ICP Arsenic

Cadmium

Chromium

Selenium

Lead

Analytical Method: EPA 6010 Preparation Method: EPA 3050 ND mg/kg 12.4 Barium 172 mg/kg 24.7

ND mg/kg 143 mg/kg 8.9 mg/kg

6.2 1.2 06/16/11 07:52 06/17/11 12:16 7440-47-3 6.2 06/16/11 07:52 06/17/11 10:19 7439-92-1 6.2 5 06/16/11 07:52 06/17/11 10:19 7782-49-2

06/16/11 07:52 06/17/11 10:19 7440-43-9

Silver 7471 Mercury

ND mg/kg Analytical Method: EPA 7471 Preparation Method: EPA 7471

Analytical Method: ASTM D2974-87

Mercury ND mg/kg

ND mg/kg

0.083

6.2

06/20/11 15:17 06/21/11 11:36 7439-97-6

Percent Moisture Percent Moisture

26.4 %

0.10

06/13/11 16:30

06/17/11 10:15 06/18/11 06:14 84-15-1

Sample: 6205 0'-3' BGL

Lab ID: 258066016

113 %

Collected: 06/06/11 16:07

Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB S	Analytical Met	hod: EPA 808	2 Preparation Met	hod: EF	PA 3546		- · · ·	
PCB-1016 (Aroclor 1016)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	12674-11-2	
PCB-1221 (Aroclor 1221)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	11104-28-2	
PCB-1232 (Aroclor 1232)	ND uç	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	11141-16-5	
PCB-1242 (Aroclor 1242)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	53469-21-9	
PCB-1248 (Aroclor 1248)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	12672-29-6	
PCB-1254 (Aroclor 1254)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	11097-69-1	
PCB-1260 (Aroclor 1260)	ND ug	g/kg	17.8	1	06/20/11 10:20	06/22/11 14:19	11096-82-5	
Tetrachloro-m-xylene (S)	68 %		29-128	1	06/20/11 10:20	06/22/11 14:19	877-09-8	
Decachlorobiphenyl (S)	64 %		23-129	1	06/20/11 10:20	06/22/11 14:19	2051-24-3	
NWTPH-Dx GCS	Analytical Met	hod: NWTPH-	Dx Preparation Me	ethod: f	EPA 3546			
Diesel Range	1460 m	g/kg	82.4	5	06/17/11 10:15	06/18/11 06:14		
Motor Oil Range	2330 m	g/kg	330	5	06/17/11 10:15	06/18/11 06:14	64742-65-0	
n-Octacosane (S)	112 %		50-150	5	06/17/11 10:15	06/18/11 06:14	630-02-4	

Date: 06/24/2011 04:23 PM

o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

50-150

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis **Parameters**

Sample: 6205 0'-3' BGL	
------------------------	--

Lab ID: 258066016

Units

Collected: 06/06/11 16:07

Report Limit

Received: 06/10/11 09:50

Prepared

Matrix: Solid

CAS No.

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

5.7 %

0.10 1

DF

06/13/11 16:30

Analyzed

Sample: 6205 4'-5' BGL

Results

Results reported on a "dry-weight" basis

Lab ID: 258066017

Collected: 06/06/11 16:12

Received: 06/10/11 09:50

Parameters

Results

Units

Report Limit DF Prepared

Analyzed

CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

25.8 %

0.10

1

DF

1

06/13/11 16:31

Sample: 6205 5'-6' BGL

Results reported on a "dry-weight" basis **Parameters**

Lab ID: 258066018

Collected: 06/06/11 16:12

Report Limit

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Qual

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Percent Moisture

26.4 %

Results

0.10

06/13/11 16:32

Analyzed

Sample: 6205 8'-9' BGL

Lab ID: 258066019

Collected: 06/06/11 16:16

Received: 06/10/11 09:50

Prepared

Analyzed

Matrix: Solid

Results reported on a "dry-weight" basis

Parameters Results

Units

Report Limit DF Prepared

CAS No.

6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050

Arsenic ND mg/kg Barium 83.7 mg/kg Cadmium ND mg/kg Chromium 96.7 mg/kg Lead

23.5 mg/kg

ND mg/kg

ND mg/kg

10.8 21.7 5.4 1.1

5 1 5 1

06/16/11 07:52 06/17/11 10:22 7440-38-2 06/16/11 07:52 06/17/11 12:20 7440-39-3

06/16/11 07:52 06/17/11 10:22 7440-43-9 06/16/11 07:52 06/17/11 12:20 7440-47-3 06/16/11 07:52 06/17/11 10:22 7439-92-1

06/16/11 07:52 06/17/11 10:22 7782-49-2 06/16/11 07:52 06/17/11 10:22 7440-22-4 D3

7471 Mercury

Selenium

Silver

Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471 ND mg/kg

0.097

5.4

5.4

5.4

5

5

5

06/20/11 15:17 06/21/11 11:43 7439-97-6

Percent Moisture

Analytical Method: ASTM D2974-87 Percent Moisture 12.1 %

0.10

06/13/11 16:33

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6206 1'-2' BGL

Lab ID: 258066020

Units

Analytical Method: ASTM D2974-87

Collected: 06/07/11 12:28

Report Limit

Received: 06/10/11 09:50

Prepared

Matrix: Solid

CAS No.

Qual

Results reported on a "dry-weight" basis

Parameters Results

Percent Moisture Percent Moisture

27.0 %

0.10

DF

06/13/11 16:34

Sample: 6206 2'-3' BGL

Lab ID: 258066021

Analyzed

Collected: 06/07/11 12:28 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

results reported on a dry-wer	giit basis							
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Met	hod: EPA 601	0 Preparation Met	nod: EF	PA 3050		-	
Arsenic	ND m	g/kg	8.2	5	06/16/11 07:52	06/17/11 10:25	7440-38-2	
Barium	103 m	g/kg	16.4	1	06/16/11 07:52	06/17/11 12:23	7440-39-3	
Cadmium	ND m	g/kg	4.1	5	06/16/11 07:52	06/17/11 10:25	7440-43-9	
Chromium	35.6 m	g/kg	0.82	1	06/16/11 07:52	06/17/11 12:23	7440-47-3	
Lead	4.4 m	g/kg	4.1	5	06/16/11 07:52	06/17/11 10:25	7439-92-1	
Selenium	ND m	g/kg	4.1	5	06/16/11 07:52	06/17/11 10:25	7782-49-2	
Silver	ND m	g/kg	4.1	5	06/16/11 07:52	06/17/11 10:25	7440-22-4	D3
7471 Mercury	Analytical Met	hod: EPA 747	Preparation Meth	nod: EF	PA 7471			
Mercury	ND m	g/kg	0.094	1	06/20/11 15:17	06/21/11 10:32	7439-97-6	
Percent Moisture	Analytical Met	hod: ASTM D2	974-87					
Percent Moisture	8.4 %		0.10	1		06/13/11 16:34		

Lab ID: 258066022

06/13/11 16:34

Sample: 6207 0'-2.5 BGL

Collected: 06/07/11 12:40 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Met	hod: EPA 601	O Preparation Met	hod: EF	PA 3050	·		
Arsenic	ND m	g/kg	11.3	5	06/16/11 07:52	06/17/11 10:29	7440-38-2	
3arium = 1	272 m	g/kg	22.6	1	06/16/11 07:52	06/17/11 12:26	7440-39-3	
Cadmium	ND mg/kg		5.7	5	06/16/11 07:52	06/17/11 10:29	7440-43-9	
Chromium	70.7 mg/kg		1.1	1	06/16/11 07:52	06/17/11 12:26	7440-47-3	
_ead	16.3 mg/kg		5.7	5	06/16/11 07:52	06/17/11 10:29	7439-92-1	
Selenium	ND m	g/kg	5.7	5	06/16/11 07:52	06/17/11 10:29	7782-49-2	
Bilver	ND m	g/kg	5.7	5	06/16/11 07:52	06/17/11 10:29	7440-22-4	D3
471 Mercury	Analytical Met	hod: EPA 747	1 Preparation Met	nod: EF	PA 7471			
Mercury	ND m	g/kg	0.10	1	06/20/11 15:17	06/21/11 11:45	7439-97-6	
Percent Moisture	Analytical Met	hod: ASTM D2	2974-87					
Percent Moisture	21.0 %		0.10	1		06/13/11 16:35		

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

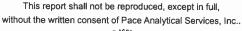
258066

Sample: 6208 0'-3' BGL Lab ID: 258066023 Collected: 06/07/11 12:55 Received: 06/10/11 09:50 Results reported on a "dry-weight" basis **Parameters** Results Units -Report Limit DF Prepared Analyzed CAS No. Qual **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 Arsenic ND mg/kg 9.5 06/16/11 07:52 06/17/11 10:32 7440-38-2 Barium 271 mg/kg 94.9 5 06/16/11 07:52 06/17/11 10:32 7440-39-3 Cadmium ND mg/kg 4.7 06/16/11 07:52 06/17/11 10:32 5 7440-43-9 Chromium 78.0 mg/kg 0.95 06/16/11 07:52 06/17/11 12:30 7440-47-3 1 Lead 11.1 mg/kg 47 06/16/11 07:52 06/17/11 10:32 7439-92-1 5 Selenium ND mg/kg 4.7 06/16/11 07:52 06/17/11 10:32 7782-49-2 5 Silver ND mg/kg 4.7 5 06/16/11 07:52 06/17/11 10:32 7440-22-4 D3 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Mercury ND mg/kg 0.12 06/20/11 15:17 06/21/11 11:47 7439-97-6 **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 26.8 % 0.10 1 06/13/11 16:35 Sample: 6208 4'-5' BGL Lab ID: 258066024 Collected: 06/07/11 13:01 Received: 06/10/11 09:50 Results reported on a "dry-weight" basis **Parameters** Results Units Report Limit DF Prepared CAS No. Analyzed Qual **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 27.6 % 0.10 06/14/11 16:01 Sample: 6209 0-3 BGL Lab ID: 258066025 Collected: 06/07/11 13:19 Received: 06/10/11 09:50 Results reported on a "dry-weight" basis **Parameters** Results Units Report Limit DF Prepared Analyzed CAS No. Qual **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 27.6 % 0.10 06/14/11 16:01 Sample: 6209 3-4' BGL Lab ID: 258066026 Collected: 06/07/11 13:23 Received: 06/10/11 09:50 Matrix: Solid Results reported on a "dry-weight" basis **Parameters** Results Units Report Limit DF Prepared CAS No. Analyzed Qual **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 14.4 % 0.10 06/14/11 16:02

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis **Parameters**

Sample: 6210 0-3 BGL

Lab ID: 258066027

Collected: 06/07/11 13:49

Report Limit

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Qual

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture

30.6 %

Results

Results

0.10 1

DF

DF

06/14/11 16:03

Analyzed

Analyzed

Sample: 6210 3-4 BGL

Lab ID: 258066028

Prepared

Prepared

Collected: 06/07/11 13:57

Report Limit

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Results reported on a "dry-weight" basis **Parameters**

6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	ND mg/kg	11.2	5	06/16/11 07:52	06/17/11 10:35	7440-38-2			

Barium	242 mg/kg	22.5	1	06/16/11 07:52 06/17/11 12:33 7440-39-3	
Cadmium	ND mg/kg	5.6	5	06/16/11 07:52 06/17/11 10:35 7440-43-9	
Chromium	74.3 mg/kg	1.1	1	06/16/11 07:52 06/17/11 12:33 7440-47-3	
Lead	ND mg/kg	5.6	5	06/16/11 07:52 06/17/11 10:35 7439-92-1	
Selenium	ND mg/kg	5.6	5	06/16/11 07:52 06/17/11 10:35 7782-49-2	
Silver	ND mg/kg	5.6	5	06/16/11 07:52 06/17/11 10:35 7440-22-4	

7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury ND mg/kg 0.099 06/20/11 15:17 06/21/11 11:49 7439-97-6

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture 16.1 %

0.10

06/14/11 16:03

Sample: 6211 0-3 BGL Results reported on a "dry-weight" basis

Lab ID: 258066029

Units

Collected: 06/07/11 14:09

Report Limit

Received: 06/10/11 09:50

Prepared

CAS No. Qual

Parameters Results

Analytical Method: ASTM D2974-87

26.9 %

0.10

06/14/11 16:04

Analyzed

Sample: 6211 4'-5' BGL

Percent Moisture

Percent Moisture

Lab ID: 258066030

Collected: 06/07/11 14:15

DF

1

Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weig	ght" basis							
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Me	thod: EPA 601	0 Preparation Meth	nod: EF	PA 3050			
Arsenic	ND m	ng/kg	10.9	5	06/16/11 07:52	06/17/11 10:38	7440-38-2	
Barium	95.6 m	ng/kg	21.8	1	06/16/11 07:52	06/17/11 12:36	7440-39-3	
Cadmium	ND m	ng/kg	5.4	5	06/16/11 07:52	06/17/11 10:38	7440-43-9	
Chromium	62.3 m	ng/kg	1.1	1	06/16/11 07:52	06/17/11 12:36	7440-47-3	
Lead	ND m	ıg/kg	5.4	5	06/16/11 07:52	06/17/11 10:38	7439-92-1	
Selenium	ND m	ng/kg	5.4	5	06/16/11 07:52	06/17/11 10:38	7782-49-2	

Date: 06/24/2011 04:23 PM

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Project:

Silver

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6211 4'-5' BGL

Lab ID: 258066030

Collected: 06/07/11 14:15 Received: 06/10/11 09:50

Results reported on a "dry-weight" basis

Parameters Results Units Report Limit Prepared Analyzed CAS No. Qual **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 ND mg/kg 5.4 5 06/16/11 07:52 06/17/11 10:38 7440-22-4 D3 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Mercury ND mg/kg 06/20/11 15:17 06/21/11 10:41 7439-97-6 0.095 **Percent Moisture** Analytical Method: ASTM D2974-87

Percent Moisture

19.4 %

0.10

06/14/11 16:04

Sample: 6212 0-3 BGL

Lab ID: 258066031

 Lab	יטו:	256066031	

ND ug/kg

Collected: 06/07/11 14:49

Received: 06/10/11 09:50 Matrix: Solid

06/14/11 15:15 06/21/11 00:22 111-44-4

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Metho	d: EPA 827	0 by SIM Preparat	ion Met	thod: EPA 3546		_	
Acenaphthene	ND ug/k	g	9.6	1	06/14/11 15:15	06/15/11 17:47	83-32-9	
Acenaphthylene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	208-96-8	
Anthracene	ND ug/k	g	9.6	1	06/14/11 15:15	06/15/11 17:47	120-12-7	
Benzo(a)anthracene	ND ug/k	g	9.6	1	06/14/11 15:15	06/15/11 17:47	56-55-3	
Benzo(a)pyrene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	50-32-8	
Benzo(b)fluoranthene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	191-24-2	
Benzo(k)fluoranthene	ND ug/k	g	9.6	1	06/14/11 15:15	06/15/11 17:47	207-08-9	
Chrysene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	218-01-9	
Dibenz(a,h)anthracene	ND ug/k	g	9.6	1	06/14/11 15:15	06/15/11 17:47	53-70-3	
luoranthene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	206-44-0	
luorene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	86-73-7	
ndeno(1,2,3-cd)pyrene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	193-39-5	
-Methylnaphthalene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	90-12-0	
2-Methylnaphthalene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	91-57-6	
laphthalene	ND ug/kg	g	9.6	1	06/14/11 15:15	06/15/11 17:47	91-20-3	
Phenanthrene	ND ug/kg	9	9.6	1	06/14/11 15:15	06/15/11 17:47	85-01-8	
Pyrene	ND ug/kg	9	9.6	1	06/14/11 15:15	06/15/11 17:47	129-00-0	
P-Fluorobiphenyl (S)	81 %		31-131	1	06/14/11 15:15	06/15/11 17:47	321-60-8	
erphenyl-d14 (S)	73 %		30-133	1	06/14/11 15:15	06/15/11 17:47	1718-51-0	
270 MSSV Semivolatiles	Analytical Method	d: EPA 8270	O Preparation Meth	od: EF	A 3546			
Benzoic acid	ND ug/kg	9	2380	1	06/14/11 15:15	06/21/11 00:22	65-85-0	
Benzyl alcohol	ND ug/kg	9	476	1	06/14/11 15:15	06/21/11 00:22	100-51-6	
-Bromophenylphenyl ether	ND ug/kg	3	476	1	06/14/11 15:15	06/21/11 00:22	101-55-3	
Butylbenzylphthalate	ND ug/kg	9	476	1	06/14/11 15:15	06/21/11 00:22	85-68-7	
-Chloro-3-methylphenol	ND ug/kg	9	476	1		06/21/11 00:22		
-Chloroaniline	ND ug/kg	9	476	1	06/14/11 15:15	06/21/11 00:22	106-47-8	
is(2-Chloroethoxy)methane	ND ug/kg	3	476	1	06/14/11 15:15	06/21/11 00:22	111-91-1	

Date: 06/24/2011 04:23 PM

bis(2-Chloroethyl) ether

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6212 0-3 BGL

Lab ID: 258066031

Collected: 06/07/11 14:49 Received: 06/10/11 09:50 Matrix: Solid

Results	reported on	a "dry	-weight"	hacie
Results	repurted on	a arv	-weiont	oasis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Meth	nod: EPA 827	0 Preparation Met	hod: EF	PA 3546		-	
bis(2-Chloroisopropyl) ether	ND ug	ı/kg	476	1	06/14/11 15:15	06/21/11 00:22	39638-32-9	
2-Chloronaphthalene	ND ug	ı/kg	476	1		06/21/11 00:22		
2-Chlorophenol	ND ug	/kg	476	1	06/14/11 15:15	06/21/11 00:22	95-57-8	
4-Chlorophenylphenyl ether	ND ug	/kg	476	1		06/21/11 00:22		
Dibenzofuran	ND ug	/kg	476	1		06/21/11 00:22		
1,2-Dichlorobenzene	ND ug	/kg	476	1	06/14/11 15:15	06/21/11 00:22	95-50-1	
1,3-Dichlorobenzene	ND ug	/kg	476	1		06/21/11 00:22		
1,4-Dichlorobenzene	ND ug	/kg	476	1	06/14/11 15:15	06/21/11 00:22	106-46-7	
3,3'-Dichlorobenzidine	ND ug	/kg	476	1		06/21/11 00:22		
2,4-Dichlorophenol	ND ug	/kg	476	1		06/21/11 00:22		
Diethylphthalate	ND ug	/kg	476	1		06/21/11 00:22		
2,4-Dimethylphenol	ND ug	/kg	476	1		06/21/11 00:22		
Dimethylphthalate	ND ug	/kg	476	1		06/21/11 00:22		
Di-n-butylphthalate	ND ug	/kg	476	1		06/21/11 00:22		
1,6-Dinitro-2-methylphenol	ND ug		476	1		06/21/11 00:22		
2,4-Dinitrophenol	ND ug	/kg	967	1		06/21/11 00:22		
2,4-Dinitrotoluene	ND ug	-	476	1		06/21/11 00:22		
,6-Dinitrotoluene	ND ug	/kg	476	1		06/21/11 00:22		
Di-n-octylphthalate	ND ug	•	476	1		06/21/11 00:22		
is(2-Ethylhexyl)phthalate	ND ug	-	476	1		06/21/11 00:22		
lexachloro-1,3-butadiene	ND ug	_	476	1		06/21/11 00:22		
lexachlorobenzene	ND ug.	/kg	476	1		06/21/11 00:22		
lexachlorocyclopentadiene	ND ug.	•	476	1		06/21/11 00:22		
lexachloroethane	ND ug	•	476	1		06/21/11 00:22		
sophorone	ND ug	-	476	1		06/21/11 00:22		
-Methylphenol(o-Cresol)	ND ug	_	476	1		06/21/11 00:22		
8&4-Methylphenol(m&p Cresol)	ND ug.	•	476	1	06/14/11 15:15			
2-Nitroaniline	ND ug	-	476	1		06/21/11 00:22	88-74-4	
3-Nitroaniline	ND ug	-	476	1		06/21/11 00:22		
-Nitroaniline	ND ug	-	476	1		06/21/11 00:22		
litrobenzene	ND ug	-	476	1		06/21/11 00:22		
-Nitrophenol	ND ugi	-	476	1		06/21/11 00:22		
-Nitrophenol	ND ug	•	476	1		06/21/11 00:22		
I-Nitroso-di-n-propylamine	ND ug	-	476	1		06/21/11 00:22		
l-Nitrosodiphenylamine	ND ug	-	476	1		06/21/11 00:22		
entachlorophenol	ND ug/		476	1		06/21/11 00:22		
henol	ND ug/	_	476	1		06/21/11 00:22		
,2,4-Trichlorobenzene	ND ug/	_	476	1		06/21/11 00:22		
,4,5-Trichlorophenol	ND ug/	-	476	1		06/21/11 00:22		
,4,6-Trichlorophenol	ND ug/		476	1		06/21/11 00:22		
litrobenzene-d5 (S)	83 %	3	40-138	1		06/21/11 00:22		
-Fluorobiphenyl (S)	84 %		46-118	1		06/21/11 00:22		
erphenyl-d14 (S)	88 %		41-137	1		06/21/11 00:22		
Phenol-d6 (S)	77 %		44-120	1		06/21/11 00:22		
-Fluorophenol (S)	74 %		37-117	1		06/21/11 00:22		
					UU/ 14/ 11 10.10	GGRZ D LL UU //	307-17-4	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis **Parameters**

Sample: 6212 0-3 BGL

Lab ID: 258066031

Collected: 06/07/11 14:49

Received: 06/10/11 09:50

Prepared

Matrix: Solid

Results

Units

Report Limit DF

1

DF

1

5

1

5

5

5

Prepared Analyzed

CAS No.

Qual

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

31.0 %

0.10

06/14/11 16:05

Sample: 6212 3'-4.3 BGL

Lab ID: 258066032

Analyzed

Units

Collected: 06/07/11 14:52

10.2

20.5

5.1

1.0

5.1

5.1

5.1

Report Limit

Received: 06/10/11 09:50

06/16/11 07:52 06/17/11 10:41 7440-38-2

06/16/11 07:52 06/17/11 12:39 7440-39-3

06/16/11 07:52 06/17/11 10:41 7440-43-9

06/16/11 07:52 06/17/11 12:39 7440-47-3

06/16/11 07:52 06/17/11 10:41 7439-92-1

06/16/11 07:52 06/17/11 10:41 7782-49-2

06/16/11 07:52 06/17/11 10:41 7440-22-4

CAS No.

Arsenic

Silver

Results reported on a "dry-weight" basis

Parameters Results

6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050 ND mg/kg 90.0 mg/kg

Barium ND mg/kg Cadmium Chromium 76.9 mg/kg Lead ND mg/kg Selenium ND mg/kg

7471 Mercury Mercury

Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture

Analytical Method: EPA 7471 Preparation Method: EPA 7471 ND mg/kg

12.7 %

ND mg/kg

0.096

06/20/11 15:17 06/21/11 11:52 7439-97-6

0.10 1

06/14/11 16:06

Sample: 6213 0-3 BGL

Results reported on a "dry-weight" basis

Lab ID: 258066033

ND ug/kg

Collected: 06/07/11 14:39

Received: 06/10/11 09:50

Matrix: Solid

Parameters Results

Units

Report Limit

DF

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

9.5

Prepared

Analyzed

06/14/11 15:15 06/15/11 18:03 83-32-9

06/14/11 15:15 06/15/11 18:03 208-96-8

06/14/11 15:15 06/15/11 18:03 120-12-7

06/14/11 15:15 06/15/11 18:03 56-55-3

06/14/11 15:15 06/15/11 18:03 50-32-8

06/14/11 15:15 06/15/11 18:03 205-99-2

06/14/11 15:15 06/15/11 18:03 191-24-2

06/14/11 15:15 06/15/11 18:03 207-08-9

06/14/11 15:15 06/15/11 18:03 218-01-9

06/14/11 15:15 06/15/11 18:03 53-70-3

06/14/11 15:15 06/15/11 18:03 206-44-0

06/14/11 15:15 06/15/11 18:03 86-73-7

06/14/11 15:15 06/15/11 18:03 193-39-5

06/14/11 15:15 06/15/11 18:03 90-12-0

06/14/11 15:15 06/15/11 18:03 91-57-6

CAS No.

Qual

D3

8270 MSSV PAH by SIM Acenaphthene

Acenaphthylene

Anthracene

Chrysene

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 ND ug/kg ND ug/kg ND ug/kg

Benzo(a)anthracene ND ug/kg Benzo(a)pyrene ND ug/kg Benzo(b)fluoranthene ND ug/kg Benzo(g,h,i)perylene ND ug/kg Benzo(k)fluoranthene ND ug/kg

Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene

Date: 06/24/2011 04:23 PM

2-Methylnaphthalene

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample:	6213	0-3	BGL	

Lab ID: 258066033 Collected: 06/07/11 14:39 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
8270 MSSV PAH by SIM	Analytical Metl	nod: EPA 827	0 by SIM Preparat	ion Met	hod: EPA 3546			
Naphthalene	ND ug	/kg	9.5	1	06/14/11 15:15	06/15/11 18:03	91-20-3	
Phenanthrene	ND ug	/kg	9.5	1	06/14/11 15:15	06/15/11 18:03	85-01-8	
Pyrene	ND ug	/kg	9.5	1	06/14/11 15:15	06/15/11 18:03	129-00-0	
2-Fluorobiphenyl (S)	82 %		31-131	1	06/14/11 15:15	06/15/11 18:03	321-60-8	
Terphenyl-d14 (S)	79 %		30-133	1		06/15/11 18:03		
3270 MSSV Semivolatiles	Analytical Meth	nod: EPA 827	0 Preparation Met	hod: EF	A 3546			
Benzoic acid	ND ug	/kg	2360	1	06/14/11 15:15	06/21/11 00:45	65-85-0	
Benzyl alcohol	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	100-51-6	
-Bromophenylphenyl ether	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	101-55-3	
Butylbenzylphthalate	ND ug	/kg	472	1		06/21/11 00:45		
I-Chloro-3-methylphenol	ND ug		472	1	06/14/11 15:15	06/21/11 00:45	59-50-7	
I-Chloroaniline	ND ug	-	472	1		06/21/11 00:45		
ois(2-Chloroethoxy)methane	ND ug	•	472	1		06/21/11 00:45		
is(2-Chloroethyl) ether	ND ug		472	1		06/21/11 00:45		
is(2-Chloroisopropyl) ether	ND ug		472	1		06/21/11 00:45		
-Chloronaphthalene	ND ug	-	472	1		06/21/11 00:45		
-Chlorophenol	ND ug	-	472	1		06/21/11 00:45		
-Chlorophenylphenyl ether	ND ug	•	472	1		06/21/11 00:45		
ibenzofuran	ND ug	•	472	1		06/21/11 00:45		
,2-Dichlorobenzene	ND ug	_	472	1		06/21/11 00:45		
,3-Dichlorobenzene	ND ug	_	472	1				
4-Dichlorobenzene	ND ug	-	472	1		06/21/11 00:45 06/21/11 00:45		
3'-Dichlorobenzidine	ND ug	•	472	1				
,4-Dichlorophenol	-	-	472	1		06/21/11 00:45		
eiethylphthalate	ND ug					06/21/11 00:45		
* *	ND ug	•	472	1		06/21/11 00:45		
,4-Dimethylphenol	ND ug	-	472	1		06/21/11 00:45		
imethylphthalate	ND ug	-	472	1		06/21/11 00:45		
i-n-butylphthalate	ND ug	_	472	1		06/21/11 00:45		
,6-Dinitro-2-methylphenol	ND ug	•	472	1		06/21/11 00:45		
,4-Dinitrophenol	ND ug	-	959	1		06/21/11 00:45		
,4-Dinitrotoluene	ND ug	-	472	1		06/21/11 00:45		
,6-Dinitrotoluene	ND ug	-	472	1		06/21/11 00:45		
i-n-octylphthalate	ND ug	-	472	1		06/21/11 00:45		
is(2-Ethylhexyl)phthalate	ND ug	-	472	1		06/21/11 00:45		
lexachloro-1,3-butadiene	ND ug	-	472	1		06/21/11 00:45		
exachlorobenzene	ND ug	•	472	1	06/14/11 15:15	06/21/11 00:45	118-74-1	
exachlorocyclopentadiene	ND ug.		472	1	06/14/11 15:15	06/21/11 00:45	77-47-4	
exachloroethane	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	67-72-1	
ophorone	ND ug	•	472	1	06/14/11 15:15	06/21/11 00:45	78-59-1	
-Methylphenol(o-Cresol)	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	95-48-7	
&4-Methylphenol(m&p Cresol)	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45		
-Nitroaniline	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	88-74-4	
-Nitroaniline	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	99-09-2	
-Nitroaniline	ND ug	/kg	472	1	06/14/11 15:15	06/21/11 00:45	100-01-6	
litrobenzene	ND ug	/ka	472	1	06/14/11 15:15	06/21/11 00:45	08-05-3	

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample:	6213	0-3	BGL

Lab ID: 258066033

Collected: 06/07/11 14:39 Received: 06/10/11 09:50 Matrix: Solid

Results rep	ported on	a "dry	/-weight"	basis
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Me	ethod: EPA 8	270 Preparation Meth	od: EF	PA 3546	· · · · ·		
2-Nitrophenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	88-75-5	
4-Nitrophenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	100-02-7	
N-Nitroso-di-n-propylamine	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	621-64-7	
N-Nitrosodiphenylamine	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	86-30-6	
Pentachlorophenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	87-86-5	
Phenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	108-95-2	
1,2,4-Trichlorobenzene	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	120-82-1	
2,4,5-Trichlorophenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	95-95-4	
2,4,6-Trichlorophenol	ND u	ıg/kg	472	1	06/14/11 15:15	06/21/11 00:45	88-06-2	
Nitrobenzene-d5 (S)	82 %		40-138	1	06/14/11 15:15	06/21/11 00:45	4165-60-0	
2-Fluorobiphenyl (S)	78 %	6	46-118	1	06/14/11 15:15	06/21/11 00:45	321-60-8	
Terphenyl-d14 (S)	79 %	6	41-137	1	06/14/11 15:15	06/21/11 00:45	1718-51-0	
Phenol-d6 (S)	82 %	6	44-120	1	06/14/11 15:15	06/21/11 00:45	13127-88-3	
2-Fluorophenol (S)	81 %	6	37-117	1	06/14/11 15:15	06/21/11 00:45	367-12-4	
2,4,6-Tribromophenol (S)	84 %	6	26-135	1	06/14/11 15:15	06/21/11 00:45	118-79-6	
Percent Moisture	Analytical Me	thod: ASTM	D2974-87					
Percent Moisture	30.2 %	6	0.10	1		06/14/11 16:06		
	•		Collected: 06/07/1				Matrix: Solid	Oual
Results reported on a "dry-weig Parameters	Results	Units	Report Limit	1 14:36 DF	Received: 06	/10/11 09:50 M	Matrix: Solid CAS No.	Qual
Results reported on a "dry-weig Parameters	ht" basis	Units	Report Limit					Qual
Results reported on a "dry-weig Parameters Percent Moisture	Results	Units	Report Limit				CAS No.	Qual
Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture	Results Analytical Me	Units othod: ASTM	Report Limit	DF 1	Prepared	Analyzed 06/13/11 16:36	CAS No.	Qual
Percent Moisture Percent Moisture Percent Moisture Percent Moisture	Results Analytical Me 20.6 %	Units othod: ASTM	Report Limit D2974-87 0.10	DF 1	Prepared	Analyzed 06/13/11 16:36	CAS No.	Qual
Parameters Percent Moisture Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL	Results Analytical Me 20.6 %	Units othod: ASTM	Report Limit D2974-87 0.10	DF 1	Prepared	Analyzed 06/13/11 16:36	CAS No.	Qual
Parameters Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters	Analytical Me 20.6 % Lab ID: 256	Units ethod: ASTM 6 8066035 Units	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit	1 1 1 14:36	Prepared 6 Received: 06	Analyzed 06/13/11 16:36 /10/11 09:50	CAS No. Matrix: Solid	
Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture	Analytical Me 20.6 % Lab ID: 256 Results	Units thod: ASTM 8066035 Units thod: ASTM	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit	1 1 1 14:36	Prepared 6 Received: 06	Analyzed 06/13/11 16:36 /10/11 09:50	CAS No. Matrix: Solid	
Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture	Analytical Me Lab ID: 25: Results Analytical Me Analytical Me	Units thod: ASTM 8066035 Units thod: ASTM	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87	1 1 14:36 DF	Prepared Received: 06 Prepared	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36	CAS No. Matrix: Solid	
Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig	Analytical Me 20.6 % Lab ID: 256 Analytical Me Analytical Me 16.5 %	Units thod: ASTM 8066035 Units thod: ASTM	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87 0.10	1 1 14:36 DF	Prepared Received: 06 Prepared	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36	CAS No. Matrix: Solid CAS No.	
Parameters Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture Percent Moisture Percent Moisture Sample: 6214 0-3' BGL	Analytical Me 20.6 % Lab ID: 256 Analytical Me Analytical Me 16.5 %	Units thod: ASTM 8066035 Units thod: ASTM	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87 0.10	1 1 14:36 DF	Prepared Received: 06 Prepared	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36	CAS No. Matrix: Solid CAS No.	
Parameters Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture Percent Moisture Sample: 6214 0-3' BGL Results reported on a "dry-weig Parameters	Results Analytical Me 20.6 % Lab ID: 25 Analytical Me 16.5 % Lab ID: 25 Analytical Me 16.5 % Results Results Results	Units thod: ASTM 6 8066035 Units thod: ASTM 6 8066036 Units	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87 0.10 Collected: 06/06/1	DF 1 14:36 DF 1 16:42 DF	Prepared Received: 06 Prepared Received: 06	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36	CAS No. Matrix: Solid CAS No.	Qual
Parameters Percent Moisture Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture Percent Moisture Percent Moisture Percent Moisture Parameters NWTPH-Dx GCS	Results Analytical Me 20.6 % Lab ID: 256 Analytical Me 16.5 % Lab ID: 256 Analytical Me Analytical Me	Units thod: ASTM 8066035 Units thod: ASTM 6 8066036 Units thod: NWTP	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87 0.10 Collected: 06/06/1 Report Limit H-Dx Preparation Me	DF 1 14:36 DF 1 16:42 DF thod: E	Prepared Received: 06 Prepared Received: 06 Prepared	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed	CAS No. Matrix: Solid CAS No.	Qual
Parameters Percent Moisture Percent Moisture Sample: 6213 5'-6 BGL Results reported on a "dry-weig Parameters Percent Moisture Percent Moisture Sample: 6214 0-3' BGL Results reported on a "dry-weig	Results Analytical Me 20.6 % Lab ID: 25 Analytical Me 16.5 % Lab ID: 25 Analytical Me 16.5 % Results Results Results	Units thod: ASTM 8066035 Units thod: ASTM 6 8066036 Units thod: NWTP	Report Limit D2974-87 0.10 Collected: 06/07/1 Report Limit D2974-87 0.10 Collected: 06/06/1	DF 1 14:36 DF 1 16:42 DF	Prepared Received: 06 Prepared Prepared Prepared PA 3546 06/17/11 10:15	Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed 06/13/11 16:36 /10/11 09:50 M Analyzed	CAS No. Matrix: Solid CAS No. Matrix: Solid CAS No.	Qual





Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6214 0-3' BGL	Lab ID: 2	258066036	Collected:	06/06/1	1 16:42	Received: (06/10/11 09:50	Matrix: Solid	
Results reported on a "dry-weigl			0011001001	00/00/1	1 10.72	recocived.	0710711 09.30	Watrix. Solid	
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical N	lethod: NWTP	H-Dx Prepar	ation Me	thod: E	PA 3546			
n-Octacosane (S)	117	%		50-150	5	06/17/11 10:19	5 06/18/11 06:3	30 630-02-4	
o-Terphenyl (S)	109	%	;	50-150	5	06/17/11 10:1	5 06/18/11 06:3	80 84-15-1	
Percent Moisture	Analytical M	lethod: ASTM	D2974-87						
Percent Moisture	9.7	%		0.10	1		06/14/11 16:0)7	
Sample: 6214 4-5' BGL	Lab ID: 2	258066037	Collected:	06/06/1	1 16:44	Received: 0	6/10/11 09:50	Matrix: Solid	
Results reported on a "dry-weigh	nt" basis								
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical M	lethod: ASTM	D2974-87						
Percent Moisture	26.6	%		0.10	1		06/14/11 16:0	7	
Sample: 6214 5'-6' BGL	Lab ID: 2	58066038	Collected:	06/06/1	1 16:44	Received: 0	6/10/11 09:50	Matrix: Solid	
Results reported on a "dry-weigh	ıt" basis								
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical M	lethod: ASTM	D2974-87						
Percent Moisture	21.7	%		0.10	1		06/14/11 16:0	8	
Sample: 6214 8'-9' BGL	Lab ID: 2	58066039	Collected:	06/06/1	16:49	Received: 0	6/10/11 09:50	Matrix: Solid	
Results reported on a "dry-weigh	t" basis								
Parameters	Results	Units	Report	Limit _	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical M	lethod: ASTM	D2974-87						
Percent Moisture	27.5	%		0.10	1		06/14/11 16:0	9	
Sample: 6215 0-3' BGL	Lab ID: 2	58066040	Collected:	06/08/11	07:59	Received: 0	6/10/11 09:50	Matrix: Solid	
Results reported on a "dry-weigh	t" basis								
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical M	ethod: ASTM	D2974-87						

Date: 06/24/2011 04:23 PM

Percent Moisture

REPORT OF LABORATORY ANALYSIS

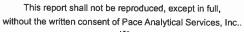
0.10

1

06/14/11 16:09

27.4 %

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6215 3'-4.5 BGL

Lab ID: 258066041

Collected: 06/08/11 08:05 Received: 06/10/11 09:50 Matrix: Solid

Results	reported	on a	"dry-weig	oht" basis
1/630113	I CDOLLEG	un a	UI V-WEIL	JIIL DASIS

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qu
8270 MSSV PAH by SIM	Analytical Meth	nod: EPA 827	0 by SIM Prepa	ation Me	ethod: EPA 3546		_	
Acenaphthene	ND ug	/kg	7.	9 1	06/14/11 15:15	06/16/11 16:33	83-32-9	
Acenaphthylene	ND ug	/kg	7.	9 1	06/14/11 15:15	06/16/11 16:33	208-96-8	
Anthracene	ND ug	/kg	7.	9 1	06/14/11 15:15	06/16/11 16:33	120-12-7	
Benzo(a)anthracene	ND ug.	/kg	7.	9 1	06/14/11 15:15	06/16/11 16:33	56-55-3	
Benzo(a)pyrene	ND ug	/kg	7.	9 1	06/14/11 15:15	06/16/11 16:33	50-32-8	
Benzo(b)fluoranthene	ND ug	/kg	7.) 1	06/14/11 15:15	06/16/11 16:33	205-99-2	
Benzo(g,h,i)perylene	ND ug.	/kg	7.) 1		06/16/11 16:33		
Benzo(k)fluoranthene	ND ug.	/kg	7.			06/16/11 16:33		
Chrysene	ND ug	/kg	7.	9 1		06/16/11 16:33		
Dibenz(a,h)anthracene	ND ug	_	7.			06/16/11 16:33		
luoranthene	ND ug	-	7.			06/16/11 16:33		
luorene	ND ug	•	7.			06/16/11 16:33		
ndeno(1,2,3-cd)pyrene	ND ug		7.			06/16/11 16:33		
I-Methylnaphthalene	ND ug	•	7.			06/16/11 16:33		
-Methylnaphthalene	ND ug	-	7.			06/16/11 16:33		
Naphthalene	ND ug	v	7.			06/16/11 16:33		
Phenanthrene	ND ug	•	7.			06/16/11 16:33		
Pyrene	ND ug	-	7. 7.			06/16/11 16:33		
-Fluorobiphenyl (S)	86 %	Ng	31-13			06/16/11 16:33		
erphenyl-d14 (S)	87 %		30-13			06/16/11 16:33		
270 MSSV Semivolatiles		od: EPA 8270	Preparation M			00/10/11 10.33	1710-51-0	
Benzoic acid	ND ug/		197			06/04/44 04:07	65.05.0	
senzyl alcohol	ND ug/	•	39			06/21/11 01:07		
-Bromophenylphenyl ether	ND ug/	-				06/21/11 01:07		
Butylbenzylphthalate	ND ug/	_	39-			06/21/11 01:07		
-Chloro-3-methylphenol	_	-	39-			06/21/11 01:07		
-Chloroaniline	ND ug/ ND ug/	•	39-			06/21/11 01:07		
is(2-Chloroethoxy)methane	ND ug/	_	39-			06/21/11 01:07		
is(2-Chloroethyl) ether	•	-	39-			06/21/11 01:07		
	ND ug/	-	39			06/21/11 01:07		
is(2-Chloroisopropyl) ether -Chloronaphthalene	ND ug/	-	39-			06/21/11 01:07		
•	ND ug/		394			06/21/11 01:07		
-Chlorophenol	ND ug/	-	394			06/21/11 01:07		
-Chlorophenylphenyl ether Dibenzofuran	ND ug/	-	394			06/21/11 01:07		
	ND ug/	_	394			06/21/11 01:07		
,2-Dichlorobenzene	ND ug/	_	394			06/21/11 01:07		
,3-Dichlorobenzene	ND ug/	-	394			06/21/11 01:07		
,4-Dichlorobenzene	ND ug/	_	394			06/21/11 01:07		
,3'-Dichlorobenzidine	ND ug/	-	394			06/21/11 01:07		
,4-Dichlorophenol	ND ug/	-	394			06/21/11 01:07		
iethylphthalate	ND ug/		394			06/21/11 01:07		
,4-Dimethylphenol	ND ug/	_	394			06/21/11 01:07		
imethylphthalate	ND ug/	-	394			06/21/11 01:07		
i-n-butylphthalate	ND ug/	-	394			06/21/11 01:07		
,6-Dinitro-2-methylphenol	ND ug/	-	394			06/21/11 01:07		
,4-Dinitrophenol	ND ug/	ka	800	1	06/14/11 15:15	06/21/11 01:07	51-29-5	

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6215 3'-4.5 BGL

Lab ID: 258066041

Collected: 06/08/11 08:05 Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" bas	Results	reported (on a "i	drv-weiaht'	hasis
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Met	hod: EPA 8270	Preparation Met	hod: EF	PA 3546		·	
2,4-Dinitrotoluene	ND ug	g/kg	394	1	06/14/11 15:15	06/21/11 01:07	121-14-2	
2,6-Dinitrotoluene	ND ug	g/kg	394	1		06/21/11 01:07		
Di-n-octylphthalate	ND ug	g/kg	394	1		06/21/11 01:07		
bis(2-Ethylhexyl)phthalate	ND ug	g/kg	394	1	06/14/11 15:15	06/21/11 01:07	117-81-7	
Hexachloro-1,3-butadiene	ND ug	g/kg	394	1		06/21/11 01:07		
Hexachlorobenzene	ND ug	g/kg	394	1		06/21/11 01:07		
Hexachlorocyclopentadiene	ND uç	g/kg	394	1		06/21/11 01:07		
Hexachloroethane	ND ug		394	1	06/14/11 15:15	06/21/11 01:07	67-72-1	
Isophorone	ND ug	g/kg	394	1	06/14/11 15:15	06/21/11 01:07	78-59-1	
2-Methylphenol(o-Cresol)	ND ug	g/kg	394	1	06/14/11 15:15	06/21/11 01:07	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug	g/kg	394	1		06/21/11 01:07		
2-Nitroaniline	ND ug	g/kg	394	1	06/14/11 15:15	06/21/11 01:07	88-74-4	
3-Nitroaniline	ND ug	g/kg	394	1		06/21/11 01:07		
4-Nitroaniline	ND ug	g/kg	394	1		06/21/11 01:07		
Nitrobenzene	ND ug	-	394	1		06/21/11 01:07		
2-Nitrophenol	ND ug	g/kg	394	1		06/21/11 01:07		
4-Nitrophenol	ND ug	ı/kg	394	1		06/21/11 01:07		
N-Nitroso-di-n-propylamine	ND ug		394	1		06/21/11 01:07		
N-Nitrosodiphenylamine	ND ug	ı/kg	394	1		06/21/11 01:07		
Pentachlorophenol	ND ug	ı/kg	394	1		06/21/11 01:07		
Phenol	ND ug	/kg	394	1		06/21/11 01:07		
1,2,4-Trichlorobenzene	ND ug		394	1		06/21/11 01:07		
2,4,5-Trichlorophenol	ND ug	ı/kg	394	1		06/21/11 01:07		
2,4,6-Trichlorophenol	ND ug	ı/kg	394	1		06/21/11 01:07		
Nitrobenzene-d5 (S)	82 %	_	40-138	1		06/21/11 01:07		
2-Fluorobiphenyl (S)	82 %		46-118	1		06/21/11 01:07		
Terphenyl-d14 (S)	85 %		41-137	1		06/21/11 01:07		
Phenol-d6 (S)	82 %		44-120	1		06/21/11 01:07		
2-Fluorophenol (S)	83 %		37-117	1		06/21/11 01:07		
2,4,6-Tribromophenol (S)	85 %		26-135	1		06/21/11 01:07		
Percent Moisture	Analytical Met	hod: ASTM D2	974-87					
Percent Moisture	17.2 %		0.10	1		06/14/11 16:10		

Sample:	6216	0-3'	BGL

Lab ID: 258066042

Collected: 06/07/11 11:13 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB S	Analytical Met	hod: EPA 808	2 Preparation Met	hod: EF	PA 3546			
PCB-1016 (Aroclor 1016)	ND ug	ı/kg	18.0	1	06/20/11 10:20	06/22/11 14:39	12674-11-2	
PCB-1221 (Aroclor 1221)	ND ug	ı/kg	18.0	1	06/20/11 10:20	06/22/11 14:39	11104-28-2	
PCB-1232 (Aroclor 1232)	ND uç	J/kg	18.0	1	06/20/11 10:20	06/22/11 14:39	11141-16-5	
PCB-1242 (Aroclor 1242)	ND ug	J/kg	18.0	1	06/20/11 10:20	06/22/11 14:39	53469-21-9	
PCB-1248 (Aroclor 1248)	ND ug	ı/kg	18.0	1	06/20/11 10:20	06/22/11 14:39	12672-29-6	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6216 0-3' BGL

Lab ID: 258066042

Collected: 06/07/11 11:13

Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" basis

Analytical Method: E ND ug/kg ND ug/kg 69 % 66 % Analytical Method: N		18.0 18.0 29-128 23-129	1 1 1	06/20/11 10:20 06/20/11 10:20 06/20/11 10:20 06/20/11 10:20	06/22/11 14:39 06/22/11 14:39	11097-69-1 11096-82-5 877-09-8 2051-24-3	
ND ug/kg 69 % 66 % Analytical Method: N	WTPH-Dx Prep	18.0 29-128 23-129	1 1 1 1 *thod: E	06/20/11 10:20 06/20/11 10:20 06/20/11 10:20	06/22/11 14:39 06/22/11 14:39	11096-82-5 877-09-8	
69 % 66 % Analytical Method: N	WTPH-Dx Prep	29-128 23-129	1 1 1 ≱thod: E	06/20/11 10:20 06/20/11 10:20	06/22/11 14:39	877-09-8	
66 % Analytical Method: N	WTPH-Dx Prep	23-129	1 1 ethod: E	06/20/11 10:20			
Analytical Method: N	WTPH-Dx Prep		1 ∍thod: E		06/22/11 14:39	2051-24-3	
	WTPH-Dx Prep	aration Me	ethod: E	EPA 3546			
208 mg/kg		16.6	1	06/17/11 10:15	06/18/11 07:18		
427 mg/kg		66.3	1			64742-65-0	
104 %		50-150	1				
105 %		50-150	1				
Analytical Method: A	STM D2974-87						
7.2 %		0.10	1		06/14/11 16:10		
	427 mg/kg 104 % 105 % Analytical Method: A 7.2 %	427 mg/kg 104 % 105 % Analytical Method: ASTM D2974-87 7.2 %	427 mg/kg 66.3 104 % 50-150 105 % 50-150 Analytical Method: ASTM D2974-87 7.2 % 0.10	427 mg/kg 66.3 1 104 % 50-150 1 105 % 50-150 1 Analytical Method: ASTM D2974-87 7.2 % 0.10 1	427 mg/kg 66.3 1 06/17/11 10:15 104 % 50-150 1 06/17/11 10:15 105 % 50-150 1 06/17/11 10:15 Analytical Method: ASTM D2974-87 7.2 % 0.10 1	427 mg/kg 66.3 1 06/17/11 10:15 06/18/11 07:18 104 % 50-150 1 06/17/11 10:15 06/18/11 07:18 105 % 50-150 1 06/17/11 10:15 06/18/11 07:18 Analytical Method: ASTM D2974-87 7.2 % 0.10 1 06/14/11 16:10	427 mg/kg 66.3 1 06/17/11 10:15 06/18/11 07:18 64742-65-0 104 % 50-150 1 06/17/11 10:15 06/18/11 07:18 630-02-4 105 % 50-150 1 06/17/11 10:15 06/18/11 07:18 84-15-1 Analytical Method: ASTM D2974-87 7.2 % 0.10 1 06/14/11 16:10

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
6010 MET ICP	Analytical Met	hod: EPA 601	0 Preparation Meth	nod: EP	A 3050			
Arsenic	ND m	g/kg	10.8	5	06/16/11 07:52	06/17/11 11:04	7440-38-2	
Barium	82.0 m	g/kg	21.7	1	06/16/11 07:52	06/17/11 12:43	7440-39-3	
Cadmium	ND m	g/kg	5.4	5	06/16/11 07:52	06/17/11 11:04	7440-43-9	
Chromium	75.7 m	g/kg	1.1	1	06/16/11 07:52	06/17/11 12:43	7440-47-3	
.ead	ND m	g/kg	5.4	5	06/16/11 07:52	06/17/11 11:04	7439-92-1	
Selenium	ND m	g/kg	5.4	5	06/16/11 07:52	06/17/11 11:04	7782-49-2	
ilver	ND m	g/kg	5.4	5	06/16/11 07:52	06/17/11 11:04	7440-22-4	D3
471 Mercury	Analytical Met	hod: EPA 747	1 Preparation Meth	od: EP	A 7471			
Mercury	ND m	g/kg	0.10	1	06/20/11 15:17	06/21/11 10:59	7439-97-6	
ercent Moisture	Analytical Met	hod: ASTM D	2974-87					
Percent Moisture	12.2 %		0.10	1		06/14/11 16:11		

Sample: 6216 7'-8' BGL Lab ID: 258066044 Collected: 06/07/11 11:19 Received: 06/10/11 09:50 Results reported on a "dry-weight" basis

20.9 %

Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual **Percent Moisture** Analytical Method: ASTM D2974-87

Date: 06/24/2011 04:23 PM

Percent Moisture

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06/14/11 16:14



0.10

1



Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6217 2'-3 BGL

Lab ID: 258066045

Collected: 06/08/11 08:15 Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" basis **Parameters**

Results

Units

Report Limit

Prepared Analyzed CAS No.

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

15.6 %

0.10

06/14/11 16:15

Sample: 6217 4-5 BGL

Lab ID: 258066046

Collected: 06/08/11 08:18

Results reported on a "dry-weight" basis

Parameters

Results

Units

Report Limit

DF

DF

1

Prepared Analyzed

Received: 06/10/11 09:50

CAS No.

Qual

Qual

D3

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

10.4 %

0.10

06/14/11 16:16

Sample: 6218 3'-6 BGL

Lab ID: 258066047

Results reported on a "dry-weight" basis

Collected: 06/08/11 08:31

Received: 06/10/11 09:50

06/16/11 07:52 06/17/11 11:13 7440-38-2

06/16/11 07:52 06/17/11 12:59 7440-39-3

06/16/11 07:52 06/17/11 11:13 7440-43-9

06/16/11 07:52 06/17/11 12:59 7440-47-3

06/16/11 07:52 06/17/11 11:13 7439-92-1

06/16/11 07:52 06/17/11 11:13 7782-49-2

06/16/11 07:52 06/17/11 11:13 7440-22-4

Matrix: Solid

Results

Units Analytical Method: EPA 6010 Preparation Method: EPA 3050

Report Limit DF

5

1

5

5

1

1

11.2

22.4

5.6

1.1

5.6

5.6

5.6

Prepared

Analyzed

CAS No.

Parameters

6010 MET ICP Arsenic ND mg/kg Barium 106 mg/kg

Cadmium ND mg/kg Chromium 93.1 mg/kg Lead ND mg/kg

Selenium ND mg/kg Silver ND mg/kg

7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Mercury ND mg/kg

23.1 %

Analytical Method: ASTM D2974-87

0.11

06/20/11 15:17 06/21/11 11:05 7439-97-6

Sample: 6218 7-8' BGL

Percent Moisture

Percent Moisture

Lab ID: 258066048

0.10

06/14/11 16:16

Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters Results

Units

Report Limit DF

Collected: 06/08/11 08:37

Prepared

CAS No.

Qual

Percent Moisture Percent Moisture

Analytical Method: ASTM D2974-87

13.1 %

0.10

06/14/11 16:17

Analyzed

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6219 0-3 BGL

Results reported on a "dry-weight" basis

Lab ID: 258066049

Results

Collected: 06/08/11 08:48

Report Limit

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Qual

Qual

D3

Parameters Percent Moisture

Analytical Method: ASTM D2974-87

Units

Percent Moisture

19.1 %

0.10 1

DF

06/14/11 16:17

Analyzed

Sample: 6219 3'-6 BGL

Lab ID: 258066050

Collected: 06/08/11 08:51

Received: 06/10/11 09:50

Results reported on a "dry-weight" basis

Parameters Results

Units

Report Limit DF

DF

1

1

Prepared

Prepared

Analyzed

CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Percent Moisture

16.8 %

0.10

17.4

4.3

4.3

4.3

4.3

0.87

06/14/11 16:18

Analyzed

06/16/11 07:52 06/17/11 11:16 7440-38-2 06/16/11 07:52 06/17/11 13:02 7440-39-3

06/16/11 07:52 06/17/11 11:16 7440-43-9

06/16/11 07:52 06/17/11 13:02 7440-47-3

06/16/11 07:52 06/17/11 11:16 7439-92-1

06/16/11 07:52 06/17/11 11:16 7782-49-2

Sample: 6220 0-3 BGL

Lab ID: 258066051

Collected: 06/07/11 10:30

Report Limit

Received: 06/10/11 09:50

Prepared

Matrix: Solid

CAS No.

Results reported on a "dry-weight" basis

Parameters Results

6010 MET ICP	Analytical Method: EPA 6010	Preparation M	lethod:	EPA 3	050
Arsenic	ND mg/kg	8	.7 5	06	6/16/

		9,19
Barium	86.3 m	ng/kg
Cadmium	ND m	ng/kg
Chromium	31.9 m	ng/kg
Lead	10.0 m	na/ka

ND mg/kg ND mg/kg

ND mg/kg

Analytical Method: ASTM D2974-87

0.081

06/16/11 07:52 06/17/11 11:16 7440-22-4 Analytical Method: EPA 7471 Preparation Method: EPA 7471

06/20/11 15:17 06/21/11 11:08 7439-97-6

Percent Moisture Percent Moisture

13.6 %

0.10

06/14/11 16:18

Sample: 6220 5'-6 BGL

Results reported on a "dry-weight" basis **Parameters**

Lab ID: 258066052

Collected: 06/07/11 10:33

Received: 06/10/11 09:50

Matrix: Solid

Selenium

7471 Mercury

Silver

Mercury

Results

Units

DF Report Limit

Prepared

CAS No.

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

19.8 %

0.10

06/14/11 16:18

Analyzed

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis

Sample: 6220 8-9 BGL

Lab ID: 258066053

Collected: 06/07/11 10:35

Received: 06/10/11 09:50

06/14/11 15:15 06/15/11 18:37

06/14/11 15:15 06/15/11 18:37

06/14/11 15:15 06/15/11 18:37

06/14/11 15:15 06/15/11 18:37 205-99-2

06/14/11 15:15 06/15/11 18:37 207-08-9

06/14/11 15:15 06/15/11 18:37 218-01-9

06/14/11 15:15 06/15/11 18:37 53-70-3

06/14/11 15:15 06/15/11 18:37 206-44-0

06/14/11 15:15 06/15/11 18:37 86-73-7

06/14/11 15:15 06/15/11 18:37 193-39-5

06/14/11 15:15 06/15/11 18:37 90-12-0

06/14/11 15:15 06/15/11 18:37 91-57-6

06/14/11 15:15 06/15/11 18:37 91-20-3

06/14/11 15:15 06/15/11 18:37 85-01-8

06/14/11 15:15 06/15/11 18:37 129-00-0

06/14/11 15:15 06/15/11 18:37 321-60-8

06/14/11 15:15 06/15/11 18:37 1718-51-0

Matrix: Solid

Qual

Parameters

Results

Results

Units

Units

Report Limit

Prepared

Analyzed

CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

17.1 %

0.10

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

8.8

31-131

30-133

DF

1

DF

1

1

1

1

1

1

1

1

06/14/11 16:19

Sample: 6221 0-3 BGL

Lab ID: 258066054

Collected: 06/08/11 09:05

Report Limit

Prepared

Received: 06/10/11 09:50

Analyzed

CAS No.

56-55-3

50-32-8

191-24-2

85-68-7

59-50-7

106-47-8

111-91-1

39638-32-9

Results reported on a "dry-weight" basis

Parameters

						-
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by	SIM Preparation	on Me	thod: EPA 3546		
Acenaphthene	ND ug/kg	8.8	1	06/14/11 15:15	06/15/11 18:37	83-32-9
Acenaphthylene	ND ug/kg	8.8	1	06/14/11 15:15	06/15/11 18:37	208-96-8
Anthracene	ND ug/kg	8.8	1	06/14/11 15:15	06/15/11 18:37	120-12-7

ND ug/kg

73 %

79 %

ND ug/kg

ND ug/kg

ND ug/kg

ND ug/kg

Anthracene ND ug/kg Benzo(a)anthracene ND ug/kg Benzo(a)pyrene ND ug/kg Benzo(b)fluoranthene ND ug/kg Benzo(g,h,i)perylene ND ug/kg

Benzo(k)fluoranthene ND ug/kg Chrysene ND ug/kg Dibenz(a,h)anthracene ND ug/kg Fluoranthene 12.2 ug/kg Fluorene ND ug/kg

Indeno(1,2,3-cd)pyrene ND ug/kg 1-Methylnaphthalene ND ug/kg 2-Methylnaphthalene ND ug/kg Naphthalene ND ug/kg Phenanthrene ND ug/kg

2-Fluorobiphenyl (S) Terphenyl-d14 (S) 8270 MSSV Semivolatiles

Pyrene

2-Chlorophenol

4-Chlorophenylphenyl ether

Date: 06/24/2011 04:23 PM

Analytical Method: EPA 8270 Preparation Method: EPA 3546

Benzoic acid Benzyl alcohol 4-Bromophenylphenyl ether Butylbenzylphthalate 4-Chloro-3-methylphenol ND ug/kg 4-Chloroaniline ND ug/kg bis(2-Chloroethoxy)methane

ND ug/kg bis(2-Chloroethyl) ether ND ug/kg bis(2-Chloroisopropyl) ether ND ug/kg 2-Chloronaphthalene ND ug/kg ND ug/kg

Dibenzofuran 1,2-Dichlorobenzene 1,3-Dichlorobenzene

ND ug/kg 2160 06/14/11 15:15 06/21/11 01:29 65-85-0 ND ug/kg 431 1 06/14/11 15:15 06/21/11 01:29 100-51-6 ND ug/kg 431 1 06/14/11 15:15 06/21/11 01:29 101-55-3 ND ug/kg 431 06/14/11 15:15 06/21/11 01:29

> 431 06/14/11 15:15 06/21/11 01:29 431 06/14/11 15:15 06/21/11 01:29 431 06/14/11 15:15 06/21/11 01:29 431 1 06/14/11 15:15 06/21/11 01:29 431 1 431 1

06/14/11 15:15 06/21/11 01:29 06/14/11 15:15 06/21/11 01:29 91-58-7 431 1 06/14/11 15:15 06/21/11 01:29 95-57-8 431 1 431 1 431

1 1

06/14/11 15:15 06/21/11 01:29 7005-72-3 06/14/11 15:15 06/21/11 01:29 132-64-9 06/14/11 15:15 06/21/11 01:29 95-50-1 06/14/11 15:15 06/21/11 01:29 541-73-1

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample:	6221	0-3	BGL		
D 4					

Lab ID: 258066054 Collected: 06/08/11 09:05 Received: 06/10/11 09:50 Matrix: Solid

Results	reported	on a	"dry-weight"	basis
---------	----------	------	--------------	-------

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
8270 MSSV Semivolatiles	Analytical Meth	nod: EPA 827	0 Preparation Met	hod: EF	PA 3546			
1,4-Dichlorobenzene	ND ug	/kg	431	1	06/14/11 15:15	06/21/11 01:29	106-46-7	
3,3'-Dichlorobenzidine	ND ug	/kg	431	1	06/14/11 15:15	06/21/11 01:29	91-94-1	
2,4-Dichlorophenol	ND ug	/kg	431	1	06/14/11 15:15	06/21/11 01:29	120-83-2	
Diethylphthalate	ND ug	/kg	431	1	06/14/11 15:15	06/21/11 01:29	84-66-2	
2,4-Dimethylphenol	ND ug	/kg	431	1		06/21/11 01:29		
Dimethylphthalate	ND ug	/kg	431	1	06/14/11 15:15	06/21/11 01:29	131-11-3	
Di-n-butylphthalate	ND ug	/kg	431	1		06/21/11 01:29		
4,6-Dinitro-2-methylphenol	ND ug	/kg	431	1		06/21/11 01:29		
2,4-Dinitrophenol	ND ug	/kg	876	1		06/21/11 01:29		
2,4-Dinitrotoluene	ND ug	/kg	431	1		06/21/11 01:29		
2,6-Dinitrotoluene	ND ug	/kg	431	1		06/21/11 01:29		
Di-n-octylphthalate	ND ug	/kg	431	1		06/21/11 01:29		
ois(2-Ethylhexyl)phthalate	ND ug	/kg	431	1		06/21/11 01:29		
Hexachloro-1,3-butadiene	ND ug	/kg	431	1		06/21/11 01:29		
Hexachlorobenzene	ND ug	/kg	431	1		06/21/11 01:29		
lexachlorocyclopentadiene	ND ug/		431	1		06/21/11 01:29		
lexachloroethane	ND ug/	/kg	431	1		06/21/11 01:29		
sophorone	ND ug/	/kg	431	1		06/21/11 01:29		
!-Methylphenol(o-Cresol)	ND ug/	/kg	431	1		06/21/11 01:29		
&4-Methylphenol(m&p Cresol)	ND ug/	/kg	431	1		06/21/11 01:29		
!-Nitroaniline	ND ug/	/kg	431	1		06/21/11 01:29	88-74-4	
3-Nitroaniline	ND ug/	/kg	431	1		06/21/11 01:29		
-Nitroaniline	ND ug/	/kg	431	1		06/21/11 01:29		
Nitrobenzene	ND ug/	/kg	431	1		06/21/11 01:29		
2-Nitrophenol	ND ug/	/kg	431	1		06/21/11 01:29		
l-Nitrophenol	ND ug/	-	431	1		06/21/11 01:29		
l-Nitroso-di-n-propylamine	ND ug/	/kg	431	1		06/21/11 01:29		
N-Nitrosodiphenylamine	ND ug/		431	1		06/21/11 01:29		
Pentachlorophenol	ND ug/	/kg	431	1		06/21/11 01:29		
Phenol	ND ug/	-	431	1		06/21/11 01:29		
,2,4-Trichlorobenzene	ND ug/	-	431	1		06/21/11 01:29		
,4,5-Trichlorophenol	ND ug/	'kg	431	1		06/21/11 01:29		
,4,6-Trichlorophenol	ND ug/	-	431	1		06/21/11 01:29		
litrobenzene-d5 (S)	73 %	•	40-138	1		06/21/11 01:29		
-Fluorobiphenyl (S)	73 %		46-118	1		06/21/11 01:29		
erphenyl-d14 (S)	75 %		41-137	1		06/21/11 01:29		
henol-d6 (S)	72 %		44-120	1		06/21/11 01:29		
-Fluorophenol (S)	71 %		37-117	1		06/21/11 01:29		
,4,6-Tribromophenol (S)	76 %		26-135	1		06/21/11 01:29		
ercent Moisture	Analytical Meth	od: ASTM D2	974-87					
Percent Moisture	24.0 %		0.10	1		06/14/11 16:10		

Percent Moisture

24.0 %

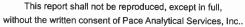
0.10

06/14/11 16:19

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

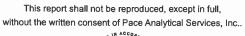
Pace Project No.: 258066

	Lab ID: 25806605	5 Collected:	06/08/1	1 09:08	Received: 06	5/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weigl	ht" basis							
Parameters	Results U	nits Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: E	PA 6010 Preparat	tion Meth	od: EPA	3050			
Arsenic	ND mg/kg		13.6	5	06/16/11 07:52	06/17/11 11:19	7440-38-2	
Barium	313 mg/kg		27.2	1		06/17/11 13:05		
Cadmium	ND mg/kg		6.8	5	06/16/11 07:52	06/17/11 11:19	7440-43-9	
Chromium	64.0 mg/kg		1.4	1		06/17/11 13:05		
Lead	15.2 mg/kg		6.8	5		06/17/11 11:19		
Selenium	ND mg/kg		6.8	5		06/17/11 11:19		
Silver	ND mg/kg		6.8	5		06/17/11 11:19		D3
7471 Mercury	Analytical Method: E	PA 7471 Preparat	tion Meth	od: EPA				
Mercury	ND mg/kg		0.14	1		06/21/11 11:10	7439-97-6	
Percent Moisture	Analytical Method: A	STM D2974-87						
Percent Moisture	46.3 %		0.10	1		06/14/11 16:20		
Sample: 6222 0-3' BGL	Lab ID: 25806605	6 Collected:	06/07/1 ⁻	1 09:50	Received: 06	/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weigh	nt" basis							
Parameters		nits Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: A	STM D2974-87						
Percent Moisture	10.8 %		0.10	1		06/14/11 16:20		
Sample: 6222 4 5 DOI								
Sample: 5222 4-5 BGL	Lab ID: 25806605	7 Collected:	06/07/11	09:59	Received: 06	/10/11 09:50 M	/latrix: Solid	
•		7 Collected:	06/07/1	09:59	Received: 06	/10/11 09:50 N	Matrix: Solid	
•	nt" basis	7 Collected:		DF	Received: 06 Prepared	/10/11 09:50 M Analyzed	fatrix: Solid	Qual
Results reported on a "dry-weigh Parameters	nt" basis	nits Report						Qual
Sample: 6222 4-5 BGL Results reported on a "dry-weigh Parameters Percent Moisture Percent Moisture	nt" basis Results U	nits Report						Qual
Results reported on a "dry-weigh Parameters Percent Moisture Percent Moisture	Results Un Analytical Method: A: 15.6 %	nits Report	0.10	DF	Prepared	Analyzed 06/14/11 16:21	CAS No.	Qual
Percent Moisture Percent Moisture Percent Moisture Sample: 6222 5'-6 BGL	Analytical Method: A. 15.6 % Lab ID: 25806605	nits Report	0.10	DF		Analyzed 06/14/11 16:21		Qual
Parameters Percent Moisture Percent Moisture Percent Moisture Sample: 6222 5'-6 BGL	Analytical Method: A 15.6 % Lab ID: 25806605	nits Report	0.10 06/07/11	DF	Prepared	Analyzed 06/14/11 16:21	CAS No.	Qual
Results reported on a "dry-weigh Parameters Percent Moisture Percent Moisture Sample: 6222 5'-6 BGL Results reported on a "dry-weigh	Analytical Method: A 15.6 % Lab ID: 25806605	Report STM D2974-87 Collected: Report	0.10 06/07/11	DF 1 09:59	Prepared Received: 06	Analyzed 06/14/11 16:21 /10/11 09:50 M	CAS No.	

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project: Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6222 11'-12' BGL Lab ID: 258066059 Collected: 06/07/11 10:05 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Li	mit _	DF	Prepared	Analyzed	CAS No.	Qu
8270 MSSV PAH by SIM	Analytical Metho	d: EPA 827	by SIM Pre	paratio	n Met	hod: EPA 3546	•		
Acenaphthene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	83-32-9	
Acenaphthylene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	208-96-8	
Anthracene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	120-12-7	
Benzo(a)anthracene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	56-55-3	
Benzo(a)pyrene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	50-32-8	
Benzo(b)fluoranthene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	205-99-2	
Benzo(g,h,i)perylene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	191-24-2	
Benzo(k)fluoranthene	ND ug/k	9		8.2	1	06/14/11 15:15	06/15/11 18:53	207-08-9	
Chrysene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	218-01-9	
Dibenz(a,h)anthracene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	53-70-3	
Fluoranthene	ND ug/k	9		8.2	1	06/14/11 15:15	06/15/11 18:53	206-44-0	
Fluorene	ND ug/k	g		8.2	1	06/14/11 15:15	06/15/11 18:53	86-73-7	
ndeno(1,2,3-cd)pyrene	ND ug/k	-		8.2	1		06/15/11 18:53		
1-Methylnaphthalene	ND ug/k	g		8.2	1		06/15/11 18:53		
2-Methylnaphthalene	ND ug/k	9		8.2	1		06/15/11 18:53		
Naphthalene	ND ug/k	9		8.2	1		06/15/11 18:53		
Phenanthrene	ND ug/k			8.2	1		06/15/11 18:53		
Pyrene	ND ug/k			8.2	1		06/15/11 18:53		
2-Fluorobiphenyl (S)	77 %	•	31-	131	1		06/15/11 18:53		
erphenyl-d14 (S)	74 %			133	1		06/15/11 18:53		
270 MSSV Semivolatiles	Analytical Method	d: EPA 8270) Preparation	Metho	d: EP	A 3546			
Benzoic acid	ND ug/kg	9	2	040	1	06/14/11 15:15	06/21/11 01:51	65-85-0	
Benzyl alcohol	ND ug/kg	1		408	1		06/21/11 01:51		
				408					
I-Bromophenylphenyl ether	ND ug/kg	4		400	1	00/14/11 15:15	06/21/11 01:51	101-55-3	
	· ·	•		408 408	1		06/21/11 01:51 06/21/11 01:51		
Butylbenzylphthalate	ND ug/k	9		408	1	06/14/11 15:15	06/21/11 01:51	85-68-7	
Butylbenzylphthalate I-Chloro-3-methylphenol	ND ug/kg ND ug/kg	9		408 408		06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7	
Butylbenzylphthalate I-Chloro-3-methylphenol I-Chloroaniline	ND ug/k ND ug/k ND ug/k	9		408 408 408	1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8	
Butylbenzylphthalate 4-Chloro-3-methylphenol 4-Chloroaniline ois(2-Chloroethoxy)methane	ND ug/kı ND ug/kı ND ug/kı ND ug/kı			408 408 408 408	1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1	
Butylbenzylphthalate I-Chloro-3-methylphenol I-Chloroaniline pis(2-Chloroethoxy)methane pis(2-Chloroethyl) ether	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;))))		408 408 408 408 408	1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4	
Butylbenzylphthalate I-Chloro-3-methylphenol I-Chloroaniline pis(2-Chloroethoxy)methane pis(2-Chloroethyl) ether pis(2-Chloroisopropyl) ether	ND ug/k _l ND ug/k _l ND ug/k _l ND ug/k _l ND ug/k _l ND ug/k _l			408 408 408 408 408 408	1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9	
Butylbenzylphthalate I-Chloro-3-methylphenol I-Chloroaniline pis(2-Chloroethoxy)methane pis(2-Chloroethyl) ether pis(2-Chloroisopropyl) ether I-Chloronaphthalene	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;			408 408 408 408 408 408 408	1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7	
Butylbenzylphthalate D-Chloro-3-methylphenol D-Chloroaniline Dis(2-Chloroethoxy)methane Dis(2-Chloroethyl) ether Dis(2-Chloroisopropyl) ether D-Chloronaphthalene D-Chlorophenol	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;			408 408 408 408 408 408 408 408	1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8	
Butylbenzylphthalate I-Chloro-3-methylphenol I-Chloroaniline Dis(2-Chloroethoxy)methane Dis(2-Chloroethyl) ether I-Chloronaphthalene I-Chlorophenol I-Chlorophenylphenyl ether	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;			408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3	
Butylbenzylphthalate D-Chloro-3-methylphenol D-Chloroaniline Dis(2-Chloroethoxy)methane Dis(2-Chloroethyl) ether Dis(2-Chloroisopropyl) ether D-Chloronaphthalene D-Chlorophenol D-Chlorophenylphenyl ether Dibenzofuran	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;			408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9	
Butylbenzylphthalate J-Chloro-3-methylphenol J-Chloroaniline Jois(2-Chloroethoxy)methane Jois(2-Chloroethyl) ether Jois(2-Chloroisopropyl) ether J-Chloronaphthalene J-Chlorophenol J-Chlorophenylphenyl ether Jibenzofuran J-Dichlorobenzene	ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k; ND ug/k;			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1	
Butylbenzylphthalate J-Chloro-3-methylphenol J-Chloroaniline Jois(2-Chloroethoxy)methane Jois(2-Chloroethyl) ether Jois(2-Chloroisopropyl) ether Jois(2-Chloroisopropyl) ether J-Chloronaphthalene J-Chlorophenol J-Chlorophenylphenyl ether Joibenzofuran J-Dichlorobenzene J-Dichlorobenzene	ND ug/k,			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1	
Butylbenzylphthalate J-Chloro-3-methylphenol J-Chloroaniline Jois(2-Chloroethoxy)methane Jois(2-Chloroethyl) ether Jois(2-Chloroisopropyl) ether Jois(2-Chloroisopropyl) ether J-Chloronaphthalene J-Chlorophenol J-Chlorophenylphenyl ether Joibenzofuran J-Dichlorobenzene J-Dichlorobenzene J-Dichlorobenzene	ND ug/k _i			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7	
Butylbenzylphthalate J-Chloro-3-methylphenol J-Chloroaniline Jois(2-Chloroethoxy)methane Jois(2-Chloroethyl) ether Jois(2-Chloroisopropyl) ether Jois(2-Chloroisopropyl) ether J-Chloronaphthalene J-Chlorophenol J-Chlorophenylphenyl ether Jibenzofuran J-Dichlorobenzene J-Dichlorobenzene J-Dichlorobenzene J-Dichlorobenzene J-Dichlorobenzene	ND ug/k _i			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1	
Butylbenzylphthalate Chloro-3-methylphenol Chloroaniline Dis(2-Chloroethoxy)methane Dis(2-Chloroethyl) ether Dis(2-Chloroisopropyl) ether Chloronaphthalene Chlorophenol Chlorophenylphenyl ether Dibenzofuran ,2-Dichlorobenzene ,3-Dichlorobenzene ,4-Dichlorobenzidine ,4-Dichlorophenol	ND ug/k,			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1 120-83-2	
Butylbenzylphthalate Chloro-3-methylphenol Chloroaniline Dis(2-Chloroethoxy)methane Dis(2-Chloroethyl) ether Dis(2-Chloroisopropyl) ether Chloronaphthalene Chlorophenol Chlorophenylphenyl ether Dibenzofuran ,2-Dichlorobenzene ,3-Dichlorobenzene ,4-Dichlorobenzidine ,4-Dichlorophenol Diethylphthalate	ND ug/k _i			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1 120-83-2 84-66-2	
Butylbenzylphthalate 4-Chloro-3-methylphenol 4-Chloroaniline bis(2-Chloroethoxy)methane bis(2-Chloroethoxy)methane bis(2-Chloroethyl) ether bis(2-Chloroisopropyl) ether c-Chloronaphthalene c-Chlorophenol 4-Chlorophenol 6-Chlorophenylphenyl ether bibenzofuran 7-Dichlorobenzene 7-Dichlorobenzene 8-3'-Dichlorobenzene 8-4-Dichlorophenol biethylphthalate 6-4-Dimethylphenol	ND ug/k _i			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1 120-83-2 84-66-2 105-67-9	
Butylbenzylphthalate 4-Chloro-3-methylphenol 4-Chloroaniline bis(2-Chloroethoxy)methane bis(2-Chloroethoxy) ether bis(2-Chloroisopropyl) ether 2-Chloronaphthalene 2-Chlorophenol 4-Chlorophenylphenyl ether bibenzofuran 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzidine 2,4-Dichlorophenol biethylphthalate 2,4-Dimethylphenol bimethylphthalate	ND ug/kg			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1 120-83-2 84-66-2 105-67-9 131-11-3	
4-Bromophenylphenyl ether Butylbenzylphthalate 4-Chloro-3-methylphenol 4-Chloroaniline bis(2-Chloroethoxy)methane bis(2-Chloroethyl) ether bis(2-Chloroisopropyl) ether 2-Chloronaphthalene 2-Chlorophenol 4-Chlorophenylphenyl ether bibenzofuran 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzidine 2,4-Dichlorophenol biethylphthalate 2,4-Dimethylphenol bimethylphthalate bi-n-butylphthalate 1,6-Dinitro-2-methylphenol	ND ug/k _i			408 408 408 408 408 408 408 408 408 408	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	06/14/11 15:15 06/14/11 15:15	06/21/11 01:51 06/21/11 01:51	85-68-7 59-50-7 106-47-8 111-91-1 111-44-4 39638-32-9 91-58-7 95-57-8 7005-72-3 132-64-9 95-50-1 541-73-1 106-46-7 91-94-1 120-83-2 84-66-2 105-67-9 131-11-3 84-74-2	

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6222 11'-12' BGL

Lab ID: 258066059

Collected: 06/07/11 10:05 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" ba	asis
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
3270 MSSV Semivolatiles	Analytical Metho	d: EPA 8270	Preparation Meth	nod: EF	PA 3546			
2,4-Dinitrotoluene	ND ug/k	g	408	1	06/14/11 15:15	06/21/11 01:51	121-14-2	
2,6-Dinitrotoluene	ND ug/k	g	408	1		06/21/11 01:51		
Di-n-octylphthalate	ND ug/k	g	408	1	06/14/11 15:15	06/21/11 01:51	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/k	g	408	1	06/14/11 15:15	06/21/11 01:51	117-81-7	
Hexachloro-1,3-butadiene	ND ug/k	g	408	1	06/14/11 15:15	06/21/11 01:51	87-68-3	
Hexachlorobenzene	ND ug/k	g	408	1		06/21/11 01:51		
dexachlorocyclopentadiene	ND ug/kg	g	408	1	06/14/11 15:15	06/21/11 01:51	77-47-4	
lexachloroethane	ND ug/k	g	408	1		06/21/11 01:51		
sophorone	ND ug/k	g	408	1		06/21/11 01:51		
-Methylphenol(o-Cresol)	ND ug/kg	g	408	1	06/14/11 15:15	06/21/11 01:51	95-48-7	
8&4-Methylphenol(m&p Cresol)	ND ug/kg	g	408	1		06/21/11 01:51		
P-Nitroaniline	ND ug/kg	9	408	1		06/21/11 01:51	88-74-4	
3-Nitroaniline	ND ug/kg	g	408	1		06/21/11 01:51		
-Nitroaniline	ND ug/kg	-	408	1		06/21/11 01:51		
litrobenzene	ND ug/kg	9	408	1		06/21/11 01:51		
-Nitrophenol	ND ug/kg	9	408	1		06/21/11 01:51		
-Nitrophenol	ND ug/kg	9	408	1		06/21/11 01:51		
l-Nitroso-di-n-propylamine	ND ug/kg	g	408	1		06/21/11 01:51		
I-Nitrosodiphenylamine	ND ug/kg	<u> </u>	408	1		06/21/11 01:51		
Pentachlorophenol	ND ug/kg	9	408	1		06/21/11 01:51		
Phenol	ND ug/kg	9	408	1		06/21/11 01:51		
,2,4-Trichlorobenzene	ND ug/kg	-	408	1		06/21/11 01:51		
,4,5-Trichlorophenol	ND ug/kg	-	408	1		06/21/11 01:51		
,4,6-Trichlorophenol	ND ug/kg	-	408	1		06/21/11 01:51		
litrobenzene-d5 (S)	73 %	•	40-138	1		06/21/11 01:51		
-Fluorobiphenyl (S)	85 %		46-118	1		06/21/11 01:51		
erphenyl-d14 (S)	88 %		41-137	1		06/21/11 01:51		
Phenol-d6 (S)	87 %		44-120	1		06/21/11 01:51		
-Fluorophenol (S)	87 %		37-117	1		06/21/11 01:51		
,4,6-Tribromophenol (S)	94 %		26-135	1		06/21/11 01:51		
ercent Moisture	Analytical Method	d: ASTM D29	974-87					
ercent Moisture	20.1 %		0.10	1		06/14/11 16:22		

Results reported on a "dry-weight" basis **Parameters** Results Units Report Limit DF Prepared Analyzed CAS No.

6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050 Arsenic ND mg/kg 7.9 06/16/11 07:52 06/17/11 11:22 7440-38-2 Barium 256 mg/kg 79.0 06/16/11 07:52 06/17/11 11:22 7440-39-3 Cadmium ND mg/kg 3.9 06/16/11 07:52 06/17/11 11:22 7440-43-9 Chromium 35.7 mg/kg 0.79 06/16/11 07:52 06/17/11 13:08 7440-47-3 Lead 11.5 mg/kg 0.79 06/16/11 07:52 06/17/11 13:08 7439-92-1

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Qual





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6223 0-3 BGL

Parameters

Lab ID: 258066060

Results

Collected: 06/07/11 09:16

Report Limit

Received: 06/10/11 09:50

CAS No.

Results reported on a "dry-weight" basis

6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050

Selenium ND mg/kg

3.9 3.9

5 06/16/11 07:52 06/17/11 11:22 7782-49-2 5

Prepared

Qual

Silver 7471 Mercury

Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Analytical Method: ASTM D2974-87

Units

Analyzed

06/16/11 07:52 06/17/11 11:22 7440-22-4

Percent Moisture

ND mg/kg

ND mg/kg

0.075

06/20/11 15:17 06/21/11 11:12 7439-97-6

Percent Moisture

0.10

06/14/11 16:23

Sample: 6223 6-9 BGL

Lab ID: 258066061

10.8 %

Collected: 06/07/11 09:22

Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters

Results

Units

Report Limit

Prepared

DF

1

DF

Analyzed

CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

11.3 %

0.10

06/14/11 16:24

Sample: 6224 3'-6 BGL Results reported on a "dry-weight" basis

Lab ID: 258066062

Collected: 06/07/11 08:35

Received: 06/10/11 09:50

Results

Units

Report Limit

Prepared

Analyzed

CAS No. Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

14.0 %

0.10

06/14/11 16:25

Sample: 6224 5.5-6.5 BGL

Results reported on a "dry-weight" basis **Parameters**

Parameters

Lab ID: 258066063

Collected: 06/07/11 08:55

DF

1

Received: 06/10/11 09:50

Matrix: Solid

Results

Units

Report Limit

Prepared

Analyzed

CAS No. Qual

Percent Moisture Percent Moisture

Analytical Method: ASTM D2974-87

0.10

06/14/11 16:26

Sample: 6225 0-3 BGL

Lab ID: 258066064

460 mg/kg

1230 mg/kg

7.8 %

Parameters

Results reported on a "dry-weight" basis

Collected: 06/07/11 08:07

80.3

321

Received: 06/10/11 09:50

Matrix: Solid

Qual

Results

Units Report Limit

DF

Prepared

06/17/11 10:15 06/18/11 07:34

Analyzed CAS No.

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NWTPH-Dx GCS

Motor Oil Range

Diesel Range

Analytical Method: NWTPH-Dx Preparation Method: EPA 3546

06/17/11 10:15 06/18/11 07:34 64742-65-0

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

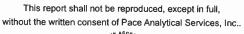
258066

Pace Project No.: 258066								
Sample: 6225 0-3 BGL	Lab ID: 258066	064 Colle	ected: 06/07/	11 08:07	Received: 06	6/10/11 09:50 I	Matrix: Solid	
Results reported on a "dry-weig	ght" basis							
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method	: NWTPH-Dx	Preparation M	ethod: E	PA 3546			
n-Octacosane (S)	108 %		50-150	5	06/17/11 10:15	06/18/11 07:34	630-02-4	
o-Terphenyl (S)	107 %		50-150	5		06/18/11 07:34		
Percent Moisture	Analytical Method	: ASTM D2974	-87					
Percent Moisture	6.2 %		0.10	1		06/14/11 16:31		
Sample: 6225 3'-5 BGL	Lab ID: 258066	065 Colle	ected: 06/07/1	11 08:14	Received: 06	5/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis							
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method	: ASTM D2974	-87				•	
Percent Moisture	11.9 %		0.10	1		06/14/11 16:32		
Sample: 6226 0-3 BGL	Lab ID: 258066	066 Colle	cted: 06/07/1	1 07:36	Received: 06	/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis							
Parameters	Results	Units I	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Method:	NWTPH-Dx F	reparation Me	ethod: E	PA 3546	<u> </u>		
Diesel Range	131 mg/kg		86.5	5	06/17/11 10:15	06/18/11 07:50		
Motor Oil Range	684 mg/kg		346	5	06/17/11 10:15		64742-65-0	
n-Octacosane (S)	110 %		50-150	5	06/17/11 10:15			
o-Terphenyl (S)	112 %		50-150	5	06/17/11 10:15			
Percent Moisture	Analytical Method:	ASTM D2974-	87					
Percent Moisture	8.5 %		0.10	1		06/14/11 16:32		
Sample: 6226 5-6 BGL	Lab ID: 258066	067 Colle	cted: 06/07/1	1 07:39	Received: 06	/10/11 09:50 N	Matrix: Solid	
-		067 Colle	cted: 06/07/1	1 07:39	Received: 06	/10/11 09:50 N	fatrix: Solid	
•			cted: 06/07/1	1 07:39 DF	Received: 06	/10/11 09:50 N	fatrix: Solid CAS No.	Qual
Results reported on a "dry-weig Parameters	ght" basis	Units F	Report Limit	DF	Prepared			Qual
Results reported on a "dry-weig Parameters	Results	Units F	Report Limit	DF nod: EPA	Prepared	Analyzed	CAS No.	Qual
Results reported on a "dry-weig Parameters 6010 MET ICP Arsenic	Results Analytical Method: ND mg/kg	Units F	Report Limit	DF	Prepared 3050 06/16/11 07:52	Analyzed 06/17/11 11:26	CAS No. 7440-38-2	Qual
Results reported on a "dry-weig Parameters 6010 MET ICP Arsenic Barium	Results Analytical Method:	Units F	Report Limit eparation Meth	DF nod: EPA	Prepared 3050 06/16/11 07:52 06/16/11 07:52	Analyzed 06/17/11 11:26 06/17/11 13:12	CAS No. 7440-38-2 7440-39-3	Qual
Results reported on a "dry-weig Parameters 6010 MET ICP Arsenic Barium Cadmium	Results Analytical Method: ND mg/kg 175 mg/kg	Units F	eparation Meth 11.9 23.7 5.9	DF nod: EPA 5 1	Prepared 3050 06/16/11 07:52 06/16/11 07:52 06/16/11 07:52	Analyzed 06/17/11 11:26 06/17/11 13:12 06/17/11 11:26	CAS No. 7440-38-2 7440-39-3 7440-43-9	Qual
Parameters Parameters 6010 MET ICP Arsenic Barium Cadmium Chromium	Results Analytical Method: ND mg/kg 175 mg/kg ND mg/kg	Units F	Report Limit eparation Meth 11.9 23.7	DF nod: EPA 5 1 5	Prepared 3050 06/16/11 07:52 06/16/11 07:52 06/16/11 07:52 06/16/11 07:52	Analyzed 06/17/11 11:26 06/17/11 13:12 06/17/11 11:26 06/17/11 13:12	CAS No. 7440-38-2 7440-39-3 7440-43-9 7440-47-3	Qual
Results reported on a "dry-weig	Analytical Method: ND mg/kg 175 mg/kg ND mg/kg 82.6 mg/kg	Units F	eparation Meth 11.9 23.7 5.9 1.2	DF nod: EP# 5 1 5 1	Prepared 3050 06/16/11 07:52 06/16/11 07:52 06/16/11 07:52	Analyzed 06/17/11 11:26 06/17/11 13:12 06/17/11 13:12 06/17/11 13:12	7440-38-2 7440-39-3 7440-43-9 7440-47-3 7439-92-1	Qual

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Sample: 6226 5-6 BGL

Lab ID: 258066067

Results

Results

Collected: 06/07/11 07:39

Report Limit

Received: 06/10/11 09:50

Prepared

Prepared

Prepared

Prepared

Matrix: Solid

CAS No.

Qual

Qual

Results reported on a "dry-weight" basis **Parameters**

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury

7471 Mercury

ND mg/kg

0.093

06/20/11 15:17 06/21/11 11:19 7439-97-6

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture

19.0 %

0.10

DF

1

DF

1

1

06/14/11 16:33

Analyzed

Analyzed

Sample: 6227 0-3 BGL

Lab ID: 258066068

Collected: 06/07/11 07:18

18.9

75.6

50-150

50-150

Report Limit

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Results reported on a "dry-weight" basis

Parameters

NWTPH-Dx GCS Analytical Method: NWTPH-Dx Preparation Method: EPA 3546 Diesel Range 22.2 mg/kg

Motor Oil Range n-Octacosane (S) o-Terphenyl (S)

93 % **Percent Moisture** Analytical Method: ASTM D2974-87

Percent Moisture

15.8 %

114 mg/kg

93 %

0.10

06/14/11 16:34

06/17/11 10:15 06/18/11 08:06 64742-65-0

06/17/11 10:15 06/18/11 08:06 630-02-4

06/17/11 10:15 06/18/11 08:06 84-15-1

Sample: 6227 4-5 BGL

Lab ID: 258066069 Results reported on a "dry-weight" basis

Collected: 06/07/11 07:25

Report Limit

Report Limit

DF

1

Received: 06/10/11 09:50

06/17/11 10:15 06/18/11 08:06

Matrix: Solid

CAS No.

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture

22.3 %

0.10

06/14/11 16:34

Analyzed

Sample: 6227 5-6 BGL

Results reported on a "dry-weight" basis **Parameters**

Parameters

Results

Results

Lab ID: 258066070

Collected: 06/07/11 07:20

DF

Received: 06/10/11 09:50

CAS No.

Qual

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

18.7 %

0.10 1 06/14/11 16:35

Analyzed

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis

Sample: 6228 0-3' BGL

Lab ID: 258066071

Collected: 06/06/11 11:04

Report Limit

Prepared

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Qual

Parameters Percent Moisture

Analytical Method: ASTM D2974-87

Units

Percent Moisture

20.5 %

0.10

06/14/11 16:36

Analyzed

Sample: 6228 4-5 BGL

Lab ID: 258066072

Collected: 06/06/11 11:11

Received: 06/10/11 09:50

Results reported on a "dry-weight" basis

Parameters

Results

Results

Results

Units

Report Limit

DF

DF

5

5

DF

1

Prepared Analyzed CAS No.

Qual

Qual

D3

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

15.6 %

0.10

06/14/11 16:36

Analyzed

Sample: 6229 0-3 BGL

Lab ID: 258066073

Collected: 06/06/11 11:25

Report Limit

Received: 06/10/11 09:50 Matrix: Solid

Prepared

CAS No.

Results reported on a "dry-weight" basis

Parameters

6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	ND mg/kg	9.5	5	06/16/11 07:52	06/17/11 11:35	7440-38-2				
Barium	137 mg/kg	19.1	1	06/16/11 07:52	06/17/11 13:15	7440-39-3				
Cadmium	ND mg/kg	4.8	5	06/16/11 07:52	06/17/11 11:35	7440-43-9				
Chromium	30.8 mg/kg	0.95	1	06/16/11 07:52	06/17/11 13:15	7440-47-3				
Lead	5.5 mg/kg	0.95	1	06/16/11 07:52	06/17/11 13:15	7439-92-1				

Units

Analytical Method: EPA 7471 Preparation Method: EPA 7471 7471 Mercury

Mercury

ND mg/kg

0.094

4.8

4.8

06/20/11 15:17 06/21/11 11:21 7439-97-6

Percent Moisture Percent Moisture

Selenium

Silver

16.1 %

ND mg/kg

ND mg/kg

Analytical Method: ASTM D2974-87

Units

0.10

06/14/11 16:37

06/16/11 07:52 06/17/11 11:35 7782-49-2

06/16/11 07:52 06/17/11 11:35 7440-22-4

Sample: 6229 4'-5 BGL

Results reported on a "dry-weight" basis **Parameters**

Lab ID: 258066074

Collected: 06/06/11 11:30

Report Limit

Prepared

Received: 06/10/11 09:50

CAS No.

Qual

Percent Moisture

Percent Moisture

Results

Analytical Method: ASTM D2974-87 9.3 %

0.10

DF

1

06/14/11 16:37

Analyzed

Date: 06/24/2011 04:23 PM

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Project: Hwy 62 Phase - 1

Pace Project No.: 258066

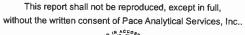
Sample: 6230 0-3 BGL Lab ID: 258066075 Collected: 06/06/11 10:36 Received: 06/10/11 09:50 Matrix: Solid

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS	Analytical Meth	nod: NWTPH-I	Ox Preparation Me	ethod:	EPA 3546			
Diesel Range	151 mg	g/kg	84.8	5	06/17/11 10:15	06/18/11 08:54		
Motor Oil Range	925 mg	g/kg	339	5	06/17/11 10:15	06/18/11 08:54	64742-65-0	
n-Octacosane (S)	102 %		50-150	5	06/17/11 10:15	06/18/11 08:54	630-02-4	
o-Terphenyl (S)	97 %		50-150	5		06/18/11 08:54		
3270 MSSV PAH by SIM	Analytical Meth	od: EPA 8270	by SIM Preparat	ion Me	thod: EPA 3546			
Acenaphthene	ND ug	/kg	7.7	1	06/14/11 15:15	06/15/11 19:10	83-32-9	
Acenaphthylene	ND ug	/kg	7.7	1		06/15/11 19:10		
Anthracene	ND ug	-	7.7	1		06/15/11 19:10		
Benzo(a)anthracene	ND ug	•	7.7	1		06/15/11 19:10		
Benzo(a)pyrene	8.8 ug	-	7.7	1		06/15/11 19:10		
Benzo(b)fluoranthene	13.3 ug/	•	7.7	1		06/15/11 19:10		
Benzo(g,h,i)perylene	13.4 ug/	•	7.7	1		06/15/11 19:10		
Benzo(k)fluoranthene	ND ug/	-	7.7	1		06/15/11 19:10		
Chrysene	30.7 ug/		7.7	1		06/15/11 19:10		
Dibenz(a,h)anthracene	ND ug/		7.7	1		06/15/11 19:10		
luoranthene	ND ug/	-	7.7	1				
luorene	_	_				06/15/11 19:10		
ndeno(1,2,3-cd)pyrene	ND ug/ ND ug/		7.7	1		06/15/11 19:10		
	•	•	7.7	1		06/15/11 19:10		
-Methylnaphthalene	ND ug/	-	7.7	1		06/15/11 19:10		
-Methylnaphthalene	ND ug/	-	7.7	1		06/15/11 19:10		
laphthalene	ND ug/	-	7.7	1		06/15/11 19:10		
henanthrene	14.3 ug/	•	7.7	1		06/15/11 19:10		
Pyrene	12.3 ug/	kg	7.7	1		06/15/11 19:10		
r-Fluorobiphenyl (S)	66 %		31-131	1	06/14/11 15:15	06/15/11 19:10	321-60-8	
erphenyl-d14 (S)	66 %		30-133	1	06/14/11 15:15	06/15/11 19:10	1718-51-0	
270 MSSV Semivolatiles	Analytical Meth	od: EPA 8270	Preparation Meth	od: EP	A 3546			
enzoic acid	ND ug/	kg	1910	1		06/21/11 03:42		
enzyl alcohol	ND ug/	•	382	1	06/14/11 15:15	06/21/11 03:42	100-51-6	
-Bromophenylphenyl ether	ND ug/	kg	382	1	06/14/11 15:15	06/21/11 03:42	101-55-3	
utylbenzylphthalate	ND ug/	kg	382	1	06/14/11 15:15	06/21/11 03:42	85-68-7	
-Chloro-3-methylphenol	ND ug/	kg	382	1	06/14/11 15:15	06/21/11 03:42	59-50-7	
-Chloroaniline	ND ug/	kg	382	1	06/14/11 15:15	06/21/11 03:42	106-47-8	
is(2-Chloroethoxy)methane	ND ug/	kg	382	1		06/21/11 03:42		
is(2-Chloroethyl) ether	ND ug/	kg	382	1		06/21/11 03:42		
is(2-Chloroisopropyl) ether	ND ug/	kg	382	1		06/21/11 03:42		
-Chloronaphthalene	ND ug/	-	382	1		06/21/11 03:42		
-Chlorophenol	ND ug/		382	1		06/21/11 03:42		
-Chlorophenylphenyl ether	ND ug/	-	382	1		06/21/11 03:42		
ibenzofuran	ND ug/		382	1		06/21/11 03:42		
,2-Dichlorobenzene	ND ug/		382	1		06/21/11 03:42		
3-Dichlorobenzene	ND ug/	-	382	1		06/21/11 03:42		
4-Dichlorobenzene	ND ug/	-	382	1	06/14/11 15:15			

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample:	6230	0-3	BGL

Lab ID: 258066075

Lab ID: 258066076

Collected: 06/06/11 10:36 Received: 06/10/11 09:50 Matrix: Solid

•		-		_			
Results rep	01	rte	d	оп	а	"dry-weight"	basis

Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 827	0 Preparation Meth	nod: EF	PA 3546			
2,4-Dichlorophenol	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	120-83-2	
Diethylphthalate	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	84-66-2	
2,4-Dimethylphenol	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	105-67-9	
Dimethylphthalate	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	131-11-3	
Di-n-butylphthalate	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	534-52-1	
2,4-Dinitrophenol	ND ug/kg	775	1	06/14/11 15:15	06/21/11 03:42	51-28-5	
2,4-Dinitrotoluene	ND ug/kg	382	1		06/21/11 03:42		
2,6-Dinitrotoluene	ND ug/kg	382	1		06/21/11 03:42		
Di-n-octylphthalate	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg	382	1		06/21/11 03:42		
Hexachloro-1,3-butadiene	ND ug/kg	382	1		06/21/11 03:42		
Hexachlorobenzene	ND ug/kg	382	1		06/21/11 03:42		
Hexachlorocyclopentadiene	ND ug/kg	382	1		06/21/11 03:42		
Hexachloroethane	ND ug/kg	382	1		06/21/11 03:42		
Isophorone	ND ug/kg	382	1		06/21/11 03:42		
2-Methylphenol(o-Cresol)	ND ug/kg	382	1		06/21/11 03:42		
3&4-Methylphenol(m&p Cresol)	ND ug/kg	382	1		06/21/11 03:42		
2-Nitroaniline	ND ug/kg	382	1		06/21/11 03:42	88-74-4	
3-Nitroaniline	ND ug/kg	382	1		06/21/11 03:42		
4-Nitroaniline	ND ug/kg	382	1		06/21/11 03:42		
Nitrobenzene	ND ug/kg	382	1		06/21/11 03:42		
2-Nitrophenol	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	88-75-5	
4-Nitrophenol	ND ug/kg	382	1		06/21/11 03:42		
N-Nitroso-di-n-propylamine	ND ug/kg	382	1		06/21/11 03:42		
N-Nitrosodiphenylamine	ND ug/kg	382	1		06/21/11 03:42		
Pentachlorophenol	ND ug/kg	382	1	06/14/11 15:15	06/21/11 03:42	87-86-5	
Phenol	ND ug/kg	382	1		06/21/11 03:42		
1,2,4-Trichlorobenzene	ND ug/kg	382	1		06/21/11 03:42		
2,4,5-Trichlorophenol	ND ug/kg	382	1		06/21/11 03:42		
2,4,6-Trichlorophenol	ND ug/kg	382	1		06/21/11 03:42		
Percent Moisture	Analytical Method: ASTM D2	974-87					
Percent Moisture	13.9 %	0.10	1		06/14/11 16:38		

Results reported on a "dry-weight" basis									
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP	Analytical Met	thod: EPA 601	0 Preparation Met	hod: EF	PA 3050			_	
Arsenic	ND m	g/kg	8.2	5	06/16/11 07:52	06/17/11 11:38	7440-38-2		
Barium	345 m	g/kg	82.1	5	06/16/11 07:52	06/17/11 11:38	7440-39-3		
Cadmium	ND m	g/kg	4.1	5	06/16/11 07:52	06/17/11 11:38	7440-43-9		
Chromium	29.6 m	g/kg	0.82	1	06/16/11 07:52	06/17/11 13:18	7440-47-3		

Collected: 06/06/11 10:45 Received: 06/10/11 09:50 Matrix: Solid

Date: 06/24/2011 04:23 PM

Sample: 6230 4'-5 BGL

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6230 4'-5 BGL

Lab ID: 258066076

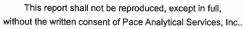
Collected: 06/06/11 10:45 Received: 06/10/11 09:50 Matrix: Solid

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Meth	nod: EPA 601	0 Preparation Met	hod: EP	A 3050			
Lead	6.6 mg	g/kg	4.1	5	06/16/11 07:52	06/17/11 11:38	7439-92-1	
Selenium	ND mg	g/kg	4.1	5		06/17/11 11:38		
Silver	ND mg	g/kg	4.1	5	06/16/11 07:52	06/17/11 11:38	7440-22-4	D3
7471 Mercury	Analytical Meth	nod: EPA 747	1 Preparation Met	hod: EP/	A 7471			
Mercury	ND mg	g/kg	0.091	1	06/20/11 15:17	06/21/11 11:23	7439-97-6	
Percent Moisture	Analytical Meth	nod: ASTM D	2974-87					
Percent Moisture	11.1 %		0.10	1		06/14/11 16:38		
Sample: 6231 0-3 BGL	Lab ID: 2586	066077	Collected: 06/06/1	11 09:55	Received: 06	/10/11 09:50 M	latrix: Solid	
Results reported on a "dry-wei								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS	Analytical Meth	nod: NWTPH-	Dx Preparation Me	ethod: E	PA 3546			-
Diesel Range	29.3 mg	g/kg	16.4	1	06/17/11 10:15	06/18/11 08:22		
Motor Oil Range	296 mg	g/kg	65.5	1	06/17/11 10:15	06/18/11 08:22	64742-65-0	
n-Octacosane (S)	110 %		50-150	1	06/17/11 10:15	06/18/11 08:22	630-02-4	
o-Terphenyl (S)	106 %		50-150	1	06/17/11 10:15	06/18/11 08:22	84-15-1	
8270 MSSV PAH by SIM	Analytical Meth	od: EPA 827	0 by SIM Preparati	ion Meth	od: EPA 3546			
Acenaphthene	ND ug	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	83-32-9	
Acenaphthylene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	208-96-8	
Anthracene	ND ug	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	120-12-7	
Benzo(a)anthracene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	56-55-3	
Benzo(a)pyrene	9.4 ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	50-32-8	
Benzo(b)fluoranthene	8.4 ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	205-99-2	
Benzo(g,h,i)perylene	14.5 ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	191-24-2	
Benzo(k)fluoranthene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	207-08-9	
Chrysene	23.0 ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	218-01-9	
Dibenz(a,h)anthracene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	53-70-3	
Fluoranthene	ND ug/	/kg	7.2	1		06/15/11 19:27		
Fluorene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	86-73-7	
ndeno(1,2,3-cd)pyrene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	193-39-5	
i-Methylnaphthalene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	90-12-0	
2-Methylnaphthalene	ND ug/	/kg	7.2	1	06/14/11 15:15	06/15/11 19:27	91-57-6	
	ND ug/	kg	7.2	1	06/14/11 15:15	06/15/11 19:27	91-20-3	
Naphthalene	-		7.0	1		06/15/11 19:27		
•	ND ug/	/kg	7.2		00/17/11 13.13			
Phenanthrene			7.2 7.2	1				
Naphthalene Phenanthrene Pyrene 2-Fluorobiphenyl (S)	ND ug/ 14.5 ug/ 71 %				06/14/11 15:15	06/15/11 19:27 06/15/11 19:27	129-00-0	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6231 0-3 BGL

Lab ID: 258066077

Collected: 06/06/11 09:55

Received: 06/10/11 09:50 Matrix: Solid

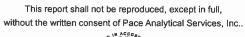
Results re	ported on	a "dr	y-weight"	basis
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Meth	nod: EPA 827	0 Preparation Met	hod: EF	PA 3546			
Benzoic acid	ND ug	/kg	1770	1	06/14/11 15:15	06/21/11 04:04	65-85-0	
Benzyl alcohol	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	100-51-6	
4-Bromophenylphenyl ether	ND ug		355	1	06/14/11 15:15	06/21/11 04:04	101-55-3	
Butylbenzylphthalate	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	85-68-7	
4-Chloro-3-methylphenol	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	59-50-7	
4-Chloroaniline	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	106-47-8	
bis(2-Chloroethoxy)methane	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	111-91-1	
bis(2-Chloroethyl) ether	ND ug	/kg	355	1		06/21/11 04:04		
bis(2-Chloroisopropyl) ether	ND ug	/kg	355	1		06/21/11 04:04		
2-Chloronaphthalene	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	91-58-7	
2-Chlorophenol	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	95-57-8	
4-Chlorophenylphenyl ether	ND ug	/kg	355	1	06/14/11 15:15	06/21/11 04:04	7005-72-3	
Dibenzofuran	ND ug	-	355	1		06/21/11 04:04		
1,2-Dichlorobenzene	ND ug	•	355	1		06/21/11 04:04		
1,3-Dichlorobenzene	ND ug		355	1		06/21/11 04:04		
1,4-Dichlorobenzene	ND ug		355	1		06/21/11 04:04		
3,3'-Dichlorobenzidine	ND ug	•	355	1		06/21/11 04:04		
2,4-Dichlorophenol	ND ug	_	355	1		06/21/11 04:04		
Diethylphthalate	ND ug	-	355	1		06/21/11 04:04		
2,4-Dimethylphenol	ND ug	-	355	1		06/21/11 04:04		
Dimethylphthalate	ND ug		355	1		06/21/11 04:04		
Di-n-butylphthalate	ND ug	•	355	1		06/21/11 04:04	-	
4,6-Dinitro-2-methylphenol	ND ug	-	355	1		06/21/11 04:04		
2,4-Dinitrophenol	ND ug	_	720	1		06/21/11 04:04		
2,4-Dinitrotoluene	ND ug	-	355	1		06/21/11 04:04		
2,6-Dinitrotoluene	ND ug	-	355	1		06/21/11 04:04		
Di-n-octylphthalate	ND ug	_	355	1		06/21/11 04:04		
bis(2-Ethylhexyl)phthalate	ND ug	-	355	1		06/21/11 04:04		
Hexachloro-1,3-butadiene	ND ug	-	355	1		06/21/11 04:04		
Hexachlorobenzene	ND ug	•	355	1		06/21/11 04:04		
Hexachlorocyclopentadiene	ND ug	-	355	1		06/21/11 04:04		
Hexachioroethane	ND ug/		355	1		06/21/11 04:04		
Isophorone	ND ug/	_	355	1		06/21/11 04:04		
2-Methylphenol(o-Cresol)	ND ug/	•	355	1		06/21/11 04:04		
3&4-Methylphenol(m&p Cresol)	ND ug/	_	355	1		06/21/11 04:04	00 10 1	
2-Nitroaniline	ND ug/		355	1		06/21/11 04:04	88-74-4	
3-Nitroaniline	ND ug/		355	1		06/21/11 04:04		
4-Nitroaniline	ND ug/	•	355	1		06/21/11 04:04		
Nitrobenzene	ND ug/		355	1		06/21/11 04:04		
2-Nitrophenol	ND ug/		355	1		06/21/11 04:04		
4-Nitrophenol	ND ug/		355	1		06/21/11 04:04		
N-Nitroso-di-n-propylamine	ND ug/	•	355	1		06/21/11 04:04		
N-Nitrosodiphenylamine	ND ug/	_	355	1		06/21/11 04:04		
Pentachlorophenol	ND ug/	•	355	1		06/21/11 04:04		
Phenol	ND ug/		355	1		06/21/11 04:04		
1,2,4-Trichlorobenzene	ND ug/		355	1		06/21/11 04:04		
THE PROPERTY OF THE PROPERTY O	IND ug/	v.à	333	1	00/14/11 10.15	00/21/11 04:04	12U-02-1	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

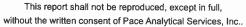
Pace Project No.: 258066

	Lab ID: 258	066077	Collected:	06/06/1	11 09:55	Received: 06	6/10/11 09:50 I	/latrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Quai
8270 MSSV Semivolatiles	Analytical Meth	hod: EPA 8	270 Prepara	tion Metl	hod: EPA	\ 3546			
2,4,5-Trichlorophenol	ND ug	ı/kg		355	1	06/14/11 15:15	06/21/11 04:04	95-95-4	
2,4,6-Trichlorophenol	ND ug	/kg		355	1		06/21/11 04:04		
Nitrobenzene-d5 (S)	72 %			40-138	1		06/21/11 04:04		
2-Fluorobiphenyl (S)	83 %			46-118	1		06/21/11 04:04		
Terphenyl-d14 (S)	81 %			41-137	1		06/21/11 04:04		
Phenol-d6 (S)	77 %			44-120	1		06/21/11 04:04		
2-Fluorophenol (S)	74 %			37-117	1		06/21/11 04:04		
2,4,6-Tribromophenol (S)	77 %			26-135	1		06/21/11 04:04		
Percent Moisture	Analytical Meth	nod: ASTM	D2974-87						
Percent Moisture	8.1 %			0.10	1		06/14/11 16:39		
(i)									
Sample: 6232 3-6 BGL	Lab ID: 258	066078	Collected:	06/06/1	1 09:18	Received: 06	5/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weig	ght" basis								
Parameters	Results	Units	Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Meth	nod: EPA 60	010 Preparat	tion Meth	nod: EPA	3050			
Arsenic	ND mg	g/kg		10.6	5	06/16/11 07:52	06/17/11 11:41	7440-38-2	
Barium	231 mg	g/kg		21.1	1		06/17/11 13:21		
Cadmium	ND mg	g/kg		5.3	5	06/16/11 07:52	06/17/11 11:41	7440-43-9	
Chromium	36.9 mg	_		1.1	1		06/17/11 13:21		
Lead	5.3 mg			1.1	1		06/17/11 13:21		
Selenium	ND mg	ı/ka		5.3	5		06/17/11 11:41		
Silver	ND mg			5.3	5		06/17/11 11:41		D3
7471 Mercury	Analytical Meth	od: EPA 74	171 Preparat	ion Meth	nod: EPA	7471			
Mercury	ND mg	ı/kg		0.081	1	06/20/11 15:17	06/21/11 11:25	7439-97-6	
Percent Moisture	Analytical Meth	od: ASTM	D2974-87						
Percent Moisture	16.3 %			0.10	1		06/14/11 16:40		
Sample: 6233 0-3 BGL	l ob ID: 259/	00000	0-1111-	00/00/4	4.00.54	D : 1 00	4044 00 50		
Sample: 6233 0-3 BGL Results reported on a "dry-weig	Lab ID: 2580 ht" basis	700013	Collected:	00/06/1	i U8:51	Received: 06	/10/11 09:50 N	latrix: Solid	
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
i aidilieteis									
	Analytical Meth	od: ASTM	D2974-87						
Percent Moisture Percent Moisture	Analytical Meth	od: ASTM	D2974-87	0.10	1		06/14/11 16:41		

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Results reported on a "dry-weight" basis

Sample: 6234 0-3 BGL

Lab ID: 258066080

Collected: 06/06/11 08:26

Received: 06/10/11 09:50

Matrix: Solid

CAS No.

Qual

Qual

Parameters

Analytical Method: ASTM D2974-87

Units

Percent Moisture Percent Moisture

15.6 %

Results

0.10 1

DF

06/14/11 16:41

Analyzed

06/16/11 07:52 06/17/11 11:45 7440-38-2

06/16/11 07:52 06/17/11 13:31 7440-39-3

06/16/11 07:52 06/17/11 11:45 7440-43-9

06/16/11 07:52 06/17/11 13:31 7440-47-3

06/16/11 07:52 06/17/11 11:45 7439-92-1

06/16/11 07:52 06/17/11 11:45 7782-49-2

06/16/11 07:52 06/17/11 11:45 7440-22-4

Analyzed

Sample: 6234 3-4' BGL

Lab ID: 258066081

Collected: 06/06/11 08:30

Report Limit

Received: 06/10/11 09:50

Report Limit DF

8.4

16.7

4.2

4.2

4.2

4.2

0.84

5

5

5

5

Prepared

Prepared

CAS No.

Results reported on a "dry-weight" basis Parameters

Parameters	Results	Units	Report Limit	DF	Pre
6010 MET ICP	Analytical Meth	nod: EPA 6010	Preparation Met	hod: EPA	3050

Arsenic ND mg/kg Barium 98.6 mg/kg Cadmium ND mg/kg Chromium 30.7 mg/kg Lead 21.4 mg/kg Selenium ND mg/kg

7471 Mercury

Silver

Mercury

ND mg/kg

ND mg/kg

0.10

Analytical Method: EPA 7471 Preparation Method: EPA 7471 06/20/11 15:17 06/21/11 11:27 7439-97-6

Analytical Method: ASTM D2974-87

Percent Moisture Percent Moisture

11.5 %

0.10

06/14/11 16:42

Sample: 6235 0-3' BGL

Lab ID: 258066082

109 %

108 %

Collected: 06/06/11 07:55

Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" basis

06/17/11 10:15 06/18/11 08:38 630-02-4

06/17/11 10:15 06/18/11 08:38 84-15-1

CAS No. Qual

D3

	,	2000
Parameters		Results

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB S	Analytical Meth	nod: EPA 808	2 Preparation Meth	nod: EF	PA 3546			
PCB-1016 (Aroclor 1016)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	12674-11-2	
PCB-1221 (Aroclor 1221)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	11104-28-2	
PCB-1232 (Aroclor 1232)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	11141-16-5	
PCB-1242 (Aroclor 1242)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	53469-21-9	
PCB-1248 (Aroclor 1248)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	12672-29-6	
PCB-1254 (Aroclor 1254)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	11097-69-1	
PCB-1260 (Aroclor 1260)	ND ug	/kg	18.6	1	06/20/11 10:20	06/22/11 15:37	11096-82-5	
Tetrachloro-m-xylene (S)	70 %		29-128	1	06/20/11 10:20	06/22/11 15:37	877-09-8	
Decachlorobiphenyl (S)	63 %		23-129	1	06/20/11 10:20	06/22/11 15:37	2051-24-3	
NWTPH-Dx GCS	Analytical Meth	nod: NWTPH-	Dx Preparation Me	thod: E	EPA 3546			
Diesel Range	871 mg	j/kg	89.1	5	06/17/11 10:15	06/18/11 08:38		
Motor Oil Range	1690 mg	g/kg	357	5	06/17/11 10:15	06/18/11 08:38	64742-65-0	

Date: 06/24/2011 04:23 PM

n-Octacosane (S)

o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

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50-150

50-150

5



Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6235 0-3' BGL

Lab ID: 258066082

Collected: 06/06/11 07:55 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
8270 MSSV PAH by SIM	Analytical Meth	nod: EPA 8270	0 by SIM Prepai	ation Me	thod: EPA 3546			
Acenaphthene	ND ug	/kg	7.	4 1	06/14/11 15:15	06/15/11 19:43	83-32-9	
Acenaphthylene	ND ug.	/kg	7.	4 1	06/14/11 15:15	06/15/11 19:43	208-96-8	
Anthracene	ND ug	/kg	7.	4 1	06/14/11 15:15	06/15/11 19:43	120-12-7	
Benzo(a)anthracene	ND ug.	/kg	7.	4 1		06/15/11 19:43		
Benzo(a)pyrene	16.4 ug.	/kg	7.	4 1	06/14/11 15:15	06/15/11 19:43	50-32-8	
Benzo(b)fluoranthene	13.6 ug.	/kg	7.	1 1	06/14/11 15:15	06/15/11 19:43	205-99-2	
Benzo(g,h,i)perylene	10.6 ug	/kg	7.	1 1	06/14/11 15:15	06/15/11 19:43	191-24-2	
Benzo(k)fluoranthene	ND ug	/kg	7.	1 1		06/15/11 19:43		
Chrysene	29.8 ug	/kg	7.	1 1		06/15/11 19:43		
Dibenz(a,h)anthracene	ND ug		7.	1 1		06/15/11 19:43		
- Iuoranthene	ND ug	/kg	7.			06/15/11 19:43		
Fluorene	ND ugi	/kg	7.	1 1		06/15/11 19:43		
ndeno(1,2,3-cd)pyrene	ND ug/	-	7.4			06/15/11 19:43		
-Methylnaphthalene	ND ug/	-	7.4			06/15/11 19:43		
2-Methylnaphthalene	ND ug/	-	7.4			06/15/11 19:43		
laphthalene	ND ug/	•	7.4			06/15/11 19:43		
Phenanthrene	13.8 ug/		7.4			06/15/11 19:43		
Pyrene	17.4 ug/		7.4			06/15/11 19:43		
-Fluorobiphenyl (S)	68 %	9	31-13 ⁻			06/15/11 19:43		
erphenyl-d14 (S)	65 %		30-13:			06/15/11 19:43		
270 MSSV Semivolatiles	Analytical Meth	od: EPA 8270	Preparation Me					
Benzoic acid	ND ug/		1840			06/21/11 04:26	65.95.0	
Benzyl alcohol	ND ug/	-	368			06/21/11 04:26		
-Bromophenylphenyl ether	ND ug/	-	368			06/21/11 04:26		
Butylbenzylphthalate	ND ug/	_	368			06/21/11 04:26		
-Chloro-3-methylphenol	ND ug/	•	368			06/21/11 04:26		
-Chloroaniline	ND ug/	-	368			06/21/11 04:26		
is(2-Chloroethoxy)methane	ND ug/	-	368			06/21/11 04:26		
is(2-Chloroethyl) ether	ND ug/	-	368			06/21/11 04:26		
is(2-Chloroisopropyl) ether	ND ug/	-	368			06/21/11 04:26		
-Chloronaphthalene	ND ug/	_	368			06/21/11 04:26		
-Chlorophenol	ND ug/	-	368			06/21/11 04:26		
-Chlorophenylphenyl ether	ND ug/	-	368			06/21/11 04:26		
ibenzofuran	ND ug/							
,2-Dichlorobenzene	ND ug/	•	368			06/21/11 04:26		
3-Dichlorobenzene	ND ug/	-	368			06/21/11 04:26		
4-Dichlorobenzene	ND ug/	•	368			06/21/11 04:26		
3'-Dichlorobenzidine	ND ug/		368				106-46-7	
4-Dichlorophenol	ND ug/	_	368			06/21/11 04:26		
iethylphthalate	_	_	368			06/21/11 04:26		
	ND ug/	-	368			06/21/11 04:26		
,4-Dimethylphenol	ND ug/		368			06/21/11 04:26		
imethylphthalate	ND ug/		368			06/21/11 04:26		
i-n-butylphthalate	ND ug/	-	368			06/21/11 04:26		
,6-Dinitro-2-methylphenol	ND ug/		368			06/21/11 04:26		
,4-Dinitrophenol	ND ug/	kg	748	1	06/14/11 15:15	06/21/11 04:26	51-28-5	

Date: 06/24/2011 04:23 PM

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

Sample: 6235 0-3' BGL

Lab ID: 258066082

Collected: 06/06/11 07:55 Received: 06/10/11 09:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Met	hod: EPA 8	270 Preparation Met	hod: EF	PA 3546			
2,4-Dinitrotoluene	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	121-14-2	
2,6-Dinitrotoluene	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	606-20-2	
Di-n-octylphthalate	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug	/kg	368	1	06/14/11 15:15	06/21/11 04:26	117-81-7	
Hexachloro-1,3-butadiene	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	87-68-3	
Hexachlorobenzene	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	118-74-1	
Hexachlorocyclopentadiene	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	77-47-4	
Hexachloroethane	ND ug	ı/kg	368	1	06/14/11 15:15	06/21/11 04:26	67-72-1	
Isophorone	ND ug	/kg	368	1		06/21/11 04:26		
2-Methylphenol(o-Cresol)	ND ug	/kg	368	1		06/21/11 04:26		
3&4-Methylphenol(m&p Cresol)	ND ug	•	368	1		06/21/11 04:26		
2-Nitroaniline	ND ug	_	368	1		06/21/11 04:26		
3-Nitroaniline	ND ug	•	368	1		06/21/11 04:26		
4-Nitroaniline	ND ug	•	368	1		06/21/11 04:26		
Nitrobenzene	ND ug	-	368	1		06/21/11 04:26		
2-Nitrophenol	ND ug	•	368	1		06/21/11 04:26		
4-Nitrophenol	ND ug	-	368	1		06/21/11 04:26		
N-Nitroso-di-n-propylamine	ND ug		368	1		06/21/11 04:26		
N-Nitrosodiphenylamine	ND ug	_	368	1		06/21/11 04:26		
Pentachlorophenol	ND ug	•	368	1		06/21/11 04:26		
Phenol	ND ug	•	368	1		06/21/11 04:26		
1,2,4-Trichlorobenzene	ND ug	•	368	1		06/21/11 04:26		
2,4,5-Trichlorophenol	ND ug		368	1		06/21/11 04:26		
2,4,6-Trichlorophenol	ND ug		368	1		06/21/11 04:26		
Nitrobenzene-d5 (S)	77 %	Ū	40-138	1		06/21/11 04:26		
2-Fluorobiphenyl (S)	88 %		46-118	1		06/21/11 04:26		
Terphenyl-d14 (S)	88 %		41-137	1		06/21/11 04:26		
Phenol-d6 (S)	82 %		44-120	1		06/21/11 04:26		
2-Fluorophenol (S)	81 %		37-117	1		06/21/11 04:26		
2,4,6-Tribromophenol (S)	85 %		26-135	1		06/21/11 04:26		
Percent Moisture	Analytical Meth	nod: ASTM	D2974-87					
Percent Moisture	11.2 %		0.10	1		06/14/11 16:43		
Sample: 6235 3-6' BGL	Lab ID: 258	066083	Collected: 06/06/1	1 07:58	Received: 06	/10/11 09:50 N	Matrix: Solid	
Results reported on a "dry-weight	" basis							
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Meth	nod: ASTM						

Date: 06/24/2011 04:23 PM

Percent Moisture

REPORT OF LABORATORY ANALYSIS

0.10

16.8 %

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06/14/11 16:43





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

Parameters

Parameters

Sample: 6235 6-9 BGL

Lab ID: 258066084

Collected: 06/06/11 08:03

Received: 06/10/11 09:50

Matrix: Solid

Results reported on a "dry-weight" basis

Results

Units

Report Limit DF

Prepared Analyzed CAS No.

Qual

Qual

Qual

D3

Percent Moisture

Analytical Method: ASTM D2974-87

Units

Units

Percent Moisture

34.3 %

0.10 1 06/14/11 16:45

Analyzed

Sample: 6236 0-3' BGL

Lab ID: 258066085

Results

Report Limit

Received: 06/10/11 09:50

CAS No.

Collected: 06/06/11 07:07

DF

5

5

1

DF

Diesel Range

Motor Oil Range

n-Octacosane (S)

o-Terphenyl (S)

Results reported on a "dry-weight" basis

NWTPH-Dx GCS Analytical Method: NWTPH-Dx Preparation Method: EPA 3546

> 193 mg/kg 2960 mg/kg

108 % 104 %

81.7 327 50-150

50-150

06/17/11 10:15 06/18/11 09:10 06/17/11 10:15 06/18/11 09:10 64742-65-0

Prepared

06/17/11 10:15 06/18/11 09:10 630-02-4 06/17/11 10:15 06/18/11 09:10 84-15-1

Percent Moisture Percent Moisture

Analytical Method: ASTM D2974-87 4.7 %

0.10

06/14/11 16:46

Analyzed

Sample: 6236 4-5 BGL

Lab ID: 258066086

Results

Collected: 06/06/11 07:12

Report Limit

Prepared

Received: 06/10/11 09:50

CAS No.

Results reported on a "dry-weight" basis

Parameters

					_	
6010 MET ICP	Analytical Method: EPA 6010	Preparation Methor	od: EF	PA 3050		
Arsenic	ND mg/kg	10.4	5	06/16/11 07:52	06/17/11 11:48	7440-38-2
Barium	85.2 mg/kg	20.7	1	06/16/11 07:52	06/17/11 13:34	7440-39-3
Cadmium	ND mg/kg	5.2	5	06/16/11 07:52	06/17/11 11:48	7440-43-9
Chromium	47.2 mg/kg	1.0	1	06/16/11 07:52	06/17/11 13:34	7440-47-3
Lead	4.2 mg/kg	1.0	1	06/16/11 07:52	06/17/11 13:34	7439-92-1
Selenium	ND mg/kg	5.2	5	06/16/11 07:52	06/17/11 11:48	7782-49-2

7471 Mercury

Silver

Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

ND mg/kg

ND mg/kg

Analytical Method: ASTM D2974-87

0.10

5.2

06/20/11 15:17 06/21/11 11:30 7439-97-6

06/16/11 07:52 06/17/11 11:48 7440-22-4

Percent Moisture Percent Moisture

17.6 %

0.10

06/14/11 16:47

Date: 06/24/2011 04:23 PM

REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

OEXT/3901

Analysis Method:

EPA 8082

QC Batch Method:

EPA 3546

Analysis Description:

8082 GCS PCB

Associated Lab Samples:

258066016, 258066042, 258066082

METHOD BLANK: 74902

Matrix: Solid

Associated Lab Samples:

258066016, 258066042, 258066082

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND ND	17.0	06/22/11 13:41	
PCB-1221 (Aroclor 1221)	ug/kg	ND	17.0	06/22/11 13:41	
PCB-1232 (Aroclor 1232)	ug/kg	ND	17.0	06/22/11 13:41	
PCB-1242 (Aroclor 1242)	ug/kg	ND	17.0	06/22/11 13:41	
PCB-1248 (Aroclor 1248)	ug/kg	ND	17.0	06/22/11 13:41	
PCB-1254 (Aroclor 1254)	ug/kg	ND	17.0	06/22/11 13:41	
PCB-1260 (Aroclor 1260)	ug/kg	ND	17.0	06/22/11 13:41	
Decachlorobiphenyl (S)	%	105	23-129	06/22/11 13:41	
Tetrachloro-m-xylene (S)	%	96	29-128	06/22/11 13:41	

LABORATORY CONTROL SAMPLE:	74903		·			
Parameter	Linito	Spike	LCS	LCS	% Rec	0 1/5
- Farameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	167	147	88	51-120	
PCB-1260 (Aroclor 1260)	ug/kg	167	161	97	63-120	
Decachlorobiphenyl (S)	%			105	23-129	
Tetrachloro-m-xylene (S)	%			96	29-128	

MATRIX SPIKE & MATRIX SP	IKE DUPLICA	TE: 74904			74905			-			
Parameter	Units	258066042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	ND	179	179	111	116	62	65	27-121	4	
PCB-1260 (Aroclor 1260)	ug/kg	ND	179	179	122	128	69	72	23-127	5	
Decachlorobiphenyl (S)	%						67	70	23-129		
Tetrachloro-m-xylene (S)	%						71	75	29-128		





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

OEXT/3887

Analysis Method:

NWTPH-Dx

QC Batch Method:

EPA 3546

Analysis Description:

NWTPH-Dx GCS

Associated Lab Samples:

258066003, 258066005, 258066008, 258066010, 258066011, 258066012, 258066016, 258066036, 258066042,

258066064, 258066066, 258066068, 258066075, 258066077, 258066082, 258066085

METHOD BLANK: 74705

Matrix: Solid

Associated Lab Samples:

258066003, 258066005, 258066008, 258066010, 258066011, 258066012, 258066016, 258066036, 258066042, 258066064, 258066066, 258066068, 258066075, 258066077, 258066082, 258066085

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range	mg/kg	ND .	16.0	06/18/11 02:27	
Motor Oil Range	mg/kg	ND	64.0	06/18/11 02:27	
n-Octacosane (S)	%	100	50-150	06/18/11 02:27	
o-Terphenyl (S)	%	97	50-150	06/18/11 02:27	

LABORATORY CONTROL SAMPLE:	74706					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range	mg/kg	500	465	93	56-124	
Motor Oil Range	mg/kg	500	499	100	50-150	
n-Octacosane (S)	%			108	50-150	
o-Terphenyl (S)	%			100	50-150	

SAMPLE DUPLICATE: 74707		-			
		258066008	Dup		
Parameter	Units	Result	Result	RPD	Qualifiers
Diesel Range	mg/kg	546	638	16	
Motor Oil Range	mg/kg	1780	1860	4	
n-Octacosane (S)	%	112	108	5	
o-Terphenyl (S)	%	105	105	2	

Parameter	Llaite	258131023	Dup	DDD	0 115
	Units	Result	Result	RPD	Qualifiers
Diesel Range	mg/kg	11.7J	14.4J		
Motor Oil Range	mg/kg	193	215	11	
n-Octacosane (S)	%	92	96	4	
o-Terphenyl (S)	%	96	97	1	

Date: 06/24/2011 04:23 PM

SAMPLE DUDLICATE: 74700





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

MPRP/2282

Analysis Method:

EPA 6010

QC Batch Method:

EPA 3050

Analysis Description:

6010 MET

Associated Lab Samples:

258066001, 258066002, 258066015, 258066019, 258066021, 258066022, 258066023, 258066028, 258066030,

258066032

METHOD BLANK: 74422

Matrix: Solid

Associated Lab Samples:

258066001, 258066002, 258066015, 258066019, 258066021, 258066022, 258066023, 258066028, 258066030,

258066032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	2.0	06/17/11 09:48	
Barium	mg/kg	ND	20.0	06/17/11 09:48	
Cadmium	mg/kg	ND	1.0	06/17/11 09:48	
Chromium	mg/kg	ND	1.0	06/17/11 09:48	
Lead	mg/kg	ND	1.0	06/17/11 09:48	
Selenium	mg/kg	ND	1.0	06/17/11 09:48	
Silver	mg/kg	ND	1.0	06/17/11 09:48	

LABORATORY	CONTROL	SAMPLE:	74423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	25	25.7	103	80-120	
Barium	mg/kg	25	26.2	105	80-120	
Cadmium	mg/kg	25	25.3	101	80-120	
Chromium	mg/kg	25	25.6	102	80-120	
Lead	mg/kg	25	25.4	102	80-120	
Selenium	mg/kg	25	25.2	101	80-120	
Silver	mg/kg	12.5	12.7	102	80-120	

MATRIX SPIKE & MATRIX	SPIKE DUPLICA	TE: 74424	-		74425						
Parameter	Units	258061003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Arsenic	mg/kg	ND ND	30.9	31.3	39.6	45.0	101	117	75-125	13	
Barium	mg/kg	378	30.9	31.3	411	442	105	206	75-125	7 M	1
Cadmium	mg/kg	ND	30.9	31.3	35.3	39.2	106	117	75-125	11	
Chromium	mg/kg	64.5	30.9	31.3	101	99.3	119	111	75-125	2	
Lead	mg/kg	108	30.9	31.3	135	139	89	100	75-125	3	
Selenium	mg/kg	ND	30.9	31.3	32.6	36.7	101	113	75-125	12	
Silver	mg/kg	ND	15.4	15.7	16.1	17.7	105	113	75-125	9	





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

MPRP/2283

Analysis Method:

EPA 6010

QC Batch Method:

EPA 3050

Analysis Description:

6010 MET

Associated Lab Samples:

258066043, 258066047, 258066051, 258066055, 258066060, 258066067, 258066073, 258066076, 258066078,

258066081, 258066086

METHOD BLANK: 74426

Matrix: Solid

Associated Lab Samples:

258066043, 258066047, 258066051, 258066055, 258066060, 258066067, 258066073, 258066076, 258066078,

258066081, 258066086

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	2.0	06/17/11 10:44	
Barium	mg/kg	ND	20.0	06/17/11 10:44	
Cadmium	mg/kg	ND	1.0	06/17/11 10:44	
Chromium	mg/kg	ND	1.0	06/17/11 10:44	
Lead	mg/kg	ND	1.0	06/17/11 10:44	
Selenium	mg/kg	ND	1.0	06/17/11 10:44	
Silver	mg/kg	ND	1.0	06/17/11 10:44	

Parameter	Units	Spike	LCS	LCS	% Rec	
—————————	Onits	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic	mg/kg	25	26.6	106	80-120	
Barium	mg/kg	25	27.1	108	80-120	
Cadmium	mg/kg	25	26.6	107	80-120	
Chromium	mg/kg	25	27.0	108	80-120	
Lead	mg/kg	25	27.4	110	80-120	
Selenium	mg/kg	25	26.6	106	80-120	
Silver	mg/kg	12.5	13.4	107	80-120	

MATRIX SPIKE & MATRIX	SPIKE DUPLICA	TE: 74428			74429						
Parameter	Units	258066043 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Qual
Arsenic	mg/kg	ND ND	25.8	26.1	28.8	32.2	108	120	75-125	<u></u>	
Barium	mg/kg	82.0	25.8	26.1	108	106	101	94	75-125	2	
Cadmium	mg/kg	ND	25.8	26.1	28.1	31.1	109	119	75-125	10	
Chromium	mg/kg	75.7	25.8	26.1	108	106	123	116	75-125	1	
_ead	mg/kg	ND	25.8	26.1	32.0	34.6	113	122	75-125	8	
Selenium	mg/kg	ND	25.8	26.1	28.9	31.7	107	116	75-125	9	
Silver	mg/kg	ND	13	13.1	14.9	16.9	115	129	75-125	12 M1	







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

MERP/1456

Analysis Method:

EPA 7471

QC Batch Method:

EPA 7471

Analysis Description:

Matrix: Solid

7471 Mercury

Associated Lab Samples:

258066001, 258066002, 258066015, 258066019, 258066021, 258066022, 258066023, 258066028, 258066030, 258066032

METHOD BLANK: 74430 Associated Lab Samples:

258066001, 258066002, 258066015, 258066019, 258066021, 258066022, 258066023, 258066028, 258066030,

258066032

Parameter

Units

Blank Result Reporting Limit

Analyzed

Qualifiers

Mercury

mg/kg

ND

0.10 06/21/11 10:06

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

Spike Conc.

MS

Spike

Conc.

.78

LCS Result

LCS % Rec % Rec Limits

Mercury

Mercury

mg/kg

Units

mg/kg

Units

.5

0.51

103

Qualifiers

100

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

74432

ND

258061003

Result

MSD

.76

Spike

Conc.

MS Result

0.86

74433

MSD Result

0.83

MS MSD % Rec % Rec

101

80-120

% Rec Limits

RPD

Qual 80-120





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

MERP/1457

Analysis Method:

EPA 7471

QC Batch Method:

EPA 7471

Analysis Description:

7471 Mercury

Associated Lab Samples:

258066043, 258066047, 258066051, 258066055, 258066060, 258066067, 258066073, 258066076, 258066078,

258066081, 258066086

METHOD BLANK: 74434

Matrix: Solid

Associated Lab Samples:

258066043, 258066047, 258066051, 258066055, 258066060, 258066067, 258066073, 258066076, 258066078,

258066081, 258066086

Blank

Reporting

Parameter

Units

Units

Result

Limit

Analyzed

Qualifiers

Mercury

Mercury

Mercury

mg/kg

ND

06/21/11 10:54 0.10

LABORATORY CONTROL SAMPLE:

Parameter

74435

mg/kg

Spike Conc.

LCS Result

LCS % Rec

MSD

101

% Rec Limits

105

80-120

Qualifiers

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

74436

74437

0.50

MS

MSD Spike

MS

MS Result % Rec MŞD

% Rec

RPD

Parameter

Units Result ND

mg/kg

258066043 Spike

Conc. Conc. .38 .38

.5

Result 0.39

0.40

% Rec 106 Limits

Qual 80-120 3





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

OEXT/3858

Analysis Method:

EPA 8270 by SIM

QC Batch Method:

EPA 3546

Analysis Description:

Matrix: Solid

8270/3546 MSSV PAH by SIM

Associated Lab Samples:

258066010, 258066031, 258066033, 258066041, 258066054, 258066059, 258066075, 258066077, 258066082

METHOD BLANK: 74206 Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND -	6.7	06/15/11 15:50	
2-Methylnaphthalene	ug/kg	ND	6.7	06/15/11 15:50	
Acenaphthene	ug/kg	ND	6.7	06/15/11 15:50	
Acenaphthylene	ug/kg	ND	6.7	06/15/11 15:50	
Anthracene	ug/kg	ND	6.7	06/15/11 15:50	
Benzo(a)anthracene	ug/kg	ND	6.7	06/15/11 15:50	
Benzo(a)pyrene	ug/kg	ND	6.7	06/15/11 15:50	
Benzo(b)fluoranthene	ug/kg	ND	6.7	06/15/11 15:50	
Benzo(g,h,i)perylene	ug/kg	ND	6.7	06/15/11 15:50	
Benzo(k)fluoranthene	ug/kg	ND	6.7	06/15/11 15:50	
Chrysene	ug/kg	ND	6.7	06/15/11 15:50	
Dibenz(a,h)anthracene	ug/kg	ND	6.7	06/15/11 15:50	
Fluoranthene	ug/kg	ND	6.7	06/15/11 15:50	
Fluorene	ug/kg	ND	6.7	06/15/11 15:50	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	6.7	06/15/11 15:50	
Naphthalene	ug/kg	ND	6.7	06/15/11 15:50	
Phenanthrene	ug/kg	ND	6.7	06/15/11 15:50	
Pyrene	ug/kg	ND	6.7	06/15/11 15:50	
2-Fluorobiphenyl (S)	%	84	31-131	06/15/11 15:50	
Terphenyl-d14 (S)	%	91	30-133	06/15/11 15:50	

LABORATORY CONTROL SAM	PLE: 74207					
Dorometor	11.70	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1-Methylnaphthalene	ug/kg	133	106	79	37-121	
2-Methylnaphthalene	ug/kg	133	112	84	33-132	
Acenaphthene	ug/kg	133	112	84	32-127	
Acenaphthylene	ug/kg	133	116	87	31-134	
Anthracene	ug/kg	133	120	90	42-135	
Benzo(a)anthracene	ug/kg	133	132	99	43-139	
Benzo(a)pyrene	ug/kg	133	132	99	44-144	
Benzo(b)fluoranthene	ug/kg	133	131	98	42-144	
Benzo(g,h,i)perylene	ug/kg	133	117	88	46-136	
Benzo(k)fluoranthene	ug/kg	133	123	92	45-147	
Chrysene	ug/kg	133	118	89	42-144	
Dibenz(a,h)anthracene	ug/kg	133	121	91	48-142	
Fluoranthene	ug/kg	133	121	91	44-143	
Fluorene	ug/kg	133	116	87	32-146	
Indeno(1,2,3-cd)pyrene	ug/kg	133	121	90	47-140	
Naphthalene	ug/kg	133	108	81	35-118	
Phenanthrene	ug/kg	133	118	88	42-131	

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

LABORATORY CONTROL SAMPLE:	74207					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Pyrene	ug/kg	133	120	90	47-136	
2-Fluorobiphenyl (S)	%			87	31-131	
Terphenyl-d14 (S)	%			95	30-133	

MATRIX SPIKE & MATRIX S	PIKE DUPLICATE	: 74208			74209						
			MS	MSD							
	25	58066002	Spike	Spike	MS	MSD	M\$	MSD	% Rec		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	Qual
1-Methylnaphthalene	ug/kg				150	146					
2-Methylnaphthalene	ug/kg				154	151				2	
Acenaphthene	ug/kg				155	152				2	
Acenaphthylene	ug/kg				160	159				.8	
Anthracene	ug/kg				156	147				6	
Benzo(a)anthracene	ug/kg				162	144				12	
Benzo(a)pyrene	ug/kg				154	135				13	
Benzo(b)fluoranthene	ug/kg				149	129				14	
Benzo(g,h,i)perylene	ug/kg				135	115				16	
Benzo(k)fluoranthene	ug/kg				138	122				13	
Chrysene	ug/kg				143	129				10	
Dibenz(a,h)anthracene	ug/kg				137	122				12	
Fluoranthene	ug/kg				156	142				9	
Fluorene	ug/kg			•	160	158				2	
ndeno(1,2,3-cd)pyrene	ug/kg				135	117				14	
Naphthalene	ug/kg				150	153				2	
Phenanthrene	ug/kg				158	148				6	
Pyrene	ug/kg				155	143				8	
?-Fluorobiphenyl (S)	%						82	79	31-131		
erphenyl-d14 (S)	%						80	76	30-133		



Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

0.510

OEXT/3859

Analysis Method:

EPA 8270

QC Batch Method:

EPA 3546

Analysis Description:

8270 Solid MSSV Microwave

Associated Lab Samples:

258066003, 258066010, 258066031, 258066033, 258066041, 258066054, 258066059, 258066075, 258066077,

258066082

METHOD BLANK: 74210

Matrix: Solid

Associated Lab Samples:

258066003, 258066010, 258066031, 258066033, 258066041, 258066054, 258066059, 258066075, 258066077,

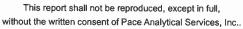
258066082

20000	JOOL	DI: 1	5 "		
Danamatan	11.4	Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	06/20/11 23:38	
1,2-Dichlorobenzene	ug/kg	ND	330	06/20/11 23:38	
1,3-Dichlorobenzene	ug/kg	ND	330	06/20/11 23:38	
1,4-Dichlorobenzene	ug/kg	ND	330	06/20/11 23:38	
2,4,5-Trichlorophenol	ug/kg	ND	330	06/20/11 23:38	
2,4,6-Trichlorophenol	ug/kg	ND	330	06/20/11 23:38	
2,4-Dichlorophenol	ug/kg	ND	330	06/20/11 23:38	
2,4-Dimethylphenol	ug/kg	ND	330	06/20/11 23:38	
2,4-Dinitrophenol	ug/kg	ND	670	06/20/11 23:38	
2,4-Dinitrotoluene	ug/kg	ND	330	06/20/11 23:38	
2,6-Dinitrotoluene	ug/kg	ND	330	06/20/11 23:38	
2-Chloronaphthalene	ug/kg	ND	330	06/20/11 23:38	
2-Chlorophenol	ug/kg	ND	330	06/20/11 23:38	
2-Methylnaphthalene	ug/kg	ND	330	06/20/11 23:38	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	06/20/11 23:38	
2-Nitroaniline	ug/kg	ND	330	06/20/11 23:38	
2-Nitrophenol	ug/kg	ND	330	06/20/11 23:38	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	06/20/11 23:38	
3,3'-Dichlorobenzidine	ug/kg	ND	330	06/20/11 23:38	
3-Nitroaniline	ug/kg	ND	330	06/20/11 23:38	
4,6-Dinitro-2-methylphenol	ug/kg	ND	330	06/20/11 23:38	
4-Bromophenylphenyl ether	ug/kg	ND	330	06/20/11 23:38	
4-Chloro-3-methylphenol	ug/kg	ND	330	06/20/11 23:38	
4-Chloroaniline	ug/kg	ND	330	06/20/11 23:38	
4-Chlorophenylphenyl ether	ug/kg	ND	330	06/20/11 23:38	
4-Nitroaniline	ug/kg	ND	330	06/20/11 23:38	
4-Nitrophenol	ug/kg	ND	330	06/20/11 23:38	
Acenaphthene	ug/kg	ND	330	06/20/11 23:38	
Acenaphthylene	ug/kg	ND	330	06/20/11 23:38	
Anthracene	ug/kg	ND	330	06/20/11 23:38	
Benzo(a)anthracene	ug/kg	ND	330	06/20/11 23:38	
Benzo(a)pyrene	ug/kg	ND	330	06/20/11 23:38	
Benzo(b)fluoranthene	ug/kg	ND	330	06/20/11 23:38	
Benzo(g,h,i)perylene	ug/kg	ND	330	06/20/11 23:38	
Benzo(k)fluoranthene	ug/kg	ND	330	06/20/11 23:38	
Benzoic acid	ug/kg	ND	1650	06/20/11 23:38	
Benzyl alcohol	ug/kg	ND	330	06/20/11 23:38	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	06/20/11 23:38	
bis(2-Chloroethyl) ether	ug/kg	ND	330	06/20/11 23:38	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	06/20/11 23:38	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	06/20/11 23:38	

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

METHOD BLANK: 74210

Matrix: Solid

Associated Lab Samples:

258066003, 258066010, 258066031, 258066033, 258066041, 258066054, 258066059, 258066075, 258066077,

258066082

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	ND	330	06/20/11 23:38	
Chrysene	ug/kg	ND	330	06/20/11 23:38	
Di-n-butylphthalate	ug/kg	ND	330	06/20/11 23:38	
Di-n-octylphthalate	ug/kg	ND	330	06/20/11 23:38	
Dibenz(a,h)anthracene	ug/kg	ND	330	06/20/11 23:38	
Dibenzofuran	ug/kg	ND	330	06/20/11 23:38	
Diethylphthalate	ug/kg	ND	330	06/20/11 23:38	
Dimethylphthalate	ug/kg	ND	330	06/20/11 23:38	
Fluoranthene	ug/kg	ND	330	06/20/11 23:38	
Fluorene	ug/kg	ND	330	06/20/11 23:38	
Hexachloro-1,3-butadiene	ug/kg	ND	330	06/20/11 23:38	
Hexachlorobenzene	ug/kg	ND	330	06/20/11 23:38	
Hexachlorocyclopentadiene	ug/kg	ND	330	06/20/11 23:38	
Hexachloroethane	ug/kg	ND	330	06/20/11 23:38	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	06/20/11 23:38	
Isophorone	ug/kg	ND	330	06/20/11 23:38	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	06/20/11 23:38	
N-Nitrosodiphenylamine	ug/kg	ND	330	06/20/11 23:38	
Naphthalene	ug/kg	ND	330	06/20/11 23:38	
Nitrobenzene	ug/kg	ND	330	06/20/11 23:38	
Pentachlorophenol	ug/kg	ND	330	06/20/11 23:38	
Phenanthrene	ug/kg	ND	330	06/20/11 23:38	
Phenol	ug/kg	ND	330	06/20/11 23:38	
Pyrene	ug/kg	ND	330	06/20/11 23:38	
2,4,6-Tribromophenol (S)	%	70	26-135	06/20/11 23:38	
2-Fluorobiphenyl (S)	%	80	46-118	06/20/11 23:38	
2-Fluorophenol (S)	%	74	37-117	06/20/11 23:38	
Nitrobenzene-d5 (S)	%	79	40-138	06/20/11 23:38	
Phenol-d6 (S)	%	79	44-120	06/20/11 23:38	
Terphenyl-d14 (S)	%	82	41-137	06/20/11 23:38	

LABORATORY CONTROL SAMPLI	E: 74211					-
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1330	1090	82	56-120	
1,4-Dichlorobenzene	ug/kg	1330	1020	77	51-105	
2,4-Dinitrotoluene	ug/kg	1330	991	74	43-114	
2-Chlorophenol	ug/kg	1330	1100	82	54-106	
2-Methylnaphthalene	ug/kg	1330	1100	82	47-124	
4-Chloro-3-methylphenol	ug/kg	1330	1170	88	57-122	
4-Nitrophenol	ug/kg	1330	1210	91	25-122	
Acenaphthene	ug/kg	1330	1170	88	48-117	
Acenaphthylene	ug/kg	1330	1120	84	43-118	
Anthracene	ug/kg	1330	1200	90	53-117	

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REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

LABORATORY CONTROL SAMPLE:	74211					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)anthracene	ug/kg	1330	1210	91	52-124	
Benzo(a)pyrene	ug/kg	1330	1230	93	51-113	
Benzo(b)fluoranthene	ug/kg	1330	1230	92	49-119	
Benzo(g,h,i)perylene	ug/kg	1330	1110	83	52-117	
Benzo(k)fluoranthene	ug/kg	1330	1150	86	54-117	
Chrysene	ug/kg	1330	1170	88	53-124	
Dibenz(a,h)anthracene	ug/kg	1330	1110	83	51-123	
Fluoranthene	ug/kg	1330	1250	94	54-118	
luorene	ug/kg	1330	1170	88	47-123	
ndeno(1,2,3-cd)pyrene	ug/kg	1330	1150	86	50-122	
-Nitroso-di-n-propylamine	ug/kg	1330	1130	85	52-123	
aphthalene	ug/kg	1330	1130	85	48-131	
entachlorophenol	ug/kg	1330	846	63	20-89	
henanthrene	ug/kg	1330	1190	89	56-117	
henol	ug/kg	1330	1140	86	56-104	
yrene	ug/kg	1330	1170	88	54-118	
,4,6-Tribromophenol (S)	%			82	26-135	
-Fluorobiphenyl (S)	%			88	46-118	
Fluorophenol (S)	%			82	37-117	
itrobenzene-d5 (S)	%			88	40-138	
henol-d6 (S)	%			85	44-120	
erphenyl-d14 (S)	%			91	41-137	

MATRIX SPIKE & MATRIX SF	PIKE DUPLICAT	E: 74212			74213				-		
			MS	MSD							
		258066003	Spike	Spike	MS	MSD	MS	MSD	% Rec		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	1390	1380	964	1190	69	87	35-137	21 D6	
1,4-Dichlorobenzene	ug/kg	ND	1390	1380	935	1060	67	7 7	29-118	12	
2,4-Dinitrotoluene	ug/kg	ND	1390	1380	827	978	60	71	16-123	17	
2-Chlorophenol	ug/kg	ND	1390	1380	1110	1370	80	99	39-119	21 D6	
2-Methylnaphthalene	ug/kg	ND	1390	1380	1010	1260	71	90	38-139	22	
4-Chloro-3-methylphenol	ug/kg	ND	1390	1380	1120	1380	80	100	33-155	21	
4-Nitrophenol	ug/kg	ND	1390	1380	1060	1260	77	92	10-146	17	
Acenaphthene	ug/kg	ND	1390	1380	1070	1340	77	98	37-129	23 R1	
Acenaphthylene	ug/kg	ND	1390	1380	1070	1330	77	97	23-145	22 R1	
Anthracene	ug/kg	ND	1390	1380	1110	1450	80	105	12-152	26 R1	
Benzo(a)anthracene	ug/kg	ND	1390	1380	1110	1370	80	99	32-140	21	
Benzo(a)pyrene	ug/kg	ND	1390	1380	1130	1420	81	103	22-136	23 R1	
Benzo(b)fluoranthene	ug/kg	ND	1390	1380	1190	1400	86	102	21-137	16	
Benzo(g,h,i)perylene	ug/kg	ND	1390	1380	749	939	54	68	31-127	22	
Benzo(k)fluoranthene	ug/kg	ND	1390	1380	1060	1460	76	106	29-126	32 R1	
Chrysene	ug/kg	ND	1390	1380	1080	1300	78	95	21-144	18	
Dibenz(a,h)anthracene	ug/kg	ND	1390	1380	814	1040	59	76	28-146	24 R1	
Fluoranthene	ug/kg	ND	1390	1380	1140	1420	82	103	10-155	22 R1	
Fluorene	ug/kg	ND	1390	1380	1090	1330	78	97	32-141	20	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	1390	1380	812	1030	59	75	30-132	23	

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REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

MATRIX SPIKE & MATRIX SP Parameter	Units	TE: 74212 258066003 Result	MS Spike Conc.	MSD Spike Conc.	74213 MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
N-Nitroso-di-n-propylamine	ug/kg	ND ND	1390	1380	1080	1270	78	92	36-136	16	
Naphthalene	ug/kg	ND	1390	1380	1010	1250	73	90	36-145	21 R1	
Pentachlorophenol	ug/kg	ND	1390	1380	970	1280	70	93	10-143	28	
Phenanthrene	ug/kg	ND	1390	1380	1150	1480	79	104	37-129	25	
Phenol	ug/kg	ND	1390	1380	1250	1520	81	102	36-127	20 D6	i
Pyrene	ug/kg	ND	1390	1380	1170	1420	81	100	12-148	19	
2,4,6-Tribromophenol (S)	%						84	103	26-135		
2-Fluorobiphenyl (S)	%						76	95	46-118		
2-Fluorophenol (S)	%						76	92	37-117		
Nitrobenzene-d5 (S)	%						74	90	40-138		
Phenol-d6 (S)	%						79	97	44-120		
Terphenyl-d14 (S)	%						84	101	41-137		







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

PMST/1703

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

21.6

7.6

Dry Weight/Percent Moisture

Associated Lab Samples:

258066001, 258066002, 258066003, 258066004, 258066005, 258066006, 258066007, 258066008, 258066009,

258066010, 258066011, 258066012

Units

Units

%

SAMPLE DUPLICATE: 74135

Percent Moisture

Percent Moisture

258074001 Result

Dup Result

21.9

7.6

RPD

RPD

Qualifiers

SAMPLE DUPLICATE: 74136

Parameter

Parameter

258066012 Result

Dup Result

Qualifiers

.2







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

PMST/1704

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

Associated Lab Samples:

258066013, 258066014, 258066015, 258066016, 258066017, 258066018, 258066019, 258066020, 258066021,

258066022, 258066023, 258066034, 258066035

SAMPLE DUPLICATE: 74137

258066016

Dup

Parameter

Units

Result

Result

RPD

Qualifiers

Percent Moisture

5.7

7.0

21

SAMPLE DUPLICATE: 74138

258066035 Result

Dup Result

RPD

Qualifiers

Parameter Percent Moisture

Units

16.5

14.9

10





Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

PMST/1705

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

.2

Associated Lab Samples:

258066024, 258066025, 258066026, 258066027, 258066028, 258066029, 258066030, 258066031, 258066032, 258066033, 258066036, 258066037, 258066038, 258066039, 258066040, 258066041, 258066042, 258066043

SAMPLE DUPLICATE: 74277

258079001

Dup

Parameter

Units

Result

Result

RPD

Qualifiers

Percent Moisture

SAMPLE DUPLICATE: 74278

258066042 Result

Dup Result

RPD

Qualifiers

Parameter Percent Moisture

Units

%

7.2

26.6

7.7

8







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

PMST/1706

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

Associated Lab Samples:

258066044, 258066045, 258066046, 258066047, 258066048, 258066049, 258066050, 258066051, 258066052, 258066053, 258066054, 258066055, 258066056, 258066057, 258066058, 258066059, 258066060, 258066061, 258066062, 258066063

SAMPLE DUPLICATE: 74281

Parameter

Parameter

258066045 Result

Dup Result

RPD

Qualifiers

Percent Moisture

Units

15.6

14.3

8

SAMPLE DUPLICATE: 74282

258066063 Result

Dup Result

RPD

Qualifiers

Percent Moisture

%

Units

7.8

7.9

1







Project:

Hwy 62 Phase - 1

Pace Project No.:

258066

QC Batch:

PMST/1707

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

Associated Lab Samples:

258066064, 258066065, 258066066, 258066067, 258066068, 258066069, 258066070, 258066071, 258066072, 258066073, 258066074, 258066075, 258066076, 258066077, 258066078, 258066079, 258066080, 258066081, 258066082, 258066083

SAMPLE DUPLICATE: 74285

Parameter

258066064 Result

Result

Dup Result

RPD

Qualifiers

Percent Moisture

%

%

Units

Units

6.2

6.3

SAMPLE DUPLICATE: 74286

258066081

Dup Result

RPD

Qualifiers

Parameter Percent Moisture

11.5

11.2

2

2







Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

QC Batch:

PMST/1708

Analysis Method:

ASTM D2974-87

RPD

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

Associated Lab Samples: 258066084, 258066085, 258066086

SAMPLE DUPLICATE: 74287

Parameter Units 258066084 Result

Dup Result

Qualifiers

Percent Moisture

%

34.3

34.5

.6





QUALIFIERS

Project: Hwy 62 Phase - 1

Pace Project No.: 258066

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

Date: 06/24/2011 04:23 PM

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

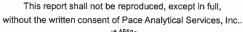
D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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Project: Hwy 62 Phase - 1

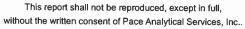
Pace Project No.: 258066

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
258066016	6205 0'-3' BGL	EPA 3546	OEXT/3901	EPA 8082	GCSV/2617
258066042	6216 0-3' BGL	EPA 3546	OEXT/3901	EPA 8082	GCSV/2617
258066082	6235 0-3' BGL	EPA 3546	OEXT/3901	EPA 8082	GCSV/2617
258066003	6201 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
258066005	6201B 0'-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
258066008	6201C 0'-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
258066010	6202B 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
258066011	6203 1-2 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066012	6203 2'-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
258066016	6205 0'-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066036	6214 0-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066042	6216 0-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066064	6225 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066066	6226 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066068	6227 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066075	6230 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066077	6231 0-3 BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066082	6235 0-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066085	6236 0-3' BGL	EPA 3546	OEXT/3887	NWTPH-Dx	GCSV/2609
58066001	Stockpile 6223 C/L	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066002	Stockpile 6224 N	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066015	6204 0'-2 BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066019	6205 8'-9' BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066021	6206 2'-3' BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066022	6207 0'-2.5 BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066023	6208 0'-3' BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066028	6210 3-4 BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066030	6211 4'-5' BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066032	6212 3'-4.3 BGL	EPA 3050	MPRP/2282	EPA 6010	ICP/2185
58066043	6216 5-6' BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066047	6218 3'-6 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066051	6220 0-3 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066055	6221 3-4.3 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066060	6223 0-3 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066067	6226 5-6 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066073	6229 0-3 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066076	6230 4'-5 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066078	6232 3-6 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066081	6234 3-4' BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066086	6236 4-5 BGL	EPA 3050	MPRP/2283	EPA 6010	ICP/2186
58066001	Stockpile 6223 C/L	EPA 7471	MERP/1456	EPA 7471	MERC/1470
58066002	Stockpile 6224 N	EPA 7471	MERP/1456	EPA 7471	MERC/1470
58066015	6204 0'-2 BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
58066019	6205 8'-9' BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
58066021	6206 2'-3' BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
58066022	6207 0'-2.5 BGL	EPA 7471	MERP/1456	EPA 7471	
58066023	6208 0'-3' BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470

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REPORT OF LABORATORY ANALYSIS

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Project:

Hwy 62 Phase - 1

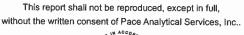
Pace Project No.: 258066

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
258066028	6210 3-4 BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
258066030	6211 4'-5' BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
258066032	6212 3'-4.3 BGL	EPA 7471	MERP/1456	EPA 7471	MERC/1470
258066043	6216 5-6' BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066047	6218 3'-6 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066051	6220 0-3 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066055	6221 3-4.3 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066060	6223 0-3 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066067	6226 5-6 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066073	6229 0-3 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066076	6230 4'-5 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066078	6232 3-6 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066081	6234 3-4' BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066086	6236 4-5 BGL	EPA 7471	MERP/1457	EPA 7471	MERC/1471
258066010	6202B 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066031	6212 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066033	6213 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066041	6215 3'-4.5 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066054	6221 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066059	6222 11'-12' BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066075	6230 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066077	6231 0-3 BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066082	6235 0-3' BGL	EPA 3546	OEXT/3858	EPA 8270 by SIM	MSSV/1656
258066003	6201 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066010	6202B 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066031	6212 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066033	6213 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066041	6215 3'-4.5 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066054	6221 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066059	6222 11'-12' BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066075	6230 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066077	6231 0-3 BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066082	6235 0-3' BGL	EPA 3546	OEXT/3859	EPA 8270	MSSV/1659
258066001	Stockpile 6223 C/L	ASTM D2974-87	PMST/1703		
258066002	Stockpile 6224 N	ASTM D2974-87	PMST/1703		
258066003	6201 0-3 BGL	ASTM D2974-87	PMST/1703		
258066004	6201 3'-5.5 BGL	ASTM D2974-87	PMST/1703		
258066005	6201B 0'-3 BGL	ASTM D2974-87	PMST/1703		
258066006	6201B 4'-5' BGL	ASTM D2974-87	PMST/1703		
258066007	6201B 5'-6' BGL	ASTM D2974-87	PMST/1703		
258066008	6201C 0'-3 BGL	ASTM D2974-87	PMST/1703		
258066009	6202 0-3 BGL	ASTM D2974-87	PMST/1703		
258066010	6202B 0-3 BGL	ASTM D2974-87	PMST/1703		
258066011	6203 1-2 BGL	ASTM D2974-87	PMST/1703		
258066012	6203 2'-3' BGL	ASTM D2974-87	PMST/1703		
258066013	6203 3'-6 BGL	ASTM D2974-87	PMST/1704		

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Project: Hwy 62 Phase - 1

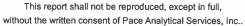
Pace Project No.: 258066

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
258066014	6203 6'-6.5 BGL	ASTM D2974-87	PMST/1704		
258066015	6204 0'-2 BGL	ASTM D2974-87	PMST/1704		
258066016	6205 0'-3' BGL	ASTM D2974-87	PMST/1704		
58066017	6205 4'-5' BGL	ASTM D2974-87	PMST/1704		
58066018	6205 5'-6' BGL	ASTM D2974-87	PMST/1704		
58066019	6205 8'-9' BGL	ASTM D2974-87	PMST/1704		
58066020	6206 1'-2' BGL	ASTM D2974-87	PMST/1704		
58066021	6206 2'-3' BGL	ASTM D2974-87	PMST/1704		
58066022	6207 0'-2.5 BGL	ASTM D2974-87	PMST/1704		
58066023	6208 0'-3' BGL	ASTM D2974-87	PMST/1704		
58066024	6208 4'-5' BGL	ASTM D2974-87	PMST/1705		
58066025	6209 0-3 BGL	ASTM D2974-87	PMST/1705		
58066026	6209 3-4' BGL	ASTM D2974-87	PMST/1705		
58066027	6210 0-3 BGL	ASTM D2974-87	PMST/1705		
58066028	6210 3-4 BGL	ASTM D2974-87	PMST/1705		
58066029	6211 0-3 BGL	ASTM D2974-87	PMST/1705		
58066030	6211 4'-5' BGL	ASTM D2974-87	PMST/1705		
58066031	6212 0-3 BGL	ASTM D2974-87	PMST/1705		
58066032	6212 3'-4.3 BGL	ASTM D2974-87	PMST/1705		
58066033	6213 0-3 BGL	ASTM D2974-87	PMST/1705		
58066034	6213 4'-5 BGL	ASTM D2974-87	PMST/1704		
58066035	6213 5'-6 BGL	ASTM D2974-87	PMST/1704		
58066036	6214 0-3' BGL	ASTM D2974-87	PMST/1705		
58066037	6214 4-5' BGL	ASTM D2974-87	PMST/1705		
58066038	6214 5'-6' BGL	ASTM D2974-87	PMST/1705		
58066039	6214 8'-9' BGL	ASTM D2974-87	PMST/1705		
58066040	6215 0-3' BGL	ASTM D2974-87	PMST/1705		
58066041	6215 3'-4.5 BGL	ASTM D2974-87	PMST/1705		
58066042	6216 0-3' BGL	ASTM D2974-87	PMST/1705		
58066043	6216 5-6' BGL	ASTM D2974-87	PMST/1705		
58066044	6216 7'-8' BGL	ASTM D2974-87	PMST/1706		
58066045	6217 2'-3 BGL	ASTM D2974-87	PMST/1706		
58066046	6217 4-5 BGL	ASTM D2974-87	PMST/1706		
58066047	6218 3'-6 BGL	ASTM D2974-87	PMST/1706		
58066048	6218 7-8' BGL	ASTM D2974-87	PMST/1706		
58066049	6219 0-3 BGL	ASTM D2974-87	PMST/1706		
58066050	6219 3'-6 BGL	ASTM D2974-87	PMST/1706		
58066051	6220 0-3 BGL	ASTM D2974-87	PMST/1706		
58066052	6220 5'-6 BGL	ASTM D2974-87	PMST/1706		
58066053	6220 8-9 BGL	ASTM D2974-87	PMST/1706		
58066054	6221 0-3 BGL	ASTM D2974-87	PMST/1706		
58066055	6221 3-4.3 BGL	ASTM D2974-87	PMST/1706		
58066056	6222 0-3' BGL	ASTM D2974-87	PMST/1706		
58066057	6222 4-5 BGL	ASTM D2974-87	PMST/1706		
58066058	6222 5'-6 BGL	ASTM D2974-87	PMST/1706		
58066059	6222 11'-12' BGL	ASTM D2974-87	PMST/1706		
	6223 0-3 BGL	ASTM D2974-87	PMST/1706		

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Project:

Hwy 62 Phase - 1

Pace Project No.: 258066

258066061	****		QC Batch	Analytical Method	Batch
20000001	6223 6-9 BGL	ASTM D2974-87	PMST/1706		
258066062	6224 3'-6 BGL	ASTM D2974-87	PMST/1706		
258066063	6224 5.5-6.5 BGL	ASTM D2974-87	PMST/1706		
258066064	6225 0-3 BGL	ASTM D2974-87	PMST/1707		
258066065	6225 3'-5 BGL	ASTM D2974-87	PMST/1707		
258066066	6226 0-3 BGL	ASTM D2974-87	PMST/1707		
258066067	6226 5-6 BGL	ASTM D2974-87	PMST/1707		
258066068	6227 0-3 BGL	ASTM D2974-87	PMST/1707		
258066069	6227 4-5 BGL	ASTM D2974-87	PMST/1707		
258066070	6227 5-6 BGL	ASTM D2974-87	PMST/1707		
258066071	6228 0-3' BGL	ASTM D2974-87	PMST/1707		
258066072	6228 4-5 BGL	ASTM D2974-87	PMST/1707		
258066073	6229 0-3 BGL	ASTM D2974-87	PMST/1707		
258066074	6229 4'-5 BGL	ASTM D2974-87	PMST/1707		
258066075	6230 0-3 BGL	ASTM D2974-87	PMST/1707		
258066076	6230 4'-5 BGL	ASTM D2974-87	PMST/1707		
258066077	6231 0-3 BGL	ASTM D2974-87	PMST/1707		
258066078	6232 3-6 BGL	ASTM D2974-87	PMST/1707		
258066079	6233 0-3 BGL	ASTM D2974-87	PMST/1707		
258066080	6234 0-3 BGL	ASTM D2974-87	PMST/1707		
258066081	6234 3-4' BGL	ASTM D2974-87	PMST/1707		
258066082	6235 0-3' BGL	ASTM D2974-87	PMST/1707		
258066083	6235 3-6' BGL	ASTM D2974-87	PMST/1707		
258066084	6235 6-9 BGL	ASTM D2974-87	PMST/1708		
258066085	6236 0-3' BGL	ASTM D2974-87	PMST/1708		
258066086	6236 4-5 BGL	ASTM D2974-87	PMST/1708		



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State of Oregon Sample Chain of Custody

Turn Around Time: 0560 /1/01/ X☐ 10 days (std.) တ ☐ 5 days ☐ 72 hours ☐ 24 hours ☐ 48 hours Comments Other 00 5 Agency/Agent: Agency/Agent: Time & Date: Time & Date: analyses) to perform requested services ☐ Proximity (if TAT < 72 hrs)
☐ Prior work on same project
X☐ Cost (for anticipated Lab Selection Criteria: ☐ Emergency work RB Festing, Ke May Sample Preservative Requested Analyses Received By: Tho fly Received By: Assibk Contract Laboratory Name: PACE Signature: Signature: SAME 1 117± 015 X 0260 Lab Batch #: Contact me Invoice To: Address: Agency/Agent: Fedex Time & Date: 6/10/// Tel. # Contain Collection Matrix Number Agency/Agent: Time & Date: Hwy 62 Phase-1 Kenny Camp 3500 Stewart Parkway Roseburg, Oregon 97470 Soil 7 Agency, Authorized Purchaser or Agent: ODOT 1/0 13:50 6/6 6/4 17:55 46 2:02 4/6 1/0 Shit 8:50 2.02 8:32 1:27 3:18 1.72 goil is detected Send Lab Report To: ODOT 62230/4 3'- 5.5 864 4-5'866 0-3866 798 .7-5 0'-3 861 0-3866 Sample ID# 6224N 0-3866 6-3861 1-2 866 243,861 Relinquished By: Relinquished By: Sampler Name: Project Name: Stock 0.16 Signature: Project #: Signature: Stackpile Address: 6204B Tel.#: E-mail: 20/8 Notes: 1010 6201 10202 1000 6201

 1.1^{1} $1.3.9^{2}$ 1.6^{2} 1.1^{1} 1.1^{1} Version: 4/4/2008 ice at

258066 PM

State of Oregon Sample Chain of Custody

Agency, Authorized Purchaser or Agent:	naser or Agent:		F	Contract Laboratory Name:	aborat	orv Nar	ne:	[6]	Selection	ah Selection Criteria.		Turn Around Time.
ОБОТ	1		-	PACE		•			Proximity	Proximity (if TAT < 72 hrs)	hre)	X 10 dave (std.)
Send Lab Report To: ODOT	75			ab Batch #:	#				Prior work	Prior work on same project	roject	∧
Address: 3500	3500 Stewart Parkway	2		nvoice To:	ö			I I	Cost (for	X Cost (for anticipated		☐ 72 hours
# 4				Address:	SA	SAME			analyses <i>)</i> Other labs	alyses) Other labs disqualified or unat to perform requested services	inalyses) Other labs disqualified or unable to perform remisested services.	
E-mail;			-	Tel. #:					Emergency work	y work		24 nours
Project Name:	Hwy 62	Hwy 62 Phase-1		7		Sa	Sample Preservative	ervative				
Project #:				art.			S					258066
Sampler Name:	Kenny	Kenny Camp		W		Re	Requested Analyses	nalyses			Γ	
Sample ID#	Collection Matrix Number Date/Time of Contain	atrix Nun o Con	NUMTER	Help Help	7015	12121912/	1808 1808					Comments
13 6203 3-6862	3:21 6/6 5	So.7 /		×			1					
6203 6-6584	3:25 6/6	1 11		×		_						
6204 0'-2 Bbb	1.35 6/4	/ //		×	X .							
6 6205 0-3 866	4:07 6/6	/ //		×								
6105 4'-5' Bbc	4:12 6/6	11		×	7							
	4:12 10/10	11		×								
6205 8-9 BGL	4:16 6/4	1 11		×	Ų,							
6306	12:38 6/7	1				×						
2'-386	6/7	1		×								
0.2.5	12:40 6/7	/	_	×								
\$ 1908 0:3 BL	1.01 617		-	×		×>						
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Relinquished By:		Agency/Agent:	ent: /			Received By:	ed By:				Agency/Agent:	ent: //
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1.1°, 2.9° 50° 50°

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State of Oregon Sample Chain of Custody

Turn Around Time: X 10 days (std.) US 10 1/101 9 ☐ 5 days ☐ 72 hours 40 48 hours 24 hours Comments Other 00 45 Agency/Agenth Agency/Agent: Time & Date: Time & Date Other labs disqualified or unable to perform requested services ☐ Proximity (if TAT < 72 hrs)
☐ Prior work on same project
X☐ Cost (for anticipated analyses) Lab Selection Criteria: ☐ Emergency work 2 an Sample Preservative Requested Analyses 40744 1808 Received By: Received By: Contract Laboratory Name: PACE Signature: Signature: 1518 SAME 2015 × Lab Batch #: 0560 ///01/ Invoice To: S Address: 70401 Tel.#: Took 4d1 mn Contain -ers Agency/Agent: Collection Matrix Number Date/Time of Agency/Agent: Time & Date: Time & Date: Hwy 62 Phase-1 Kenny Camp 3500 Stewart Parkway Roseburg, Oregon 97470 2 = 1 > 3 Agency, Authorized Purchaser or Agent: ODOT 1:57 6/2 7:09 6/7 2:39 6/7 2:49 6/7 3:36 4/7 3:52 2:15 66:1 1.23 61:1 Send Lab Report To: ODOT 361 778 198 3-43 862 3-4 866 778 41-5' BGL 3-4' 866 0-3 BGL 0-3 364 798 5-0 Sample ID# Relinquished By: Relinquished By: 0-3 5-, 5 Sampler Name: 0-3 Project Name: Project #: Signature: Signature: Address: E-mail: Tel. #: Notes: 6000 6209 6210 6213 6210 6212 6212 1100 30 6211

1.16, 2.96, 0.6%

State of Oregon Sample Chain of Custody

Accorded Assistance Designation						,		6		
DOOL				PACE	Labora	Contract Laboratory Name:		Lab Selection Criteria:	a: 72 hrs)	~
b Report To:	ОТ			Lab Batch #:	h #:			☐ Prior work on same project	e project	\
Address: 350 Ros	3500 Stewart Parkway Roseburg, Oregon 97470	'ay 37470		Invoice To:	ö			X Cost (for anticipated	ted	72 hours
) S			Address:	<i>'</i> 5	SAME		Other labs disqualified or unable to perform requested services	fied or unable ed services	48 hours
E-mail:				Tel. #:				☐ Emergency work		Other
Project Name:	Hwy	Hwy 62 Phase-1		7		Sample	Sample Preservative	ative		0 0
Figer #:				101	-		_			990007
Sampler Name:	Ken	Kenny Camp		1	f	Reques	Requested Analyses	/ses		
Sample ID#	Collection Matrix Number Date/Time of Contain	Matrix N		HAT WAY	למון ני במפר במפר					Comments
36214 0-3' BEL	4:42 6/4	7.5	_	×	?		-			
36514 4-5 BLL	4:44 6/4	"	11	×						
386214 5-6 166	0/19 his	"	"	×						
798 6.8 1189	4:49 6/1	1	"	×						
0	7:59 6/8	*	"	×						
6215	8:05 6/8	-	*		×					
63/1 0-3'		11	11	×						
2716	11:17 617	٤	"	×	1					
1316	11:19 617	"	W	×						
217 3	8:15 6/8	"	"	X						
	3	4	*	X						
476218 56 1566	8:31 6/8	q	ll ll	X	-/					
Notes:										
Relinquished By:		Agency/Agent:	Agent:	Pedry	- W	Received By:	10	h Sug	Agency/Agent:	ent: ACT
Signature:		Time & Date:	Date:	Cho hi	0930	Signature:	1		Time & Date:	5: 6/10/1, 0950
Relinquished By:		Agency/Agent:	Agent:	11		Received By:			Agency/Agent:	
Signature:		Time & Date:	Date:			Signature:			Time & Date:	in

 1.1° (3.9° C $\frac{1}{10000}$ C Version: 4/4/2008

State of Oregon Sample Chain of Custody

A											
Agency, Authorized Furchaser of Agent:	aser or Agent:			Contract Laboratory Name:	t Labo	ratory	vame:		Lab Selection Criteria:	ria:	Turn Around Time:
1000				PACE E					☐ Proximity (if TAT < 72 hrs)	< 72 hrs)	X□ 10 days (std.)
b Report To:	1			Lab Batch #:	ch #:				☐ Prior work on same project	ne project	☐ 5 davs
Address: 3500	3500 Stewart Parkway	ay		Invoice To:	To:				X☐ Cost (for anticipated	ated	☐ 72 hours
	a logo, o agus	Ì		Address:		SAME			analyses)	lified or unable	48 hours
F-mail:				<u>=</u>					to perform requested services	ted services	24 hours
Project Name:	Hwy	Hwy 62 Phase-1		-	8		Sample Preservative	reserval	live	_	
Project #:				12/	1- 11						0
Sampler Name:	Ken	Kenny Camp		u	8	+	Requested Analyses	d Analy	ses	Γ	0 0 0 0 0 7
Sample ID#	Collection Matrix Number Date/Time of Contain	Matrix		HOLLMA HOLLMA	Dons	2005 8470 5002					Comments
4861/8 7-8' 156L	8:37 6/0	100		×		4	-				
47 6218 0-3 866	8/9 St:8	11	^	×	-						
6219 3'-6 Bec	8:51 6/9	11	/	×							
16820 0-3 BGL	10:30 6/7	11	/		X						
516230 5-6 B6L	10:33 6/7	*	1	×							
6220 8-9	10:35 47	"	1	×							
46221 0-3866	8/0 80:5	Z	1			X					
86221 3-4.3 866	819 80:6	"	1		×						
56222 0-3,364	9:50 6/7	2	_	×							
	9:59 47	1	,	×							
6222 5:68	4:59 6/7		_	×							
516223 11-12 BGL	10:05 6/7	*	,			×					
Notes:											
Relinquished By:		Agency	Agency/Agent:	Rode		Rece	Received By:	Tues	the Sway	Agency/Agent:	ent: PACE
Signature:		Time & Date:	Date:	11/01/9	6950	 	Signature:	B		Time & Date:	6/10/1
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Signature:		Time & Date:	Date:			Sign	Signature:			Time & Date:	iii

11°C, 2.9°C, 0.6°C.

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State of Oregon Sample Chain of Custody

Agency, Authorized Purchaser or Agent:	or Agent:		Contra	act Labora	Contract Laboratory Name:	Lab Selection Criteria:		Turn Around Time:
obot			PACE			☐ Proximity (if TAT < 72 hrs)	2 hrs)	X☐ 10 days (std.)
Send Lab Report To: ODOT			Lab B	Lab Batch #:		Prior work on same project	project	☐ 5 davs
Address: 3500 Stev	3500 Stewart Parkway		Invoice To:	е То:		X☐ Cost (for anticipated	9	72 hours
Roseburg	Roseburg, Oregon 97470				!	analyses)	-	:
			Address:		SAME	U Other labs disqualified or unable to berform requested services	ed or unable	48 hours
E-mail:			Tel. #	0/		☐ Emergency work		Other
Project Name:	Hwy 62 Phase-1	1-9	a		Sample Preservative	vative		
Project #:			12#	ap:			7	258066
	Kenny Camp	qt		101	Requested Analyses	llyses		
Sample ID#	Collection Matrix Date/Time	Number of Contain	1d_1 n	704				Comments
		ers	v	34				
60 6223 0-3 Bbc 1	7:16 6/7 5:1	/		×				
6223 6-9 BGL 9	9:22 6/7 11	1	×					
7	8:35 417 11	/	×					
36224 5.5-65 BGL 8	8:55 6/7 11	/	×					
6225 0-3 BGL	8:07 6/7 11	_	X					
36-1	11 1/2 41:8	/	×					
(66226 0-3 BCL)	7:34 47 11	,	×					
616224 5-6 B6L 7	7:39 6/7 11		×	X				
6227 0-3 866	11 6/0 81:1	,	×,					1
96227 4-5 866	7.25 47 11		×					
106227 5-6- 866 7	7:20 6/7 11	1	×					
	,							
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State of Oregon Sample Chain of Custody

Agency	Authorized Burchas	or Or Agant				,						
DODO	TODO				PACE	r Labo	Contract Laboratory Name: PACE	ame:		Lab Selection Criteria:	iteria:	= 1
Send La	b Report To:				Lab Batch #:	ch #:				☐ Proximity (if TAT < 72 hrs) ☐ Prior work on same project	41 < 72 hrs) same project	X∐ 10 days (std.) ☐ 5 days
Address:		3500 Stewart Parkway Roseburg, Oregon 97470	vay 97470		Invoice To:	T 0:				X Cost (for anticipated	cipated	72 hours
# 					Address:		SAME			analyses)	qualified or unab	ile
E-mail:					7°/2 # -0 -					to perform reques	to perform requested services	24 hours
Project Name:	Name:	Hwy	Hwy 62 Phase-1	7	G.		Ś	Sample Preservative	eservat	ive	-	
Project #:	2.5				124		_					
Sampler Name:	Name:	Ker	Kenny Camp	D	-	8	a	Requested Analyses	Analys	200	7	58066
	Sample ID#	Collection Matrix Number Date/Time	Matrix	Number of	577		(SI) 1					Comments
				Contain			78					
1,6228	0-3,066	11:04 G/C	715	/	×							
1,0238	-	1/9 11:11	11	1	×	-						
13 6229	0-3 BGL	11:25 6/1	"	/	*	×						
14 6229	4.5 866	11:30 6/6	*	/	×							
15/0230	0-3861	10:26 6/16	11		×		×					
0		10:45 6/6	*		×	×						
116431	0.3 862	1/9 55:6	11	_	×		×					
186232	3-6 866	3/18 10/10	11			×						
62	Bou	8:51 6/6	•	,	×							
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826235	0-3'364	7:55 46	//	/	X		X					
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1.16 2.92 , 0.6%

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State of Oregon Sample Chain of Custody

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ОБОТ					PACE				Drowingth, //f TAT / 70 km	77 han	VI 40 June 11me.
Send La	b Report To:				Lab Batch #:	#:			Prior work on same project	The project	^ 10 days (sto.)
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Tel. #:) }			Address:	SAME	ш	ōЦ	 Other labs disqualified or unable to perform requested services 	alified or unable sted services	48 hours
E-mail:					Tel. #:				Emergency work		Other
Project Name:	Name:	Hwy	Hwy 62 Phase-1	-1	-,		Sample Preservative	servativ	9		
Project #:	··•				of			_			9 9 0 8 6 7
Sampler Name:	Name:	Ken	Kenny Camp		25		Requested Analyses	Inalvse		T	
	Sample ID#	Collection Matrix Number	Matrix	_				_			
		Date/Time		of Contain ers	Metri HEID NOUT						Comments
83 6435	3-6, 86-6	1/3 85:1	7.75	/	×			\dagger			
84 6235	6-9 1862	8.03 6/6	11	\	×			-			
8 6236	0-3'866		"	-	×			-			
843.36	4-5 BGL	7:12 6/6	"	\	×			-			
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1.16, 2.92, 0.62.

CLIENT: ODO 7

COC PAGE __ of __ S

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Face Analytical

Comments Trip Blank? NO VG9H AG1H AG1U BG1H BP1U BP2U BP3U BP2N BP2S WGFU WGKU S Sample Line Item 5 12 = N ന 4 S ∞| თ Θ 7

AG1H 1 liter HCL amber glass	BP2S 500mL H2SO4 plastic	JGFU 4oz unpreserved amber wide
AG1U 1liter unpreserved amber glass	BP2U 500mL unpreserved plastic	R terra core kit
AG2S 500mL H2SO4 amber glass	BP2Z 500mL NaOH, Zn Ac	U Summa Can
AG2U 500mL unpreserved amber glass	BP3C 250mL NaOH plastic	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N 250mL HNO3 plastic	VG9T 40mL Na Thio. clear vial
BG1H 1 liter HCL clear glass	BP3S 250mL H2SO4 plastic	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	BP3U 250mL unpreserved plastic	VG9W 40mL glass vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B 40mL Na Bisulfate amber vial	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	DG9H 40mL HCL amber voa vial	WGFU 4oz clear soil jar
BP1U 1 liter unpreserved plastic	DG9M 40mL MeOH clear viai	WGFX 4oz wide jar w/hexane wipe
BP1Z 1 liter NaOH, Zn, Ac	DG9T 40mL Na Thio amber vial	ZPLC Ziploc Bao
BP2N 500mL HNO3 plastic	DG9U 40mL unpreserved amber vial	
BP2O 500mL NaOH plastic	I Wipe/Swab	

Pace Analytical"		:												Trip Blank? / D
	3	S & S WGFU WGKU		-										
		WGKU												
		WGFU												
		BP2S												
		BP2N												
		BP3U												
		BP2U												
		AGIH AGIU BGIH BP1U												
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DD01		AG1H												
2	\$5 \	VG9H												
CLIENT:	COC PAGE of 8	Sample Line Item	-	2	3	4	5	9	2	8	6	10	11	12

AG1H] 1 liter HCL amber glass	BP2S	BP2S 500mL H2SO4 plastic	JGFU 402 unpreserved amber wide
AG1U Hiter unpreserved amber glass	BP2U	BP2U 500mL unpreserved plastic	R terra core kit
AG2S 500mL H2SO4 amber glass	BP2Z	BP2Z 500mL NaOH, Zn Ac	U Summa Can
AG2U 500mL unpreserved amber glass	BP3C	BP3C 250mL NaOH plastic	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N	BP3N 250mL HNO3 plastic	VG9T 40mL Na Thio. clear vial
BG1H 1 liter HCL clear glass	BP3S	BP3S 250mL H2SO4 plastic	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	BP3U	BP3U 250mL unpreserved plastic	VG9W 40mL glass vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	BG9B	DG9B 40mL Na Bisulfate amber vial	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	H6DQ	DG9H 40mL HCL amber voa vial	WGFU 4oz clear soil iar
BP1U 1 liter unpreserved plastic	DG9M	DG9M 40mL MeOH clear vial	WGFX 4oz wide iar w/hexane wipe
BP1Z 1 liter NaOH, Zn, Ac	DG9T	DG9T 40mL Na Thio amber vial	ZPLC Ziploc Bad
BP2N 500mL HNO3 plastic	Desc	DG9U 40mL unpreserved amber vial	
BP2O 500mL NaOH plastic		Wipe/Swab	

4 9 0 Pace Analytical Comments Trip Blank? / O VG9H AG1H AG1U BG1H BP1U BP2U BP3U BP2N BP2S WGFU WGKU S 60V C CLIENT: ODOT COC ID# Sample Line Item 위 Ξ 감 က N 4 ro. ဖ 7 8 σ

AG1H 1 liter HCL amber glass	BP2S 500mL H2SO4 plastic	JGFU 4oz unpreserved amber wide	r wide
AG1U Iliter unpreserved amber glass	BP2U 500mL unpreserved plastic	R terra core kit	
AG2S 500mL H2SO4 amber glass	BP2Z 500mL NaOH, Zn Ac	U Summa Can	
AG2U 500mL unpreserved amber glass	BP3C 250mL NaOH plastic	VG9H 40mt HCL clear vial	
AG3S 250mL H2SO4 amber glass	BP3N 250mL HNO3 plastic	VG9T 40mL Na Thio, clear vial	al
BG1H 1 liter HCL clear glass	BP3S 250mL H2SO4 plastic	VG9U 40mL unpreserved clear vial	ar vial
BG1U 1 liter unpreserved glass	BP3U 250mL unpreserved plastic	VG9W 40mL glass vial preweighted (EPA 5035)	ohted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B 40mL Na Bisulfate amber vial	VSG Headspace septa vial & HCL	A HCL
BP1S 1 liter H2SO4 plastic	DG9H 40mL HCL amber voa vial	WGFU 4oz clear soil iar	
BP1U 1 liter unpreserved plastic	DG9M 40mL MeOH clear vial	WGFX 4oz wide lar w/hexane wine	wipe
BP1Z 1 liter NaOH, Zn, Ac	DG9T 40mL Na Thio amber vial	ZPLC Ziploc Bag	
BP2N 500mL HNO3 plastic	DG9U 40mL unpreserved amber vial	D.	
BP2O 500mL NaOH plastic	I Wipe/Swab		

Face Analytical	narin, padalabi stan	Comments											
	•	BP2S WGFU WGKU S											
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		BP2N											
		BP3U											
		BP1U_BP2U_BP3U											
		AG1H AG1U BG1H											
		AG1U											
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5	20/	VG9H											
CLIENT:	COC PAGE # or &	Sample Line Item	-	2	က	4	2	9	7	80	6	10	Ŧ

AG1H 1 liter HCL amber glass	BP2S	BP2S 500mL H2SO4 plastic	IGEI I 407 unpresenved amber wide
AG1U 1liter unpreserved amber glass	BP2U	BP2U 500mL unpreserved plastic	A forta care kit
AG2S 500mL H2SO4 amber glass	BP2Z	BP2ZI 500mL NaOH Zn Ac	III Summa Can
AG2U 500mL unpreserved amber glass	BP3C	BP3C 250mL NaOH plastic	VG9H 40ml HCl clear vial
AG3S 250mL H2SO4 amber glass	BP3N	BP3N 250mL HNO3 plastic	VG9T 40ml Na Thio clear vial
BG1H 1 liter HCL clear glass	BP3S	BP3S 250mL H2SO4 plastic	VG911 40ml moresened clear vial
BG1U 1 liter unpreserved glass	BP3U	BP3U 250mL unpreserved plastic	VG9W 40mL class vial preweighted (FPA 5035)
BP1N 1 liter HNO3 plastic	DG98	DG9B 40mL Na Bisulfate amber vial	VSG Headspace cents visit & HCI
BP1S 1 liter H2SO4 plastic	HeDO	DG9H 40mt HCl amher voa vial	WGEII 407 clear soil iar
BP1U 1 liter unpreserved plastic	MeSIG	DG9M 40ml MeOH clear vial	WGEX 402 wide for withouses with
BP1Z 1 liter NaOH, Zn, Ac	DG9T	DG9T 40mL Na Thio amber viai	ZPI C. Zinloc Ban
BP2N 500mL HNO3 plastic	DGBO	DG9U 40mL unpreserved amber vial	
BP20 500mL NaOH plastic		Wipe/Swab	

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1	S	BP2S WGFU WGKU S												
		BP2S WGFU WGK												
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2	χ. 	AG1H												
CLIENT:	COC PAGE S of B	Sample Line Item VG9H	1	2	3	4	5	9	7	8	6	10	11	12

ACALL FILM COLUMN			
AGIN I MET HOL AMOET glass	BP2S	BP2S 500mL H2SO4 plastic	JGFU 402 unpreserved amber wide
AG1U Iliter unpreserved amber glass	BP2U	BP2U 500mL unpreserved plastic	R terra core kit
AG2S 500mL H2SO4 amber glass	BP2Z	BP2Z 500mL NaOH, Zn Ac	U Summa Can
AG2U 500mL unpreserved amber glass	BP3C	BP3C 250mL NaOH plastic	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	VG9T 40mL Na Thio. clear vial
BG1H 1 liter HCL clear glass	BP3S	BP3S 250mL H2SO4 plastic	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	UEPBU	BP3U 250mL unpreserved plastic	VG9W 40mL class vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B	DG9B 40mL Na Bisulfate amber vial	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	H6DQ	DG9H 40mL HCL amber voa vial	WGFU 402 clear soil iar
BP1U 1 liter unpreserved plastic	DG9M	DG9M 40mL MeOH clear vial	WGFX 402 wide iar w/hexane wipe
BP1Z 1 liter NaOH, Zn, Ac	DG9T	DG9T 40mL Na Thio amber vial	ZPLC Ziploc Bag
BP2N 500mL HNO3 plastic	Dead	DG9U 40mL unpreserved amber vial	
BP20 500mL NaOH plastic		Wipe/Swab	
יייייייייייייייייייייייייייייייייייייי		wipe/swap	

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	9	J BP2S WGFU WGKU S												
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2	5	VG9H												
CLIENT:	COC PAGE 6 of 8	Sample Line Item	-	2	က	4	5	9	7	89	တ	10	11	12
-														

AG1H 1 liter HCL amber glass	BP2S 500mL H2SO4 plastic	JGFU 4oz unpreserved amber wide
AG1U 1liter unpreserved amber glass	BP2U 500mL unpreserved plastic	R terra core kit
AG2S 500mL H2SO4 amber glass	BP2Z 500mL NaOH, Zn Ac	U) Summa Can
AG2U 500mL unpreserved amber glass	BP3C 250mL NaOH plastic	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N 250mL HNO3 plastic	VG9T 40mL Na Thio, clear vial
BG1H 1 liter HCL clear glass	BP3S 250mL H2SO4 plastic	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	BP3U 250mL unpreserved plastic	VG9W 40mL glass vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B 40mL Na Bisulfate amber vial	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	DG9H 40mL HCL amber voa vial	WGFU 402 clear soil jar
BP1U 1 liter unpreserved plastic	DG9M 40mL MeOH clear vial	WGFX 402 wide jar w/hexane wipe
BP12 1 liter NaOH, Zn, Ac	DG9T 40mL Na Thio amber vial	ZPLC Ziploc Bag
BP2N 500mL HNO3 plastic	DG9U 40mL unpreserved amber vial	
BP20 500mL NaOH plastic	Wipe/Swab	

Face Analytical Comments Trip Blank? VG9H AG1H AG1U BG1H BP1U BP2U BP2N BP2S WGFU WGKU S CLIENT: ODOT COC PAGE 701 8 Sample Line Item 5 = 12 ~ က 4 വ ဖ ω 6

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				מכון כן בסל מווספולים מווספולים
	BP2U	BP2U 500mL unpreserved plastic	Œ	terra core kit
	BP2Z	BP2Z 500mL NaOH, Zn Ac	n	U Summa Can
	BP3C	BP3C 250mL NaOH plastic	VG9H	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N	BP3N 250mL HNO3 plastic	VG9T	VG9T 40mL Na Thio. clear vial
BG1H 1 liter HCL clear glass	BP3S	BP3S 250mL H2SO4 plastic	VG9U	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	BP3U	BP3U 250mL unpreserved plastic	VG9W	VG9W 40mL glass vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B	DG9B 40mL Na Bisulfate amber vial	VSG	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	DG9H	DG9H 40mL HCL amber voa vial	WGFU	WGFU 4oz clear soil jar
BP1U 1 liter unpreserved plastic	DG9M	DG9M 40mL MeOH clear vial	WGFX	WGFX 402 wide jar w/hexane wipe
BP1Z 1 liter NaOH, Zn, Ac	DG9T	DG9T 40mL Na Thio amber vial	ZPLC	ZPLC Ziploc Bag
BP2N 500mL HNO3 plastic	DG9O	DG9U 40mL unpreserved amber vial		
BP2O 500mL NaOH plastic	_	Wipe/Swab		Francisco (approximate to the control of the contro

Face Analytical ware served as some Comments Trip Blank? AG1H AG1U BG1H BP1U BP2U BP2U BP2N BP2S WGFU WGKU CLIENT: ODOT COC PAGE S of S COC ID# VG9H Sample Line Item 유 N က വ ဖ Ξ 2 4 7 ∞| ტ

AG1H 1 liter HCL amber glass	BP2S 500mL H2SO4 plastic	JGFU	JGFU 40z unpreserved amber wide
AG1U 1liter unpreserved amber glass	BP2U 500mL unpreserved plastic		R terra core kit
AG2S 500mL H2SO4 amber glass	BP2Z 500mL NaOH, Zn Ac	ח	U Summa Can
AG2U 500mL unpreserved amber glass	BP3C 250mL NaOH plastic	H65A	VG9H 40mL HCL clear vial
AG3S 250mL H2SO4 amber glass	BP3N 250mL HNO3 plastic	TGDV	VG9T 40mL Na Thio, clear vial
BG1H 1 liter HCL clear glass	BP3S 250mL H2SO4 plastic	UGBV	VG9U 40mL unpreserved clear vial
BG1U 1 liter unpreserved glass	BP3U 250mL unpreserved plastic	Webv	VG9W 40mL glass vial preweighted (EPA 5035)
BP1N 1 liter HNO3 plastic	DG9B 40mL Na Bisulfate amber vial	OS/	VSG Headspace septa vial & HCL
BP1S 1 liter H2SO4 plastic	DG9H 40mL HCL amber voa vial	WGFU	WGFU 4oz clear soil iar
BP1U 1 liter unpreserved plastic	DG9M 40mL MeOH clear vial	WGFX	WGFX 4oz wide jar w/hexane wine
BP12 1 liter NaOH, Zn, Ac	DG9T 40ml. Na Thio amber vial	ZPLC	ZPLC Ziploc Bao
BP2N 500mL HNO3 plastic	DG9U 40mL unpreserved amber vial		0
BP20 500mL NaOH plastic	Wipe/Swab		

Sample Condition Upon Receipt Client Name: ODOT Project # 258066 Courier: Fed Ex UPS USPS Client Commercial Pace Other Tracking #: <u>\$151</u> 9428 9404 Custody Seal on Cooler/Box Present: Yes No Seals intact: Packing Material: Bubble Wrap Bubble Bags None Other Temp. Blank Yes Thermometer Used 132013 or 101731962 or 226099 Type of Ice: Wer Blue None Samples on ice, cooling process has begun Date and Initials of person examining contents: 03 6/6/1/ 2,900,6 Biological Tissue is Frozen: Yes No Cooler Temperature Temp should be above Ireezing ≤ 6°C Comments Chain of Custody Present: DYES DNO DNA Chain of Custody Filled Out: ZYes □No DNA Chain of Custody Relinquished: TYes PNo □N/A Sampler Name & Signature on COC: Pres ONO DINA Samples Arrived within Hold Time: EYes ONO □N/A Short Hold Time Analysis (<72hr): ☐Yes ☐No □N/A Dret DINO Rush Turn Around Time Requested: □N/A Follow Up / Hold Analysis Requested: ØYes □No **DN/A** ØYes □No □N/A Sufficient Volume: Correct Containers Used: ØYes □No □N/A 10. Sleeves -Pace Containers Used: ☐Yes ☐Ao □N/A ØYes □No Containers Intact: □N/A 11. Filtered volume received for Dissolved tests □Yes □No DHIA sleuve Sample Labels match COC: ÆYes □No □N/A -Includes date/time/ID/Analysis Soi All containers needing preservation have been checked 14. Sleeve reads "HID" for 62300-3 ☐Yes ☐No DNIA on coc, tested for All containers needing preservation are found to be in DYES DNO DNA compliance with EPA recommendation. Initial when Lol # of added Exceptions: VOA, coliform, 70C, O&G completed preservative DINIA Samples checked for dechlorination: □Yes □No 15. Headspace in VOA Vials (>6mm): □Yes □No DINA 16. Trip Blanks Present: ☐Yes ☐No □N/A 17. Trip Blank Custody Seals Present ☐Yes ☐No DATA Pace Trip Blank Lot # (if purchased): Client Notification/ Resolution: Field Data Required? Date/Time: 6/13/11 0853 Person Contacted: 🐰 Comments/ Resolution:

 HCID on wo 258062

 Project Manager Review:
 QRI3

 Date:
 6/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp. incorrect containers)





June 28, 2011

Andy Brownfield **PASI** Seattle 940 South Harney Seattle, WA 98108

RE: Project 20124332 Project ID: 258066/ODOT

Dear Andy Brownfield:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2011. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerly,

Karen Brown

karen.brown@pacelabs.com

Kaunthrow



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Laboratory Certifications

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Project: 20124332

Client: PASI Seattle
Project ID: 258066/ODOT

Washington Department of Ecology C2078

Oregon Environmental Laboratory Accreditation - LA200001

U.S. Dept. of Agriculture Foreign Soil Import P330-10-00119

Pennsylviania Dept. of Env Protection (NELAC) 68-04202

Texas Commission on Env. Quality (NELAC) T104704405-09-TX

Kansas Department of Health and Environment (NELAC) E-10266

Florida Department of Health (NELAC) E87595 Louisiana Dept. of Environmental Quality (NELAC/LELAP) 02006



6/28/2011 14:54:59

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Sample Cross Reference

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Project: 20124332

Client: PASI Seattle
Project ID: 258066/ODOT

Client Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time	
258066020	20893631	Soil	07-Jun-11 12:28	14-Jun-11 10:10	
258066023	20893632	Soil	07-Jun-11 12:55	14-Jun-11 10:10	
258066024	20893633	Soil	07-Jun-11 13:01	14-Jun-11 10:10	
258066025	20893634	Soil	07-Jun-11 13:19	14-Jun-11 10:10	
258066026	20893635	Soil	07-Jun-11 13:23	14-Jun-11 10:10	
258066027	20893636	Soil	07-Jun-11 13:49	14-Jun-11 10:10	
258066029	20893637	Soil	07-Jun-11 14:09	14-Jun-11 10:10	

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Project Narrative

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Project:	20124332
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Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times (Qualified):

These holding times were exceeded due to sample receipt or re-extraction after the holding time had expired.

See the previous page for a detailed explanation:

Sample 20893632 analysis 35468151 8151 Soil MWave Herbs

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

All LCS recoveries were within QC limits.

Matrix Spikes and Duplicates:

MS or MSD recoveries outside of QC limits are qualified in the Report of Quality Control section.

Surrogates:

Surrogate recoveries outside of QC limits are qualified in the surrogate results section.



QC Cross Reference

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Project: 20124332

Analytical Method	Batch	Sample used for QC
EPA 8151	163057	Project sample 258066020
EPA 8081	163070	Project sample 258066025
EPA 8151	163715	Project sample 258066023
Dry Weight Moisture	163087	Batch sample from another client



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Project ID: 258066/ODOT

Site: None

Lab ID: 20893631

Client ID: 258066020

Matrix: Soil

% Moisture: 26.7 Corrected

Description: None

Prep Level: Soil

Batch: 163057

Method: EPA 8151

8151 Herbs Low Soil

Collected: <u>07-Jun-11</u>

Received: 14-Jun-11

Prepared: 15-Jun-11

Units: ug/kg

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND		90.9		23-Jun-11 23:31	SLF
93 - 76-5	2,4,5-T	1	ND		90.9		23-Jun-11 23:31	SLF
93-72-1	2,4,5-TP (Silvex)	I	ND		90.9		23-Jun-11 23:31	SLF



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Site: None

% Moisture: 46.3 Corrected

Batch: 163057

Prep Level: Soil

Matrix: Soil

Method: EPA 8151

Client ID: 258066023

Project ID: 258066/ODOT

Lab ID: 20893632

Description: None

8151 Herbs Low Soil

Collected: 07-Jun-11

Received: 14-Jun-11

Prepared: 15-Jun-11

Units no/ko

					Cilits.	ug/Kg		
CACN	4 14	7.11			Reporting			
CAS No.	Analyte	Dilution	Result	Qu	Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND	M1,N	117.		24-Jun-11 00:40	SLF
93-76-5	2,4,5-T	1	ND	M1,N	117.		24-Jun-11 00:40	SLF
93-72-1	2,4,5-TP (Silvex)	1	ND	M1,N	117.		24-Jun-11 00:40	SLF



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Client ID: 258066023 Project: 20124332

Project ID: 258066/ODOT Site: None

Lab ID: 20893632RE1 Matrix: Soil % Moisture: 46.3 Corrected

Description: None Prep Level: Soil Batch: 163715

Method: EPA 8151 8151 Herbs Low Soil

Collected: <u>07-Jun-11</u> Received: 14-Jun-11

Prepared: 24-Jun-11

Units: ug/kg Reporting CAS No. Analyte Dilution Result Qu Limit Reg Limit Analysis 94-75-7 2,4-D 1 ND M1,N 122. 28-Jun-11 10:36 SPP1 93-76-5 2,4,5-T 1 ND M1,N122. 28-Jun-11 10:36 SPP1 93-72-1 2,4,5-TP (Silvex) 1 ND 28-Jun-11 10:36 SPP1 M1,N 122.



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Site: None

Matrix: Soil

% Moisture: 31.2 Corrected

Prep Level: Soil

Batch: 163057

Description: None

Method: EPA 8151

Client ID: 258066024

Project ID: 258066/ODOT

Lab ID: 20893633

8151 Herbs Low Soil

Collected: <u>07-Jun-11</u>

Received: 14-Jun-11

Prepared: 15-Jun-11

Units: ug/kg Reporting CAS No. Analyte Dilution Result Qu Limit Reg Limit Analysis 94-75-7 2,4-D 1 ND 92.0 24-Jun-11 01:03 SLF 93-76-5 2,4,5-T 1 ND 92.0 24-Jun-11 01:03 SLF 93-72-1 2,4,5-TP (Silvex) ND 92.0 24-Jun-11 01:03 SLF



Client ID: 258066025

Project ID: 258066/ODOT

Lab ID: 20893634

Method: EPA 8081

8081 Pests Low Soil

Description: None

Sample Results

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Site: None

Matrix: Soil

% Moisture: 28 Corrected

Prep Level: Soil

Batch: 163070

Collected: $\underline{07}$ -Jun-11

Received: 14-Jun-11

Prepared: 15-Jun-11

					Uı	nits: ug/kg
CACN					Reporting	
CAS No.	Analyte	Dilution	Result	Qu	Limit	Reg Limit Analysis
309-00-2	Aldrin	1	ND		2.28	17-Jun-11 13:21 TWE
319-84-6	alpha-BHC	1	ND		2.28	17-Jun-11 13:21 TWE
319-85-7	beta-BHC	1	ND		2.28	17-Jun-11 13:21 TWE
319-86-8	delta-BHC	1	ND		2.28	17-Jun-11 13:21 TWE
58-89-9	gamma-BHC (Lindane)	1	ND		2.28	17-Jun-11 13:21 TWE
5103-71-9	alpha-Chlordane	1	ND		2.28	17-Jun-11 13:21 TWE
5103-74-2	gamma-Chlordane	1	ND		2.28	17-Jun-11 13:21 TWE
72-54-8	4,4'-DDD	1	ND		4.46	17-Jun-11 13:21 TWE
72-55-9	4,4'-DDE	1	9.46		4.46	17-Jun-11 13:21 TWE
50-29-3	4,4'-DDT	1	ND		4.46	17-Jun-11 13:21 TWE
60-57-1	Dieldrin	1	ND		4.46	17-Jun-11 13:21 TWE
959-98-8	Endosulfan I	1	ND		2.28	17-Jun-11 13:21 TWE
33213-65-9	Endosulfan II	1	ND		4.46	17-Jun-11 13:21 TWB
1031-07-8	Endosulfan sulfate	1	ND		4.46	17-Jun-11 13:21 TWB
72-20-8	Endrin	1	ND		4.46	17-Jun-11 13:21 TWB
7421-93-4	Endrin aldehyde	1	ND		4.46	17-Jun-11 13:21 TWB
53494-70-5	Endrin ketone	1	ND		4.46	17-Jun-11 13:21 TWB
76-44-8	Heptachlor	1	ND		2.28	17-Jun-11 13:21 TWB
1024-57-3	Heptachlor epoxide	1	ND		2.28	17-Jun-11 13:21 TWB
72-43-5	Methoxychlor	1	ND		22.4	17-Jun-11 13:21 TWB
8001-35-2	Toxaphene	1	ND		89.3	17-Jun-11 13:21 TWB

²¹ compound(s) reported



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Site: None

Matrix: Soil

% Moisture: 29.3 Corrected

Prep Level: Soil

Batch: 163057

Method: EPA 8151

Client ID: 258066026

Project ID: 258066/ODOT

Lab ID: 20893635

Description: None

8151 Herbs Low Soil

Collected: <u>07-Jun-11</u>

Received: 14-Jun-11

Prepared: 15-Jun-11

Units: ug/kg Reporting CAS No. Analyte Dilution Result Qu Limit Reg Limit Analysis 94-75-7 2,4-D 1 ND 91.6 24-Jun-11 01:26 SLF 2,4,5-T 93-76-5 1 ND 91.6 24-Jun-11 01:26 SLF 93-72-1 2,4,5-TP (Silvex) ND 91.6 24-Jun-11 01:26 SLF



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

24-Jun-11 01:49 SLF

Client: PASI Seattle

Project: 20124332

Site: None

Matrix: Soil

% Moisture: 26.9 Corrected

Batch: 163057

Prep Level: Soil

Method: EPA 8151

Description: None

Lab ID: 20893636

Client ID: 258066027

Project ID: 258066/ODOT

8151 Herbs Low Soil

1

ND

Collected: <u>07-Jun-11</u>

Received: 14-Jun-11

Prepared: 15-Jun-11

90.3

Units: ug/kg Reporting Analyte Dilution Result Qu Limit Reg Limit Analysis 1 ND 90.3 24-Jun-11 01:49 SLF 2,4,5-T 1 ND 90.3 24-Jun-11 01:49 SLF

3 compound(s) reported

2,4-D

2,4,5-TP (Silvex)

CAS No.

94-75-7

93-76-5

93-72-1



Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Client: PASI Seattle

Project: 20124332

Site: None

Matrix: Soil

% Moisture: 27.6 Corrected

Prep Level: Soil

Batch: 163057

Method: EPA 8151

Description: None

Client ID: 258066029

Project ID: 258066/ODOT

Lab ID: 20893637

8151 Herbs Low Soil

Collected: <u>07-Jun-11</u>

Received: 14-Jun-11

Prepared: 15-Jun-11

Units: ug/kg

					Reporting			
CAS No.	Analyte	Dilution	Result	Qu	Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND		86.7		24-Jun-11 02:12	SLF
93-76-5	2,4,5-T	1	ND		86.7		24-Jun-11 02:12	SLF
93-72-1	2,4,5-TP (Silvex)	1	ND		86.7		24-Jun-11 02:12	SLF



Surrogate Recovery

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: 163057

Project: 20124332

Method: Soil GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20893752	163057 BLANK 1		99	93						
20893753	163057 LCS 1		102	102						
20893631	258066020		48	46						
20893754	258066020 MS 1		103	92						
20893755	258066020 MSD 1		120	107						
20893632	258066023	N	10	9 *						
20893633	258066024		49	47						
20893635	258066026		21	19						
20893636	258066027		51	52						
20893637	258066029		23	20						
	QC limits:		10-169	10-161						

Sur 1: 2,4-DCPA (Conf)(S) Sur 2: 2,4-DCPA (S)

 $[\]mbox{*}$ denotes surrogate recovery outside of QC limits.



Surrogate Recovery

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: 163070

Project: 20124332

Method: Soil GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20893810	163070 BLANK 1		95	88	88	81				
20893811	163070 LCS 1		100	94	97	92				
20893634	258066025		82	74	91	84				
20893808	258066025 MS 1		89	80	96	89				
20893809	258066025 MSD 1		96	88	94	87				
	QC limits:		15-179	15-177	10-144	10-178				

Sur 1: Decachlorobiphenyl (Conf)(S)

Sur 2: Decachlorobiphenyl (S)

Sur 3: Tetrachloro-m-xylene (Conf)(S)

Sur 4: Tetrachloro-m-xylene (S)

^{*} denotes surrogate recovery outside of QC limits.



Surrogate Recovery

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: 163715

Project: 20124332

Method: Soil GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20896836	163715 BLANK 1		62	60						
20896837	163715 LCS 1		105	99						
20893632	258066023	N	3 *	2 *						
20896838	258066023 MS 1		90	77						
20896839	258066023 MSD 1		92	84						
	QC limits:		10-169	10-161					_	

Sur 1: 2,4-DCPA (Conf)(S) Sur 2: 2,4-DCPA (S)

^{*} denotes surrogate recovery outside of QC limits.



Quality Control

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: 163070

Project: 20124332

LCS: 20893811 17-Jun-11 10:56

Method: Soil GC Semivolatile Organics

MS: 20893808

<u>17-Jun-11</u> <u>13:37</u>

Units: ug/kg

MSD: 20893809 17-Jun-11 13:53

Original for MS: Client Sample 20893634

	¥ 60							_						
Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD	MS %Rec	MSD %Rec	RPD	QC LCS	Limits MS/MSD	Max RPD	Qu
			741100	- Брис		Tound	Tound	/orcc	/orcc	KI D	LCS	IMIS/IMISD	- KID	
Aldrin	16.0	12.4	78	21.9		19.0	19.3	87	84	2	28-135	10-167	22	
alpha-BHC	16.0	12.5	78	21.9		19.9	19.6	91	85	1	27-135	10-175	20	
beta-BHC	16.0	12.9	81	21.9		20.1	19.9	92	86	1	30-136	10-188	24	
delta-BHC	16.0	12.0	75	21.9		18.8	18.7	86	82	0	20-147	10-182	22	
gamma-BHC (Lindane)	16.0	12.5	78	21.9		19.8	19.7	91	86	1	29-136	10-181	21	
alpha-Chlordane	16.0	13.5	84	21.9		20.8	21.2	95	92	2	31-139	10-180	20	
gamma-Chlordane	16.0	12.8	80	21.9		19.8	20.1	91	87	2	32-138	10-176	20	
4,4'-DDD	16.0	13.3	83	21.9		20.6	21.0	94	91	2	31-145	10-188	20	
4,4'-DDE	16.0	13.2	82	21.9	9.46	38.9	50.6	135	179	26 *	32-142	10-182	20	
4,4'-DDT	16.0	12.9	81	21.9	1.29	21.5	24.3	92	100	12	29-136	10-181	20	
Dieldrin	16.0	12.9	81	21.9	1.35	23.2	23.8	100	98	3	32-137	10-170	20	
Endosulfan I	16.0	9.52	60	21.9		15.2	15.2	69	66	0	10-121	10-160	24	
Endosulfan II	16.0	10.2	64	21.9		16.4	16.3	75	71	1	10-123	10-175	20	
Endosulfan sulfate	16.0	13.7	86	21.9		20.6	20.5	94	89	0	28-146	10-171	20	
Endrin	16.0	12.1	76	21.9		19.7	21.3	90	93	8	31-168	10-204	20	
Endrin aldehyde	16.0	12.8	80	21.9		18.7	18.7	86	81	0	20-143	10-176	22	
Endrin ketone	16.0	14.4	90	21.9		22.1	21.5	101	94	2	25-145	10-184	21	
Heptachlor	16.0	13.3	83	21.9		20.6	20.8	94	91	1	31-135	10-161	25	
Heptachlor epoxide	16.0	13.1	82	21.9		21.1	21.2	97	92	0	26-133	10-177	23	
Methoxychlor	16.0	15.0	94	21.9		26.3	27.9	120	121	6	27-155		23	
20 compound(s) non-owt-										_				



Quality Control

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: 163057

Project: 20124332

LCS: 20893753

23-Jun-11 23:08

Method: Soil GC Semivolatile Organics

MS: 20893754

23-Jun-11 23:54

Units: ug/kg

MSD: <u>20893755</u> <u>24-Jun-11</u> <u>0:17</u>

Original for MS: Client Sample 20893631

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	RPD		Limits MS/MSD	Max RPD	Qu
2,4-D	667.	700.	105	900.	15.3	304.	1110	32	121	114 *	10-189	10-165	35	
2,4,5-T	66.7	69.9	105	90.0		49.7	148.	55	163	99 *	20-193	10-178	34	
2,4,5-TP (Silvex)	66.7	69.3	104	90.0		73.6	115.	82	127	44 *	34-188	10-184	34	
3 compound(s) reported														



Quality Control

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Batch: <u>163715</u>

Project: 20124332

LCS: <u>20896837</u> <u>28-Jun-11</u> <u>10:13</u>

Method: Soil GC Semivolatile Organics

MS: 20896838 28-Jun-11 10:59

Units: ug/kg

MSD: <u>20896839</u> <u>28-Jun-11</u> <u>11:21</u>

Original for MS: Client Sample 20893632

	LCS	LCS	LCS	MS	MS Sample	MS	MSD) MS	MSD		OC.	Limits	Max	Oı
Parameter Name	Spike	Found	%Rec	Spike	Found	Found	Found	%Rec	%Rec	RPD	LCS	MS/MSD	RPD	
2,4-D	667.	636.	95	1220		692.	845.	57	69	20	10-189	10-165	35	
2,4,5-T	66.7	69.6	104	122.		85.3	99.7	70	81	16	20-193	10-178	34	
2,4,5-TP (Silvex)	66.7	57.8	87	122.		86.8	105.	71	86	19	34-188	10-184	34	
3 compound(s) reported														



Blank Results

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Blank ID: 163057 BLANK 1

Project: 20124332

Lab ID: 20893752

Prep Level: Soil

Batch: 163057

Method: Soil GC Semivolatile Organics

Prepared: 15-Jun-11

		Units: ug/kg Reporting				
CAS Num	ıb Analyte	Dilution	Result	Qu Limit	Analysis	
94-75-7	2,4-D	1	ND	66.7	23-Jun-11 22:45 SLF	
93-76-5	2,4,5-T	1	ND	66.7	23-Jun-11 22:45 SLF	
93-72-1	2,4,5-TP (Silvex)	1	ND	66.7	23-Jun-11 22:45 SLF	



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Blank ID: 163070 BLANK 1

Project: 20124332

Lab ID: 20893810

Prep Level: Soil

Batch: 163070

Method: Soil GC Semivolatile Organics

Prepared: 15-Jun-11

				Units:	ıg/kg	
				Reportin	g	
CAS Numb	Analyte	Dilution	Result	Qu Limit	Analysis	
309-00-2	Aldrin	1	ND	1.63	17-Jun-11 10:40 TWB	3
319-84-6	alpha-BHC	1	ND	1.63	17-Jun-11 10:40 TWB	3
319-85-7	beta-BHC	1	ND	1.63	17-Jun-11 10:40 TWB	3
319-86-8	delta-BHC	1	ND	1.63	17-Jun-11 10:40 TWB	3
58-89-9	gamma-BHC (Lindane)	1	ND	1.63	17-Jun-11 10:40 TWB	3
5103-71-9	alpha-Chlordane	1	ND	1.63	17-Jun-11 10:40 TWB	3
5103-74-2	gamma-Chlordane	1	ND	1.63	17-Jun-11 10:40 TWB	3
72-54-8	4,4'-DDD	1	ND	3.20	17-Jun-11 10:40 TWB	3
72-55-9	4,4'-DDE	1	ND	3.20	17-Jun-11 10:40 TWB	3
50-29-3	4,4'-DDT	1	ND	3.20	17-Jun-11 10:40 TWB	3
60-57-1	Dieldrin	1	ND	3.20	17-Jun-11 10:40 TWB	3
959-98-8	Endosulfan I	1	ND	1.63	17-Jun-11 10:40 TWB	3
33213-65-9	Endosulfan II	1	ND	3.20	17-Jun-11 10:40 TWB	3
1031-07-8	Endosulfan sulfate	1	ND	3.20	17-Jun-11 10:40 TWB	3
72-20-8	Endrin	1	ND	3.20	17-Jun-11 10:40 TWB	3
7421-93-4	Endrin aldehyde	1	ND	3.20	17-Jun-11 10:40 TWB	3
53494-70-5	Endrin ketone	1	ND	3.20	17-Jun-11 10:40 TWB	3
76-44-8	Heptachlor	1	ND	1.63	17-Jun-11 10:40 TWB	3
1024-57-3	Heptachlor epoxide	1	ND	1.63	17-Jun-11 10:40 TWB	3
72-43-5	Methoxychlor	1	ND	16.0	17-Jun-11 10:40 TWB	}
8001-35-2	Toxaphene	1	ND	64.0	17-Jun-11 10:40 TWB	3



Blank Results

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Blank ID: 163715 BLANK 1

Project: 20124332

Lab ID: <u>20896836</u>

Prep Level: Soil

Batch: 163715

Method: Soil GC Semivolatile Organics

Prepared: 24-Jun-11

Units: ug/kg					
				Reporting	
Analyte	Dilution	Result	Qu	Limit	Analysis
2,4-D	1	ND		66.7	28-Jun-11 09:50 SPP1
2,4,5-T	1	ND		66.7	28-Jun-11 09:50 SPP1
2,4,5-TP (Silvex)	1	ND		66.7	28-Jun-11 09:50 SPP1
	2,4-D 2,4,5-T	2,4-D 1 2,4,5-T 1	2,4-D 1 ND 2,4,5-T 1 ND	2,4-D 1 ND 2,4,5-T 1 ND	Analyte Dilution Result Qu Reporting Limit 2,4-D 1 ND 66.7 2,4,5-T 1 ND 66.7



Definitions/Qualifiers

Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 (504) 469-0333

Project: 20124332

Value	Description
M1	The sample required reextraction and/or reanalysis due to surrogate recoveries outside the QC limits. Reanalysis yielded similar results, indicating a sample matrix effect. The results reported are from the original analysis.
N	See narrative for a detailed explanation.
J	This estimated value for the analyte is below the adjusted reporting limit but above the instrument reporting limit.
U	The analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
В	This analyte was detected in the method blank.
E	The sample concentration is above the linear calibrated range of the analysis.
LCS	Laboratory Control Sample.
MS(D)	Matrix Spike (Duplicate).
DUP	Sample Duplicate.
RPD	Relative Percent Difference.



Chains of Custody

FMT-ALL-C-002rev.00 24March2009

Samples Intact Y or N

Z

Received on Ice (Y/ or

Z

Custody Seal A or

Cooler Temperature on Receipt 2.0c

2012 453 Pace Analytical murpossible com

Chain of Custody

}

LAB USE ONLY 6/10/2011 Results Requested By: 6/24/2011 2089363 653 634 1808 2shished 1518 4 Owner Received Date: V22 ハーカー Date/Time Pace Analytical New Orleans 1000 Riverbend Bivd Solid Solid Solid Solid Solid Solid Sofid Received By St. Rose, LA 70087 Phone (504)469-0333 258066026. 258066025 258066023 258066024 258066029 258066020 258066027 Workorder Name: Hwy 62 Phase - 1 Suite F DateTime *קינאיוו* 6/7/2011 14:09 6772011 12:28 6772011 12:55 6/7/2011 13:01 6772011 13:19 6772011 13:23 6772011 13:49 112/19 S S S PS PS S PS Pace Analytical Services, Inc. Released By Seattle WA 98108 Phone (206)767-5060 Fax (206)767-5063 Workorder: 258066 6208 0'-3' BGL 6206 1'-2' BGL 6208 4'-5' BGL 6209 3-4' BGL 6209 0-3 BGL 6210 0-3 BGL 6211 0-3 BGL 940 South Hamey Andy Brownfield Transfers

20124332 PASI-SEAT



Sample Condition ce Analytical 1000 Riverbend, Blvd., Suite F St. Rose, LA 70087 FIUICUL#:1 Courier: □ Pace Courier ☐ Hackbarth Fed X □ UPS □ DHL □ USPS □ Customer □ Other Custody Seal on Cooler/Box Present: [see COC] Custody Seals Intact: □Yes □No Therm Fisher IR 1 Therometer □ Therm Fisher IR 2 Type of Ice: Samples on ice: [see COC] Used: n Therm Fisher IR 4 Date and initials of person examining Cooler Temperature: [see COC] Temp should be above freezing to 6°C contents: Temp must be measured from Temperature blank when present Comments: Temperature Blank Present"? □Yes □No □N/A ØYes □No Chain of Custody Present: **□N/A** Chain of Custody Complete: QYes □No □N/A 3 Chain of Custody Relinquished: THES INO **□N/A** Sampler Name & Signature on COC: Dres DNo **DN/A** Samples Arrived within Hold Time: Pes DNo **□**N/A Sufficient Volume: ØYes □No **□N/A** ZYes DNo Correct Containers Used: □n/a Filtered vol. Rec. for Diss. tests ☐Yes ☑No □N/A ØYes □No Sample Labels match COC: □N/A 10 All containers received within manafacture's ØYes □No □N/A precautionary and/or expiration dates. All containers needing preservation have been ☐Yes ☐No **DNA** checked (except VOA, coliform, & O&G). All containers preservation checked found to be in If No, was preserative added? DYes DNo ☐Yes ☐No DNIA compliance with EPA recommendation. If added record lot no.: HNO3 H2SO4 DNA Samples checked for dechlorination: ☐Yes ☐No

Client Notification/ Resolution:	
Person Contacted:	Date/Time:

□N/A 14

DINA 16

DIVAT 17

18

☐Yes ☐No

☐Yes ☐No

☐Yes ☐No

N/A

Headspace in VOA Vials (>6mm):

Trip Blank Custody Seals Present

Pace Trip Blank Lot # (if purchased):

Trip Blank Present:

ALLC003rev.06, 28Jul2010 - mod

Appendix F

Supporting Documentation

Oregon DEQ Facility Profiler 2.0

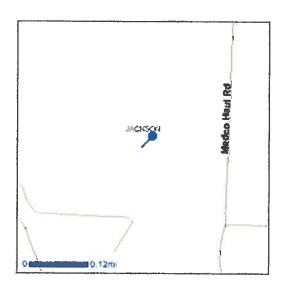
[Help] [Close Window]

Facility Summary Report

Return to Site Listing

Maps





Facility / Site Information for Location 89006

Facility/Site Name:

MEDCO ROAD FORMER

ORCHARD

Address:

T27S, R1W, SEC 6, TL 2500

City State Zip:

MEDFORD OR 97502

Latitude:

Longitude:

42° 23' 2.8" -122° 52' 8.4"

Location Accuracy: HIGH

Last Updated: 6/16/2005 2:33:06 PM

Aliases

County:

Watershed:

Medco Road Former Orchard

ECSI

Geographic Features

Township: T37S-R1W-S6

JACKSON MIDDLE ROGUE **Congress Dist:**

2 Forest Type:

OR Senate Dist: OR House Dist:

02 Vegetation:

Urban and industrial

04 Agricultural Land: N/A

Drinking Water Source:

CITY OF GOLD HILL

Oregon DEQ Program Information

Environmental Cleanup (ECSI)

Operation ID	Start Date	NF A Date	Permit Type	Permit SubType	Status		EPA Number
4435	04/01/2005		Contaminated Site		Listed on CRL or Inventory	ECSI Site Report	

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

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.

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

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Land Quality

Environmental Cleanup

DEQ Home > Land Quality > Environmental Cleanup > ECS1 > Site Summary

Environmental Cleanup Site Information (ECSI) Database Site Summary Report - Details for Site ID 4435, Medco Road Former Orchard

This report shows data entered as of September 9, 2011 at 8:54:59 AM

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: 4435 Site Name: Medco Road Former Orchard CERCLIS No:

Address: 37S/1W/S6 Medford 97504

County: Jackson Region: Western

Other location information:

Investigation Status: Listed on CRL or Inventory

Brownfield Site: No NPL Site: No Orphan Site: Study Area:

No No

Property: Twnshp/Range/Sect: 37S , 1W , 6 Tax Lots: 2500

Latitude: Longitude: Site Size: 59 acres

42.3841 deg. -122.869 deg.

Other Site Names:

Site Characteristics

General Site The information in this database refers to a 59 acre subsection of tax

Description: lot 2500. This does not apply to the other 30 acres.

Site History: The Medco Road former orchard site is a 49 acre industrial property

located immediately northwest of the Medford Airport in Medford, Oregon. The site was used historically a fruit orchard from some time prior to 1939 until the early 1990s. The site is currently a vacant grassy

field.

Contamination Information:

The subject property was used as an orchard from sometime prior to 1939 until around 1993, after which it was cleared and sat undeveloped. Historical practices at orchard sites included the use of agricultural chemicals including herbicides, pesticides, petroleum products, and fertilizers. In order to evaluate the potential for environmental impact based on historical use at the site, Agate Engineering, Inc. (Agate) conducted a Phase I and Phase II ESA in May of 2004.

As has been detected above RBCs, but below background. Pb has been detected above background, but below appropriate RBCs. Dieldrin is present in soils above residential but below undustrial standards.

Manner and Time of

Release:

Hazardous

Substances/Waste

Types:

Pathways:

Environmental/Health

Threats:

Risks at the site may be managed by establishing an Equitable Easement and Servitude with the following general conditions:

- 1. No installation of wells on the property;
- 2. No residential use of the property;
- 3. Soil must be managed in accordance with a soil-management plan (which the site owner will need to develop and provide to DEQ).

Status of Investigative or Remedial Action:

Data Sources:

Conditional no further action issued May 2005, based on the implementation of institutional controls.

- August 20, 1996, No Further Action Letter, LUST 15-92-0098, DEQ
- April 28, 2004, Cursory Summary of On-Going Work Regarding the Environmental Site Assessment Jurisdictional Wetlands, and FAA Issues Concerning Property Identified as Taxlot 2500 Located in Section 6 Of Township 37 South, Range 1 West of the Willamette Meridian in Medford, Oregon, Agate Engineering, Inc.
- May 14, 2004, Phase I Environmental Site Assessment, Agate Engineering, Inc.
- May 26, 2004, Medco/International Road Property: Addendum No. 1 to Phase 1 ESA Report, Agate Engineering, Inc.
- May 28, 2004, Environmental Review for Industrial Lands Initiative, DEO
- December 2, 2004, Email from Mike Wolf to Geoff Brown, FW: Medco Site, Options for NFA Status, DEQ
- March 9, 2005, Letter Re: Pete Naumes Description of Roque Valley Cultivation Practices, William R. Bagley
- April 11, 2005, Email from Bill Mason to Geoff Brown, Subject: Medco Rd/Airport East TL 2500 Property, DEQ

Substance Contamination Information

Substance **Media Contaminated**

Concentration Level

Date Recorded

No information is available

Investigative, Remedial and Administrative Actions

Action Start Date Compl. Resp. Staff Lead No Further Action (Conditional) (Primary 09/22/2005 09/22/2005 Geoffrey Action) Geometric Pgm

VCS

Brown

View Full Report Showing Action History

Site	Environ	mental	Control	6
JILL	PHALLOL	HIGHLA	CONLIG	3

Control Description	Begin Date	End Date	Last Reviewed By	Last Review Date
Easement Equitable Servitude	05/31/2005		Geoff Brown, DEQ	05/31/2005
	Commontes Dieles			

Comments: Risks at the site are managed by an Easement and Equitable Servitude, with the following general conditions: 1. No installation of wells on the property; 2. No residential use of the property; 3. Soil must be managed in accordance with a soil-management plan (which the site owner will need to develop and provide to DEQ).

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 Geoffrey Brown at the Western regional office or via email at brown.geoff@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 Western regional office.

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

For more information about DEQ's Land Quality Division and its programs, see the contact page.

Oregon Department of Environmental Quality

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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Department of Environmental Quality

Western Region Eugene Office 1102 Lincoln Street, Suite 210 Eugene, OR 97401 (541) 686-7838 FAX (541) 686-7551 TTY (541) 687-5603

STAFF MEMORANDUM BASIS AND REQUIREMENTS FOR NO FURTHER ACTION DETERMINATION MEDCO ROAD/AIRPORT EAST INDUSTRIAL LANDS ACT SITE

Site Name: Medco Road/Airport East

Geoff-there is none - enter into ECSI once agreement on this approach has been

reached.

Site Location T37S, R1W, Section 6, Tax Lot 2500

Lat.: 42.3841 Long.: -122.869

Prepared by: Geoff Brown, R.G.

DEQ Western Region Project Manager

Reviewed by: Max Rosenberg, R.G.

Western Region Site Assessment Lead Worker

Date:

April 19, 2005

INTRODUCTION

The Medco Road/Airport East site is a 49 acre industrial property located immediately northwest of the Medford Airport in Medford, Oregon. The site was used historically a fruit orchard from some time prior to 1939 until the early 1990s. The site is currently a vacant grassy field.

As a requirement of the Industrial Lands Act initiative, the site owners hired Agate Engineering to conduct a Phase I Environmental Site Assessment (ESA) on the site. Soil sampling data during the ESA and follow up work indicate elevated concentrations dieldrin and arsenic are present in on-site soils at concentrations above DEQ screening levels.

In reaching a conclusion that conditions at the site are sufficiently protective of human health and the environment to warrant site closure, the DEQ reviewed this report and other information contained in the file including the following:

- August 20, 1996, No Further Action Letter, LUST 15-92-0098, DEQ
- April 28, 2004, Cursory Summary of On-Going Work Regarding the Environmental Site Assessment Jurisdictional Wetlands, and FAA Issues Concerning Property Identified as Taxlot 2500 Located in Section 6 Of Township 37 South, Range 1 West of the Willamette Meridian in Medford, Oregon, Agate Engineering, Inc.
- May 14, 2004, Phase I Environmental Site Assessment, Agate Engineering, Inc.

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- March 9, 2005, Letter Re: Pete Naumes Description of Rogue Valley Cultivation Practices. William R. Bagley
- April 11, 2005, Email from Bill Mason to Geoff Brown, Subject: Medco Rd/Airport East TL 2500 Property, DEQ

BACKGROUND AND ENVIRONMENTAL CONCERNS

The subject property was used as an orchard from sometime prior to 1939 until around 1993, after which it was cleared and sat undeveloped. Historical practices at orchard sites included the use of agricultural chemicals including herbicides, pesticides, petroleum products, and fertilizers. In order to evaluate the potential for environmental impact based on historical use at the site, Agate Engineering, Inc. (Agate) conducted a Phase I and Phase II ESA in May of 2004.

Issues associated with the site include:

Underground Storage Tank

A leaking underground storage tank was removed from the site in 1992. No impact to groundwater was noted with respect to the UST release. On-site soil treatment was successfully conducted under a DEQ permit. After the cleanup and soil treatment was complete, DEQ issued a Letter of No Further Action for the UST release in 1996.

Surface Soil Sampling

In May 2004 Agate collected six shallow composite samples from the site and had them analyzed for lead, arsenic, organochlorine pesticides, and chlorinatd herbicides. The samples were collected from surficial soils at a depth of around six inches. Lead, arsenic, Dieldrin, DDT, and DDT breakdown products were detected in all soil samples.

Lead

Lead was present in all soil samples at concentrations below EPA Region 9 Preliminary Remediation Goals (PRG)s. DEQ screens samples against the PRGs to estimate whether contaminants detected in a sample are likely to pose a risk to people. The residential PRG for lead is 400 mg/kg. For industrial properties it is 750 mg/kg. The highest lead concentration detected at the site was 291 mg/kg. The concentrations are below the PRGs and DEQ has concluded lead does not pose a risk to future site workers or residents.

Arsenic

The PRG for arsenic in soil is 0.39 mg/kg for residential receptors and 1.6 mg/kg for occupational/industrial receptors. Arsenic was detected in every composite sample collected at the site at concentrations ranging from 2 to 7 mg/kg. The default background concentration for naturally occurring arsenic in Oregon soil is 7 mg/kg. No samples from the site exceeded the



default background concentration for arsenic. Site specific background concentrations are always preferred over default background values, however the DEQ can use default background values during the screening phase of an investigation. The use of default background values is justified in this case because the site is a former orchard surrounded by former orchards, and collecting background samples from similar areas outside of the same types of agricultural influences as the site would be problematic.

Dieldrin

Dieldrin was present in all six composite samples at concentrations in excess of residential PRGs but below industrial PRGs. DEQ considers conditions at the site protective of industrial use. However, the presence of soils exceeding residential PRGs precludes future residential use of the site and will require a deed restriction preventing residential use. The deed restriction will also require proper handling and disposal of dieldrin-containing soils during site development activities.

The full horizontal and vertical extent of Dieldrin impact to soil is not known. However, since dieldrin was detected in all samples, it is likely that Dieldrin is present on all portions of the site. The relatively low and consistent concentrations of dieldrin detected in site soils indicate it is the result of pesticide application, not a spill or improper disposal. Since the site is surrounded by other former orchards that may have used similar pesticides, delineation of the extent of dieldrin beyond the property boundaries is considered by DEQ to be both impractical and unnecessary to assure the safe industrial development of the Medco Road/Airport East site.

Since chemical detected in groundwater exceed DEQ screening levels for drinking water near the north end of the property, potential drinking water impact was a concern at the site. Therefore, DEQ conducted an analysis of the potential fate and transport of the contaminants. The conclusion of the analysis is that off-site impact to shallow-groundwater users is not reasonably likely for the following reasons:

- Bedrock is very shallow, from 13-17 feet below ground surface, limiting the potential for vertical migration of contaminants;
- Water supply wells in the section (none closer than 2,500 feet from the site) Section 6 are completed in bedrock at depths ranging from 110-300 feet, with the top of shallowest screened interval at 50 feet below ground surface;
- "First water" was significantly deeper than corresponding static water levels on all water well reports for nearby wells, confirming that the bedrock aquifer(s) are confined and are therefore less vulnerable to surficial contaminants;
- Shallow soils at the site are classified as "Coleman Loam" (Jackson County Soil Survey),
 a low permeability soil consisting primarily of clay loam, which limits the potential for
 significan off-site migration of contaminants in any perched groundwater zones near the
 site; and
- The primary contaminants of concern are heavy PAHs, which have a low water solubility, are strongly sorbed to soil, and are not likely to travel far in higher-claycontent soils.



The site specific soil and aquifer characteristics limit the maximum potential extent of shallow groundwater to the area immediately north of the site, certainly not extending to areas in which groundwater wells are present or likely to be constructed in the future. Therefore DEQ has determined that PAHs do not pose a risk to nearby residents via groundwater.

Ecological Risks

The site, a former orchard, consists of filled and disturbed soils with no significant ecological habitat.

CONCLUSIONS AND RECOMMENDATIONS

The site is suitable for industrial development provided potential risks from dieldrin are managed by establishing a DEQ-approved Easement and Equitable Servitude (EE&S) with the following general conditions:

- 1. No installation of wells on the property;
- 2. No residential use of the property;
- Soil, including any soil taken off the site, is managed in accordance with a DEQapproved soil management plan (which the site owner will need to develop and provide to DEQ prior to development).

Placing an EE&S on the property deed, and abiding by the conditions, will meet the standards set forth under 340-122-040 and will be protective of present and future public health, safety, welfare, and the environment.

DEQ will provide public notification of the proposed institutional control in the Secretary of State's Bulletin and the Medford Mail Tribune. The notification will summarize the proposed institutional control and allow the public a 30 day public comment period.

Upon closure of the public comment period, after any substantive public comments have been addressed, and the Equitable Easement and Servitude has been recorded, DEQ will issue a Letter of No Further Action (NFA) for the site.

DEO will update the ECSI database to reflect the changes in site status.

Enc.

Figure 1 Site Location Figure 2 Site Plan

April 11, 2005, Email from Bill Mason to Geoff Brown, Subject: Medco Rd/Airport East TL 2500 Property, DEQ



Date Pgm

No Further Action (Conditional) (Primary 09/22/2005 09/22/2005 Geoffrey VCS Action)

View Full Report Showing Action History

Site Environmental Controls

Control Description	Begin Date	End Date	Last Reviewed By	Last Review Date
Easement Equitable Servitude	05/31/2005		Geoff Brown, DEQ	05/31/2005

Comments: RIsks at the site are managed by an Easement and Equitable Servitude, with the following general conditions: 1. No installation of wells on the property; 2. No residential use of the property; 3. Soil must be managed in accordance with a soil-management plan (which the site owner will need to develop and provide to DEQ).

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