Phase II Environmental Site Investigation and Cleanup

10TH STREET PROPERTIES

The Dalles, OR 97058

Prepared for:

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May 1, 2014

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1.0 Introduction and Purpose

This report presents the results of a subsurface environmental assessment and cleanup at the 10th Street Properties in The Dalles, Oregon. The 10th Street Properties consist of the former Wasco County Road Department facility and the baseball and soccer fields to the north.

This assessment was conducted at the request of Tyler Stone, Wasco County Administrative Officer.

The purpose of this assessment was to investigate areas identified in a recent Phase I Environmental Site Assessment for soil and groundwater contamination (MYA, 2014). In addition, two areas of surface soil contaminated with petroleum were cleaned up by simple excavation.

2.0 Background

A Phase I Environmental Assessment of the 10th Street Properties was conducted by Mark Yinger Associates in October, 2014 (MYA, 2014). This study identified the following areas of concern:

1. Decommissioned in place underground storage tank (UST) on the south side of the Shop Building (Figs. 1 and 2).
2. Floor drain/sump in the floor in the northeast corner of the Shop Building.
3. Dispenser locations associated with the former UST system near the Oil House.
4. Petroleum contaminated soil treated by aeration and left on site, on the south side of the Equipment Shed.
5. Oil stained surface soil at the Old Shed, west side of Shop Building and in the old Barn.
6. Potential diesel contamination of soil on the north side of the Equipment Shed due to using diesel to clean out tar spreading equipment.
7. Potential pesticide contamination of soil on the north side of concrete slab on the north side of the Shop Building. Pesticide application equipment was reportedly washed out on the concrete slab.
8. Concrete sump box beneath the Sand Shed may have received contaminated waste water.

9. Large steel container near the Oil House may have leaked liquid with a petroleum odor and sheen onto the ground.

3.0 Progress Narrative

On February 23, 2015, a geophysical subsurface investigation was conducted on the south and north sides of the Shop Building. The subcontractor for this work was GeoPotential out of Brightwood, Oregon. A copy of their report is included in Appendix A. On the same day the areas where soil borings would be located were marked on the ground in preparation for using the one-call utility locate service.

On March 16, 2015, soil borings were made to observe subsurface conditions and to collect soil and groundwater samples for laboratory analysis. Soil borings were made on the south and north sides of the Shop Building and on the north side of the Sand Shed. The drilling contractor was Pacific Soil and Water out of Tigard, Oregon.

On April 14th and 15th test pits and hand-augered soil borings were made, and soil samples were collected for laboratory analysis. The oil stained soil in the Old Shed and in the shed on the west side of the Shop Building was cleaned up by excavation. Soil samples to confirm the soil cleanup were collected for analysis. Eugene Scherer, a Wasco County employee, assisted with all of this work.

4.0 Site and Vicinity Description

4.1 Location

The 10th Street Properties are located on the west side of the City of The Dalles, Oregon. The site has long been within the city limits. Approximately 1/3 of the subject property was used primarily by the Wasco County Road Department for many years. The address of the Shop Building is 1819 West 10th Street. The remainder of the subject property has long been used for baseball and soccer fields, which are maintained by North Wasco County Parks and Recreation. The ball fields are known as Kramer Field. In the most western part of the site there is an old single family residence that is vacant.

4.2 Vicinity General Characteristics

The area slopes moderately to very gently toward the north. The Columbia River is located approximately 2,900 feet northeast of the site. The areas to the south, west and northwest of the site are long established single-family residential neighborhoods. Immediately to the east are the Columbia Basin Care Facility and Headstart. To the north and west of the Kramer Field ball fields is commercial development along West 6th Street. The commercial development consists of restaurants, service stations and car dealerships. The area is served by the City of The Dalles water system and sanitary sewer systems. Starting two blocks to the northwest of the site is the boundary of the Chenowith Water PUD.

4.3 Geologic and Hydrogeologic Setting

The site and vicinity is underlain by silt, sand and gravel deposited by the Columbia River on a scoured basalt surface. The depth to the scoured basalt surface is variable. Deep channels and potholes were eroded into the basalt by the river. Basalt bedrock is exposed along the north edge of Kramer Field. This is the Priest Rapids member of the Wanapum Basalt. In the borings near the Shop Building the material overlying the basalt is predominantly brown silty fine sand. The depth to the basalt varied from approximately 11 to 13.75 feet. Two of the borings did not encounter basalt and were stopped at 15 feet beneath the surface in silty fine sand. Groundwater was present in the silty-sand just above the basalt. In the borings near the Shop Building the depths to groundwater varied from 10.4 to 12.5 feet beneath the surface. At the boring near the Sand Shed the depth to groundwater was 3.25 feet beneath the surface. The Sand Shed is approximately 12 feet below the elevation of the Shop Building. It is reasonable to assume that groundwater flows in a northerly direction toward the Columbia River.

The Oregon Water Resource Department well log database was searched for area water wells. The nearest public water supply well is a Chenowith Water PUD well located approximately two blocks northwest of the site (1,700 feet). This 263 foot deep well was drilled in 2008. Hard basalt was encountered at seventeen feet beneath the surface. The first water bearing zone occurs at 182 to 203 feet beneath the surface in hard gray basalt with a static water level of 106 feet beneath the surface. Several thin zones of blue/green shale are described above the water bearing zone and likely act to confine the aquifer. The nearest City of The Dalles well is approximately 3,600 feet southeast of the site and is clearly up gradient of the site in terms of the likely groundwater flow direction. A number of domestic wells were drilled in the area in from the early 1920s through the1950s and ranged from very shallow to 258 feet. It is likely

that these wells are no longer in use. Well logs for selected wells are included in Appendix B.

5.0 Methodology

The soil borings were made with a truck mounted 6600-Geoprobe machine. This is a hydraulic powered direct-push soil coring machine. A 1.75-inch diameter soil core was collected in 5-foot long intervals in a plastic sleeve. The plastic sleeves were split open on site and a description of the soil recorded in a boring log. The boring logs are included in Appendix C. Portions of the soil core selected for laboratory analysis were tightly packed in four-ounce laboratory supplied wide-mouth jars and sealed with Teflon lined screw-on lids. Select portions of the soil were placed in a small ziplock bag and kneaded to break the clumps up then the probed of an organic vapor analyzer was inserted into the bag. The instrument peak reading was record on the boring log in parts per million.

Groundwater samples were collected by inserting a ¾-inch diameter 5-foot long PVC slotted screen with a riser in the borehole. A peristaltic pump was then used to purge the temporary well and to collect the water sample. Each water sample was collected in laboratory supplied containers and preserved with the appropriate acid. All new materials (screen, riser and tubing) were used for the collection of each water sample. The sample containers were placed in a cooler with ice for transport to the laboratory.

The boreholes were backfilled with granular bentonite and the asphalt if present was patched with cold-patch asphalt. The soil and the water generated by the investigation were placed in open top steel drums. The two sealed drums were left on the site.

6.0 Sample Analysis

Based on the lack of observable evidence of contamination in the soil borings soil samples were generally collected near the level of the watertable. Several groups of soil samples were analyzed first for gasoline range hydrocarbons (NWTPH-Gx) and diesel/oil range hydrocarbons (NWTPH-Dx), and then based on the results additional analysis was done for constituents of concern. The following is a list of all analytical methods used:

<u>Soil Samples</u>

Gasoline range hydrocarbons, method NWTPH-Gx
Diesel/oil range hydrocarbons, method NWTPH-Dx

Volatile organic compounds (VOCs), method SW8260B
Polynuclear aromatic hydrocarbons (PAHs), method 8270SIM
RCRA-Metals, method 6010B
Toxicity Characteristic Leaching Procedure-RCRA metals (TCLP), method E1311/6010
Pesticides, method 8081
Herbicides, method 8151

Water Samples

Gasoline range hydrocarbons, method NWTPH-Gx
Diesel/oil range hydrocarbons, method NWTPH-Dx
Volatile organic compounds (VOCs), method SW8260B
Polynuclear aromatic hydrocarbons (PAHs), method 8270SIM
RCRA-Metals, method 6010B

The soil and water sample analytical results are summarized in Tables 1 through 7. The laboratory reports are in Appendix D. Location of borings, test pits and samples are shown Figures 1, 2 and 3.

All of samples were shipped via FedEx overnight express to ESC Lab Sciences in Mt. Juliet, Tennessee for analysis.

7.0 Discussion of Results

The investigation and cleanup focused on the areas listed in Section 2 above.

7.1 UST Area on South Side of Shop Building

Three magnetic anomalies were identified in the area of UST known to have been abandoned in 1992 by filling with sand. There were two former dispensers. Three soil borings were made near the UST, dispenser locations and magnetic anomalies (Fig. 2). These are borings Bh-1, Bh-2 and Bh-3. The boring logs are in Appendix C. The borings encountered basalt at 12.7 to 13.2 feet beneath the surface. No obvious evidence of petroleum contamination was observed in the soil cores or purged groundwater. No gasoline or diesel was detected in the soil samples. The soil sample collected from Bh-2 from just above the basalt was wet and a very low concentration of heavy oil range hydrocarbons was detected. The concentration at 6.8 milligrams per kilogram (mg/kg) is below the method reporting limit and is an estimated value (J-flagged).

The water sample collected from boring Bh-3 contained no detectable gasoline (Table 3). However, toluene was detected at the very low J-flagged

concentration of 0.95 micrograms per liter (ug/l). Diesel was detected in the water sample at the very low concentration of 33 ug/l. This is an estimated concentration. The water sample was also analyzed for PAHs and naphthalene was detected at the very low concentration of 0.20 ug/l (Table 4), which is an estimated value (J-flagged). Of the contaminants detected in the water sample from Bh-3 only naphthalene slightly exceeds the Oregon Department of Environmental Quality's (ODEQ) risk-based concentration (RBC). The RBC for naphthalene is 0.14 ug/l for the exposure pathway involving ingestion of tapwater in a residential scenario (2012). The area has long been served by public water systems. The nearest public water supply wells is approximately 1,700 feet to the northwest (Chenowith Water PUD). This is a deep well that taps a confined basalt aquifer. The potential for exposure to naphthalene via tapwater ingestion is considered nil.

7.2 Floor Drain/Sump in Northeast Corner of Shop Building

Ground penetrating radar found what appeared to be a possible pit or drywell just north of the concrete slab on the north side of the Shop Building. A failed attempt was made to work a steel snake down the drain to use for tracing the drain pipe. Boring Bh-4 was made in the center of the suspected drywell. The boring encountered two feet of compacted crushed rock and then silty fine sand to fifteen feet beneath the surface. No indication of a drywell was observed. The soil was saturated at approximately 11.5 beneath the surface. The static water level in the boring was 10.5 feet beneath the surface. No diesel or heavy oil range hydrocarbons were detected in the soil sample. With one exception no VOCs were detected in the soil sample. Methylene chloride was reported at the very low J-flagged concentration of 0.013 mg/kg. Methylene chloride is a common laboratory contaminant. The soil sample was also analyzed for the RCRA-8 metals (Table 6). Arsenic was detected at a concentration well below the regional soil background concentration (ODEQ, 2013).

A water sample was collected from Bh-4 and analyzed for diesel and heavy oil range hydrocarbons. Diesel was detected at 100 ug/l, which exceeds the RBC for the exposure pathway involving tapwater ingestion in a residential and urban residential setting. The concentrations of PAHs are all well below the RBCs. As concluded in the above section the potential for exposure to diesel via tapwater ingestion is considered nil.

Two more soil borings were made in the area using the Geoprobe machine. These are borings Bh-5 and Bh-6 (Fig. 2). At Bh-5 basalt was encountered at eleven feet and the probe could not penetrate deeper than 11.1 feet. No evidence of petroleum contamination was observed and no sample was collected for laboratory analysis. At boring Bh-6 no basalt was encountered at depth of fifteen feet. Static water level in the boring was eleven feet beneath the surface.

No evidence of petroleum contamination such as odor, discoloration or sheen was observed. The soil sample collected at ten to eleven feet beneath the surface contained no detectable diesel or heavy oil range hydrocarbons (Table 2). The water sample from Bh-6 did contain diesel and heavy oil range hydrocarbons, toluene and xylenes at very low J-flagged concentrations (Table 4 and 5). The estimated concentrations are well below the RBCs.
An additional boring, Bh-8, was made with a 4-inch diameter hand auger as close to the floor drain as possible (Fig. 2). Prior to making this boring two attempts were made with a concrete coring machine to open a 6-inch diameter hole through the concrete slab but steel within the concrete stopped the coring machine. In Bh-8 1.5 feet of compacted crushed rock was encountered and then brown silty fine sand to the top of the basalt at eleven feet beneath the surface. The bottom foot of the silty sand was wet, however, no groundwater accumulated in the boring after waiting for approximately one hour. No evidence of contamination was observed. A soil sample was collected from ten to eleven feet for laboratory analysis. No diesel and heavy oil range hydrocarbons were detected in the soil sample. Additionally, no PAHs were detected in the soil sample.

7.3 Dispenser Locations near Oil House

Using a scaled historical aerial photograph as a reference three test pits were excavated with a backhoe where the dispenser islands had been located. The backhoe and operator were provided by the Wasco County Road Department. At the dispenser location on the south side of the Oil House no evidence of soil contamination was observed in a three foot deep test pit. A soil sample was collected from native soil at approximately two feet beneath the surface. No gasoline range hydrocarbons were detected in the soil sample (Table 1). Diesel and heavy oil range hydrocarbons were detected in the soil sample. The detected concentrations are well below all of the RBCs (Table 2). Two test pits were excavated in the area where the dispenser on the north side of the Oil House had been located. The only material encountered was coarse pit run backfill to a depth of five feet. It appears likely that this dispenser had been above the former tank and it was removed when the tank was decommissioned in 1991. No soil sample was collected at this location as samples had been previously collected and analyzed in 1991.

A test pit was excavated on the west edge of the concrete slab on the west side of the Oil House. A small lense of gray silty sand with a slight petroleum odor was discovered from two to three feet beneath the surface. As the pit was expanded eastward right to the edge of the concrete slab the size of the lense decreased on both thickness and width. No evidence of soil contamination was observed on the west, north and south walls of the pit, or on the floor of the pit. Samples of the grey discolored silty sand and the brown silty sand beneath the

lense were analyzed. No gasoline range hydrocarbons were detected in the samples, and only very low concentrations diesel and heavy oil range hydrocarbons were detected. The detected concentrations are well below all RBCs.

7.4 South Side of Equipment Shed

On the south side of the Equipment Shed petroleum contaminated soil generated when the USTs at the Oil House were decommissioned in 1991 was reportedly treated and left in place. Three test pits were excavated in this area (Fig. 3). The soil samples were collected from the silty fine sand just beneath compacted crushed rock that ranges in thickness from approximately 0.75 feet to 1.25 feet. No gasoline range hydrocarbons were detected in the samples from Test Pits 5, 6 and 7. The sample from Test Pit 7 contained low concentrations of diesel at130 milligrams per kilogram (mg/kg) and heavy oil range hydrocarbons at 1,700 mg/kg (Table 2). These detected concentrations are below the RBCs. This same soil sample was also analyze for PAHs and ten compounds were detected at very low J-flagged concentrations; well below the RBCs.

7.5 Stained Soil at the Old Shed, West Side of Shop Building and Barn

Oil stained soil inside the Old Shed was removed by excavating with the backhoe. The excavated soil was temporarily stored in the Equipment Shed on asphalt paving and covered with plastic sheeting. This petroleum contaminated soil will be disposed at the Wasco County Landfill. An estimated twelve cubic yards was excavated based on discoloration and odor. The cleanup excavation area is shown Figure 3 and the depth ranged from 1 to 2.5 feet. Three confirmatory soil samples were collected from the floor of the cleanup excavation. No heavy oil range hydrocarbons were detected in the soil samples. One soil sample contained a very low concentration of diesel (Table 2). The diesel concentration is well below the RBCs. No further cleanup is recommended.

At the south end of the shed attached to the west side of the Shop Building there was an oil stain approximately four feet in diameter. The oil stained soil was excavated by hand. The cleanup pit was 1.5 feet deep. A confirmatory sample was collected from the bottom of the cleanup excavation. This sample contained low concentrations of diesel and heavy oil range hydrocarbons. The detected concentrations are well below the RBCs. No further cleanup is recommended.

The oil staining on the floor of the old Barn proved on close examination in good lighting to be bat guano.

7.6 Potential Soil Contamination on the North Side of the Equipment Shed

On the north side of the Equipment Shed tar spreading equipment was reportedly cleaned out using diesel and applied on the ground surface. Four test pits were excavated along the north side of the Equipment Shed using the backhoe (Fig. 3). The samples were collected from native silty fine sand just beneath the compacted crushed rock. Soil sample depths ranged from 1.25 to 1.5 feet beneath the surface. No evidence of petroleum contamination was observed in the test pits. Low concentrations of heavy oil range hydrocarbons were detected in all four samples (Table 2). Low concentrations diesel were detected in two of the soil samples. The concentrations detected are all well below the RBCs.

7.7 Potential Pesticide Contamination on the North Side of the Shop Building

Pesticide application equipment was reportedly washout on the concrete pad on the north side of the Shop Building. It was evident based water draining from the slab while coring the concrete that the slab drains to the north. A 4-inch diameter hand auger was used to make two soil borings along the north edge of the concrete slab (Fig. 2). Soil samples were collected from native silty fine sand at three feet beneath the surface. These two samples were analyzed for pesticides and herbicides and none were detected.

7.8 Concrete Sump Box beneath the Sand Shed

Based on an old master plan map of the site there is an old concrete sump box beneath the Sand Shed. The area where the map shows the sump box was covered by a large pile of fine gravel. A magnetometer was used to try and locate the sump box but the steel of the sand shed structure made this impossible. The concern is that contaminated waste water may have drained to the sump box. Soil boring Bh-7 was made just to the north, down gradient, of the mapped location of the sump box using the Geoprobe machine (Fig. 1). In this boring basalt was encountered at 13.75 feet beneath the surface. Brown silt and silty sand was encounter beneath 0.5 feet of crushed rock and sand. Static water level in the boring was 3.25 feet beneath the surface. No evidence of contamination was observed. A sample of silt was collected from 5 to 6.5 feet beneath the surface. No diesel or heavy oil range hydrocarbons were detected in the soil sample. The soil sample was analyzed for VOCs and none were detected. The soil sample was analyzed for the RCRA-8 metals. The concentration of arsenic slightly exceeds the RBCs for the pathway involving dermal contact and ingestion in residential, urban residential and occupational

settings (Table 6). However, the arsenic concentrations are well below the regional background soil concentration for arsenic (ODEQ, 2013).
A groundwater sample was collected from the boring. No VOCs, diesel or heavy oil range hydrocarbons were detected in the water sample. The concentrations of arsenic and lead in the water sample exceed RBCs and drinking water standards. The sample was very turbid and it is likely that a water sample free of sediment would not have concentrations of arsenic and lead exceeding standards. There are no nearby drinking water wells.

7.9 Large Steel Container near Oil House

There is a large open top steel container near the Oil House that contains an oily sludge. The container is a former UST that was cut in half. The contents are likely sludge removed from the USTs decommission in 1991. There is an inspection port or hatch on the side of the tank from which liquid has seeped. The soil immediately below the port was inspected and the degree and amount of staining were very minor and the release is considered de minimis. No soil sample was collected.

8.0 Investigation Generated Waste

There are two partial drums of non-hazardous waste that were generated during the investigation. The soil contained in one of the drums should be disposed of along with the stockpile of petroleum contaminated soil. The stockpiled soil is to be disposed of at the Wasco County Landfill. The partial drum of water consists primarily of water used to clean equipment between uses. This water may dispose of on the ground.

9.0 Conclusions and Recommendations

Field observations and sample analytical results revealed no subsurface contamination that requires further investigation or cleanup. Diesel and naphthalene, a constituent of gasoline and diesel, and oil, were detected in groundwater samples collected near the Shop Building. The concentrations detected slightly exceed conservative risk-based standards (RBCs) for exposure by ingestion of tapwater. The area has long been served by public water systems. The nearest public water supply well, located 1,700 feet to the northwest, is not threatened by the diesel and naphthalene detected in shallow groundwater samples collected at the site. The public water supply well is not threatened because it is too distant and the basalt aquifer tapped by the well is deep and confined. It is reasonable to conclude that in the future no shallow

water well will be installed on the site and thus there is no reasonable future potential for exposure via tapwater.

The stained surface soils described in our Phase I Phase I Environmental Site Assessment were cleaned up by simple excavation. The majority of the cleanup involved excavation of shallow soil within the Old Shed. A small volume of oil stained soil was removed from the shed attached to the west side of the Shop Building. Soil samples collected after removal of the stained soil confirm that the cleanups reduce the concentrations of residual petroleum to well below acceptable risk-based concentrations for a residential exposure scenario. No further action is recommended.

The stockpile of petroleum contaminated soil needs to be disposed of at the Wasco County Landfill. The oily sludge in the large steel container near the Oil House needs to be properly disposed of. The sludge is potentially a hazardous waste, and therefore, a hazardous waste determination must be made prior to disposal.

10.0 References

Mark Yinger Associates, 2014, *Phase I environmental site assessment 10th Street Properties, The Dalles, Oregon*, prepared for Tyler Stone Wasco County Administrative Officer.

ODEQ, 2013, *Development of Oregon background metals concentrations in soil*, Technical Report, March 2013.

ODEQ, 2012, *Risk-based concentrations for individual chemicals*, revised June 7, 2012.

See Detail Figure 2
Shop Area Investigations

See Detail Figure 3
Equipment Shed Area Investigations

0 100 200
Approximate Scale in Feet

Phase II Environmental Site Assessment
10th Street Properties
The Dalles, Oregon

Groundwater & Environmental Consultants
Mark Yinger Associates
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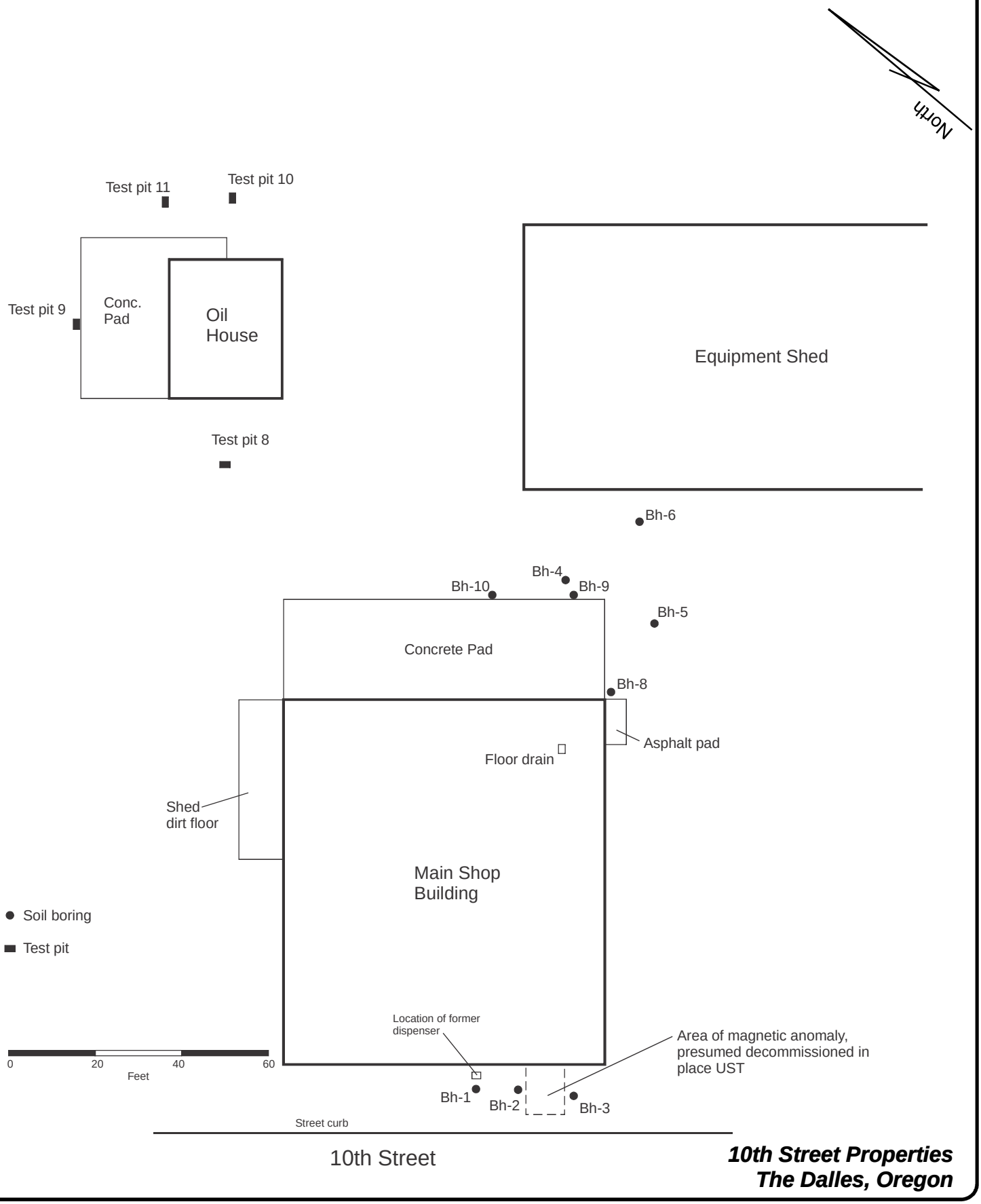
Figure 1
Location Map

April 2015



10th Street Properties
The Dalles, Oregon

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Figure 2
Shop Area Investigations

April 2015

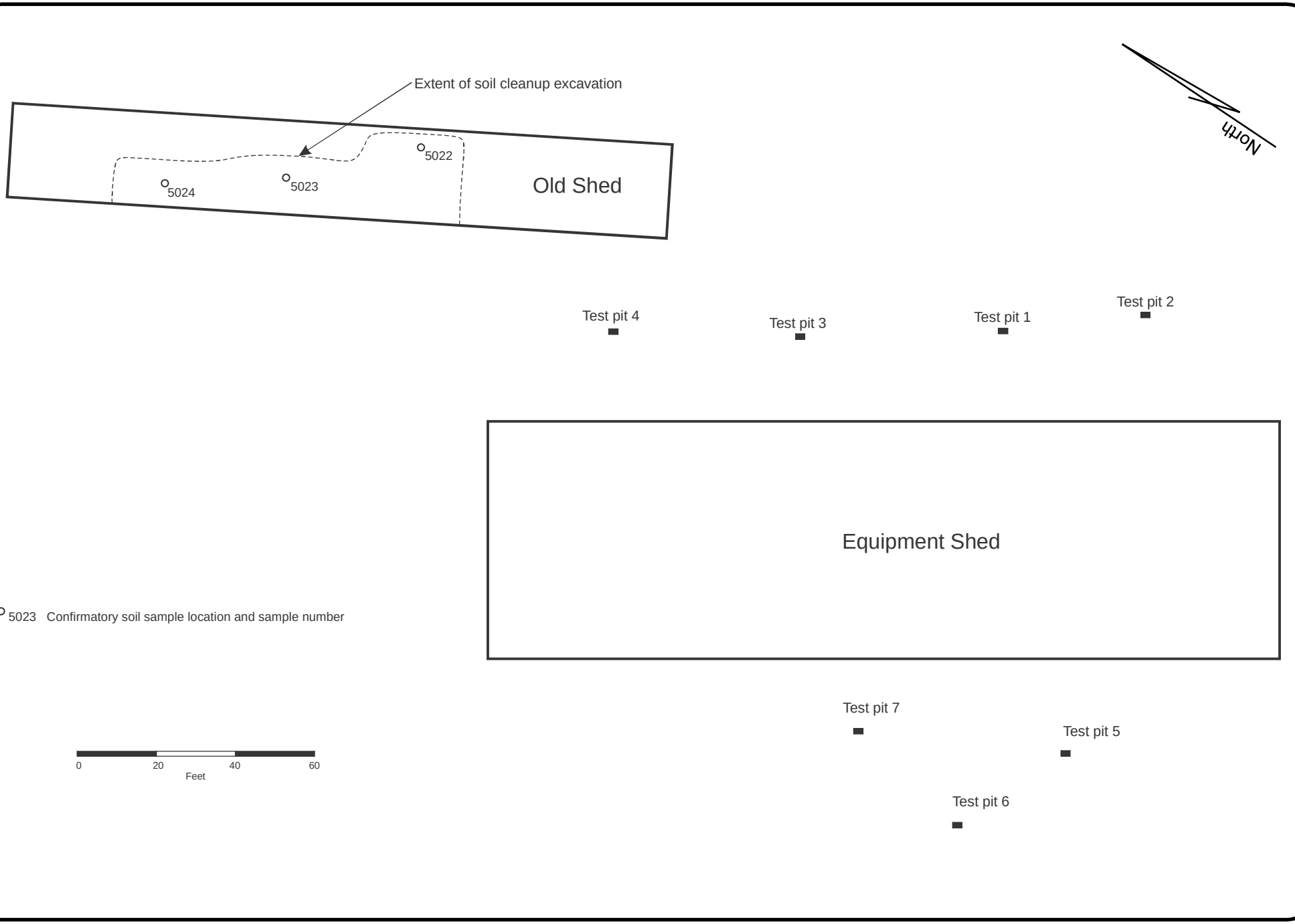

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Figure 3
Old Shed Area Investigations and Cleanup
April 2015

10th Street Proprties, The Dalles, Oregon

Table 1: Soil Sample Analytical Results - Gasoline and RBDM-VOCs

Sample Number	Date	Sample Location	Depth in feet	Gasoline	Benzene	1,2-EDB	1,2-EDC	Ethyl-benzene	Isopropyl-benzene	MTBE	Naphthalene	n-Propyl-benzene	Toluene	1,2,4-TMB	1,3,5-TBM	Xylenes
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Former UST area south side of Shop Building																
5001	3/16/15	Bh-1	12-13	<0.17												
5003	3/16/15	Bh-2	11.5-12.5	<0.17												
South side of Equipment Shed																
5016	4/14/15	Test Pit 5	1.25	<0.17												
5017	4/14/15	Test Pit 6	1	<0.17												
5018	4/14/15	Test Pit 7	1.5	<0.17												
Former dispenser areas near Oil House																
5019	4/14/15	south side	2	<0.17												
5020	4/114/15	west side	2.5	<0.17												
5021	4/14/15	west side	4	<0.17												
Risk-Based Screening Values																
RBC_{SS}	residential			1,200	7.30	0.14	3.20	30	3,500	220	4.6		0.440	110	780	1,400
	urban residential			2500	24	0.53	12	110	7,000	720	25		12,000	220	1,600	2,900
	occupational			20,000	34	0.68	15	140	53,000	1,000	23		77,000	2,000	10,000	25,000
	construction			9,700	340	8.1	180	1,600	24,000	10,000	580		24,000	2,000	3,100	19,000
	excav worker			>MAX	9,500	230	5,000	44,000	670,000	290,000	16,000		680,000	54,000	86,000	540,000
RBC_{SO}	residential			5,900	10	0.13	3	31	>Csat	300	7		>Csat	230	>MAX	>Csat
	urban residential			5,900	27	0.35	8	85	>Csat	810	18		>Csat	230	>MAX	>Csat
	occupational			69,000	50	0.65	15	160	>Csat	1500	99		>Csat	1,000	>MAX	>Csat
RBC_{Si}	residential			94	0.08	0.0095	0.039	0.82	>Csat	4.9	7		>Csat	82	>MAX	>Csat
	urban residential			94	0.22	0.026	0.11	2.2	>Csat	13	18		>Csat	82	>MAX	>Csat
	occupational			>MAX	1.2	0.14	0.59	12	>Csat	74	99		>Csat	1,000	>MAX	>Csat
RBC_{SW}	resdiential			31	0.0093	0.00081	0.0014	0.16	>Csat	0.092	0.087		140	16	92	25
	urban residential			31	0.042	0.00039	0.0068	0.77	>Csat	0.41	0.470		280	33	180	50
	occupational			130	0.053	0.00044	0.0077	0.90	>Csat	0.52	0.44		>Csat	68	>Csat	100

Notes:

1,2-EDB = 1,2-dibromoethane

1,2-EDC = 1,2-dichloroehtane

MTBE = Methyltert-butyl ether

1,2,4-TMB = 1,2,4-trimethylbenzene

1,3,5-TMB = 1,3,5-trimethylbenzene

RBDM-VOCs = Risk-based decision making - Volatile Organic Compounds

mg/kg = milligrams per kilograms

AST - Aboveground fuel storage tank

RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated October 3, 2008.

RBC_{ss} = Risk based concentration for soil ingestion, dermal contact, and inhalation pathway

RBCso = Risk based concentration for volatilization to outdoor air pathway

RBCsi = Risk based concentration for vapor intrusion into buildings pathway

RBCsw = Risk based concentration for leaching to groundwater pathway

>Csat = This soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of Csat indicate that free product might be present.

>MAX = The constituent RBC for this pathway is >100,000 mg/kg. Highly unlikely that such concentrations will ever be encountered.

10th Street Proprties, The Dalles, Oregon

Table 2: Soil Sample Analytical Results - Diesel - Heavy Oil and PAHs

Sample Number	Date	Sample Location	Depth feet	Diesel	Heavy Oil	Anthracene	Acena-phthene	Acenaph-thylene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(ah) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenan-threne	Pyrene	1-Methyl naphthalene	2-Methyl naphthalene	2-Chloro naphthalene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Former UST area south side of Shop Building																								
5001	3/16/15	Bh-1	12-13	<1.3	<3.3																			
5003	3/16/15	Bh-2	11.5-12.5	<1.3	6.8 (J)																			
5004	3/16/15	Bh-3	12-13	<1.3	<3.3																			
North side of Shop Building																								
5006	3/16/15	Bh-4	12-13	<1.3	<3.3																			
5008	3/16/15	Bh-6	10-11	<1.3	<3.3																			
5025	4/15/15	Bh-8	10-11	<1.3	<3.3	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.0020	<0.00060	<0.00060	<0.0020	<0.0020	<0.0020
South side of Equipment Shed																								
5016	4/14/15	Test Pit 5	1.25	<1.3	10																			
5017	4/14/15	Test Pit 6	1	<1.3	4.8																			
5018	4/14/15	Test Pit 7	1.5	130	1700	<0.003	<0.003	<0.003	0.0076(J)	0.0072(J)	0.012(J)	0.015(J)	<0.003	0.0036(J)	<0.003	0.0080(J)	<0.003	0.0078(J)	<0.010	0.0042(J)	0.011(J)	<0.010	<0.010	<0.010
North side of Equipment Shed																								
5012	4/14/15	Test Pit 1	1.5	28	200																			
5013	4/14/15	Test Pit 2	1.25	5.6	18																			
5014	4/14/15	Test Pit 3	1.25	<1.3	15																			
5015	4/14/15	Test Pit 4	1.25	<1.3	6.2	0.00073(J)	<0.0006	<0.0006	0.0052(J)	0.0062(J)	0.0073	0.0050(J)	0.0031(J)	0.0055(J)	0.0013(J)	0.0075	<0.0006	0.0044(J)	0.0026(J)	0.0018(J)	0.0094	<0.002	<0.002	<0.002
Near historic sump, north side of Sand Shed																								
5010	3/16/15	Bh-7	5-6.5	<1.3	<3.3																			
Old Equipment Shed																								
5022	4/14/15	From bottom of cleanup pit	1.5	10.0	<3.3																			
5023	4/14/15	From bottom of cleanup pit	2	<1.3	<3.3																			
5024	4/14/15	From bottom of cleanup pit	1.5	<1.3	<3.3																			
5028	4/15/15	Waste Soil	-	4,300	39,000																			
Former dispenser areas near Oil House																								
5019	4/14/15	south side	2	1.6	5.9																			
5020	4/14/15	west side	2.5	6.4	4.8																			
5021	4/14/15	west side	4	5.3	6.9																			
Oil Stain in shed on west side of Shop Building																								
5029	4/15/15	From bottom of cleanup pit	1.5	3.3	28																			
Risk-Based Screening Values																								
RBC_{SS}	residential			1,100	2,800	23,000	4,700		0.15	0.015	0.15		1.5	14	0.015	2,300	3,100	0.15	4.6		1,700			
	urban residential			2,200	5,700	47,000	9,400		0.34	0.034	0.34		3.4	32	0.034	4,600	6,300	0.34	25		3,400			
	occupational			14,000	36,000	310,000	61,000		2.70	0.27	2.70		27	250	0.27	29,000	41,000	2.70	23		21,000			
	construction			4,600	11,000	93,000	19,000		21.0	2.10	21		210	2,100	2.10	8,900	12,000	21	580		6,700			
	excav worker			>MAX	>MAX	>MAX	520,000		590	59	590		5,900	57,000	59	250,000	340,000	590	16,000		190,000			
RBC_{SO}	residential			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	6.5		NV			
	urban residential			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	18		NV			
	occupational			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	99		NV			
RBC_{SI}	residential			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	6.5		NV			
	urban residential			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	18		NV			
	occupational			>MAX	>MAX	>MAX	>MAX		NV	NV	>Csat		NV	>Csat	NV	>MAX	>MAX	NV	99		NV			
RBC_{SW}	residential			9,500	>MAX	>Csat	>Csat		3.5	0.9	4		>Csat	>Csat	3.4	>Csat	>Csat	>Csat	0.087		>Csat			
	urban residential			9,500	>MAX	>Csat	>Csat		10	2.7	>Csat		>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.47		>Csat			
	occupational			>MAX	>MAX	>Csat	>Csat		>Csat	>Csat	>Csat		>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.44		>Csat			
EPA-SL	Residential																					22	310	
	Industrial																					99	4100	
	Protection of groundwater																					0.012	0.75	

Notes:

PAHs = polynuclear aromatic hydrocarbons

mg/kg = milligrams per kilograms

(J) = an estimated value between the reporting limit and the method detection limit

AST = Aboveground fuel storage tank

Bolded numbers are greater than one or more RBC or screening level.

RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated June 2012.

RBC_{SS} = Risk based concentration for soil ingestion, dermal contact, and inhalation pathway

RBC_{SO} = Risk based concentration for volatilization to outdoor air pathway

RBC_{SI} = Risk based concentration for vapor intrusion into buildings pathway

RBCsw = Risk based concentration for leaching to groundwater pathway

EPA-SL = screening levels December 2009

>Csat = This soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of Csat indicate that free product might be present.

>MAX = The constituent RBC for this pathway is >100,000 mg/kg. Highly unlikely that such concentrations will ever be encountered.

NV = non-volatile chemical

10th Street Proprties, The Dalles, Oregon

Table 3: Water Sample Analytical Results - Gasoline and RBDM-VOCs

Sample Number	Date Sampled	Sample Location		Gasoline	Benzene	1,2-EDB	1,2-EDC	Ethyl-benzene	Isopropyl-benzene	MTBE	Naphthalene	n-Propyl-benzene	Toluene	1,2,4-TMB	1,3,5-TMB	Xylenes
				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Former UST area south side of Shop Building																
5005	3/16/15	Bh-3		<32	<0.33	<0.38	<0.36	<0.38	<0.36	<0.37	<1.0	<0.33	0.95 (J)	<0.37	<0.39	<1.1
Risk-Based Screening Values																
RBCtw	resdiential			110	0.39	0.0063	0.14	1.4	680	12	0.14		2,300	15	360	200
	urban residential			110	1.7	0.031	0.69	6.7	1,400	53	0.78		4,600	29	25	410
	occupational			450	2.2	0.0340	0.78	7.8	2,800	67	0.72		9,200	61	52	850
RBCwo	residential			>S	2,800	190	1,900	8,200	>S	230,000	3,100		>S	>S	>S	>S
	urban residenial			>S	7,600	520	5,100	22,000	>S	610,000	8,400		>S	>S	>S	>S
	occupational			>S	14,000	960	9,500	41,000	>S	1,100,000	16,000		>S	>S	>S	>S
RBCwi	residential			22000	190	46	250	490	>S	39,000	670		>S	5,000	>S	58,000
	urban residenial			22000	510	130	690	1,300	>S	110,000	1,800		>S	5,000	>S	58,000
	occupational			>S	2,800	690	3,800	7,400	>S	590,000	10,000		>S	>S	>S	>S
RBCwe	construction/excav.			14,000	1,700	28	630	4,400	>S	62,000	500		210,000	1,700	23,000	23,000

Notes:

1,2-EDB = 1,2-dibromoethane

1,2-EDC = 1,2-dichloroehtane

MTBE = Methyltert-butyl ether

1,2,4-TMB = 1,2,4-trimethylbenzene

1,3,5-TMB = 1,3,5-trimethylbenzene

RBDM-VOCs = Risk-based decision making Volatile Organic Compounds

ug/l = micrograms per liter

AST = Aboveground fuel storage tank

Bolded numbers are greater than one or more RBC and exceeded RBCs are bolded.

"J" subscripted values are below the reporting limit and above the method detection limit, estimated concentration.

RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated October 3, 2008.

RBCtw = Risk based concentration for ingestion and inhalation tapwater pathway

RBCwo = Risk based concentration for volatilization to outdoor air pathway

RBCwi = Risk based concentration for vapor intrusion into buildings pathway

RBCwe = Risk based concentration for groundwater in excavation construction/excavation worker pathway

>S = exceeds solubility limit

10th Street Proprties, The Dalles, Oregon

Table 4: Water Sample Analytical Results - Diesel-Heavy Oil and PAHs

Sample Number	Date Sampled	Sample Location		Diesel	Heavy Oil	Anthracene	Acena-phthene	Acenaph-thylene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(ah)anthracene	Fluor- anthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenan-threne	Pyrene	1-Methyl naphthalene	2-Methyl naphthalene	2-Chloro naphthalene
				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Former UST area south side of Shop Building																								
5005	3/16/15	Bh-3		33 (J)	<82	<0.0080	0.029 (J)	<0.31	0.011 (J)	<0.012	<0.0021	0.0088 (J)	<0.014	<0.011	<0.0040	<0.016	0.039 (J)	<0.015	0.20 (J)	0.083	0.025 (J)	0.025 (J)	0.037 (J)	0.042 (J)
North side of Shop Building																								
5007	3/16/15	Bh-4		100	210 (J)	0.022 (J)	0.020 (J)	<0.31	0.0087 (J)	<0.012	0.0025 (J)	<0.0023	<0.014	<0.011	<0.0040	<0.016	0.022 (J)	<0.015	0.10 (J)	0.062	0.020 (J)	0.024 (J)	0.024 (J)	<0.0065
5009	3/16/15	Bh-6		47 (J)	120 (J)																			
Near historic sump, north side of Sand Shed																								
5011	3/16/15	Bh-7		<33	<82																			
Risk-Based Screen Values																								
RBCtw	residential			100	300	>S	2,200		0	0	0		0	0	0	>S	1,500	>S	**0.14**		>S			
	urban residential			100	300	>S	>S		0.088	0.0088	0.039		>S	0.66	0.0088	>S	>S	>S	0.78		>S			
	occupational		-	430	1,300	>S	>S		0.56	0.056	0.16		>S	>S	0.056	>S	>S	>S	0.72		>S			
RBCwo	residential			>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	3,100		>S			
	urban residential			>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	8,400		>S			
	occupational		-	>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	16,000		>S			
RBCwi	residential			>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	670		>S			
	urban residential			>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	1,800		>S			
	occupational		-	>S	>S	>S	>S		NV	NV	>S		NV	>S	NV	>S	>S	NV	10,000		>S			
RBCwe	construction/excav.		-	>S	>S	>S	>S		9.1	0.53	>S		>S	>S	0.21	>S	>S	>S	500		>S			
EPA-SL	tapwater																					2.3	150	

Notes:

PAHs = ploynuclear aromatice hydrocarbons

AST = Aboveground fuel storage tank

ug/l = micrograms per liter

"J" subscripted values are below the reporting limit and above the method detection limit, estimated concentration.

Bolded numbers are greater than one or more RBC and exceed RBCs bolded.

RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated October 3, 2008.

RBCtw = Risk based concentration for ingestion and inhalation tapwater pathway

RBCwo = Risk based concentration for volatilization to outdoor air pathway

RBCwi = Risk based concentration for vapor intrusion into buildings pathway

RBCwe = Risk based concentration for groundwater in excavation construction/excavation worker pathway

EPA-SL = screening level for tapwater, December 2009

>S = exceeds solubility limit

NV = non-valatile chemical

10th Street Proprties, The Dalles, Oregon

Table 5: Water Sample Analytical Tables - VOCs

Sample Number	Date Sampled	Sample Location		Toluene ug/l	Xylene ug/l	All Other VOCs ug/l
North side of Shop Building						
5007	3/16/15	BH-4		<0.78	<1.1	Not Detected
5009	3/16/15	BH-6		1.7 (J)	1.3 (J)	Not Detected
Near historic sump, north side of Sand Shed						
5011	3/16/15	Bh-7		<0.78	<1.1	Not Detected
				Risk-Based Screening Values		
EPA-SL	tapwater			29		
Notes:						
Volatile organic compounds (VOCs) by EPA Method 8260B						
ug/l = micrograms per liter						
"J" subscripted values are below the reporting limit and above the method detection limit, estimated concentration.						
EPA-SL = screening levels December 2009						

10th Street Proprties, The Dalles, Oregon

Table 6: Soil Sample Analytical Results - Metals

Sample Number	Date Sampled	Sample Location	Depth feet		Mercury mg/kg	Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Selenium mg/kg	Silver mg/kg
North side of Shop Building												
5006	3/16/15	Bh-4	12-13		0.0034 (J)	1.8 (J)	62	<0.070	10	4.7	1.0 (J)	<0.28
5008	3/16/15	Bh-6	11-12		0.0040 (J)	1.8 (J)	60	<0.70	7	2.7	<0.74	<0.28
Near historic sump, north side of Sand Shed												
5010	3/16/15	Bh-7	5-6.5		0.0053 (J)	1.6 (J)	70	<0.70	8.9	3.1	<0.74	<0.28
Risk-Based Screening Values												
RBC_{SS}	residential				23	**0.39**	15,000	39	120,000	400		390
	urban residential				47	1	31,000	78	230,00\0	400		780
	occupational		-		310	1.70	190,000.00	510	>MAX	800		5,100
	construction				93	13	60,000	150	460,000	800		1,500
	excav worker		-		2,600	370	>MAX	4,300	>Max	800		43,000
RBC_{SO}	residential				NV	NV	NV	NV	NV	NV		NV
	urban residential				NV	NV	NV	NV	NV	NV		NV
	occupational		-		NV	NV	NV	NV	NV	NV		NV
RBC_{Si}	residential				NV	NV	NV	NV	NV	NV		NV
	urban residential				NV	NV	NV	NV	NV	NV		NV
	occupational		-		NV	NV	NV	NV	NV	NV		NV
RBC_{SW}	residential				*	*	*	*	*	*		*
	urban residential				*	*	*	*	*	30		*
	occupational		-		*	*	*	*	*	30		*
EPA-SL	residential										390	
	industrial										5100	
Deschutes-Columbia Region background metal 95% UPL					0.04	6.8	700	0.4	170	18	0.46	0.82

Notes:

mg/kg = milligrams per kilograms

RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated October 3, 2008.

RBC_{SS} = Risk based concentration for soil ingestion, dermal contact, and inhalation pathway

RBCso = Risk based concentration for volatilization to outdoor air pathway

RBCsi = Risk based concentration for vapor intrusion into buildings pathway

RBCsw = Risk based concentration for leaching to groundwater pathway

EPA-SL and SSL = screening levels December 2009

>Max = The constituent RBC for this pathway is >100,000 mg/kg. Highly unlikely that such concentrations will ever be encountered

NV = non-volatile chemical

10th Street Proprties, The Dalles, Oregon

Table 7: Water Sample Analytical Results - Metals

Sample Number	Date Sampled	Sample Location		Mercury ug/l	Arsenic ug/l	Barium ug/l	Cadmium ug/l	Chromium ug/l	Lead ug/l	Selenium ug/l	Silver ug/l
North side of Shop Building											
5007	3/16/15	Bh-4		<0.049	<6.5	76	<0.70	2.5 (J)	9	<7.4	<2.8
5009	3/16/15	Bh-6		<0.049	<6.5	150	<0.70	7.7 (J)	18	<7.4	<2.8
Near historic sump, north side of Sand Shed											
5011	3/16/15	Bh-7		0.14 (J)	24	480	<0.70	76	23	9.8 (J)	<2.8
Risk-Based Screening Values											
RBC tw	residential			11	**0.038**	7,300	18	55,000	**15**		180
	urban residential			22	0.13	15,000	37	110,000	15		370
	occupational			44	0.27	29,000	73	220,000	15		730
RBC wo	resdiental			NV	NV	NV	NV	NV	NV		NV
	urban residential			NV	NV	NV	NV	NV	NV		NV
	occupational			NV	NV	NV	NV	NV	NV		NV
RBC_{WI}	residential			NV	NV	NV	NV	NV	NV		NV
	urban residential			NV	NV	NV	NV	NV	NV		NV
	occupational			NV	NV	NV	NV	NV	NV		NV
RBC_{WE}	construction/excav.			>S	5,800	2.50E+07	57,000	>S	>S		1,000,000
EPA Primary drinking water				2	**10**	2000	5	100	**15**	50	

Notes:

ug/l = micrograms per liter

RBC = Risk Based Concentrations

RBC_{TW} = Risk based concentration for ingestion and inhalation of tapwater pathway

RBC_{WO} = Risk based concentration for volatilization to outdoor air pathway

RBC_{WI} = Risk based concentration for vapor intrusion into buildings pathway

RBC_{WE} = Risk based concentration for groundwater in excavation pathway

EPA-SL and SSL = screening levels December 2009

NV = non-volatile chemical

>S = exceeds solubility limit

Appendix A
GeoPotential Report

GeoPotential

ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22323 East Wild Fern Lane, Brightwood, Oregon 97011• PH (503) 622-0154• FAX (503) 622-0526
WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz

SUMMARY REPORT

SUBSURFACE MAPPING SURVEY TO DETECT UNDERGROUND STORAGE TANKS

WASCO COUNTY MAINTENANCE YARD
1819 WEST 10TH STREET
THE DALLES, OREGON

CLIENT

Mark Yinger and Associates
69860 Camp Polk Road
Sisters, OR
97759

DATE OF SURVEY

February 23, 2015

GeoPotential Project Number: 9301

CONTENTS

FIGURES

APPENDICES

SUMMARY

A Subsurface Mapping Survey (SMS) to detect Underground Storage Tanks (UST's) and a dry well was conducted over selected portions of the Wasco County Maintenance Yard located at 1819 West 10th Street The Dalles, Oregon.

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

Two possible UST'S and one probable UST was detected in the area covered by the SMS.

A possible dry well location was mapped using GPR.

INTRODUCTION

Tony Bartruff and Rex Gordon of GeoPotential conducted the Subsurface Mapping Survey. Fieldwork was conducted on February 23, 2015. Mark Yinger was the YINGER AND ASSOCIATES representative onsite. The report was completed and e-mailed to YINGER AND ASSOCIATES on February 27, 2015. Information provided by YINGER AND ASSOCIATES indicated that the facility contained a decommissioned UST.

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

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

SURVEY OBJECTIVES

The objective of this subsurface mapping survey was:

1. Detect and map any UST's within the survey area.
2. Find and mark a sewer line and dry well location.

SURVEY SITE

The survey Site is shown on Figures 1-3. The Site consisted of exterior parking lots and an inactive former maintenance facility.

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- GEOMETRICS 858G Cesium Vapor Magnetometer (Magnetic Survey).
- Mala RAMAC Ground Penetrating Radar System with a 250 MHz antenna (GPR Survey).
- Schonstedt GA52 Magnetic Gradiometer.
- Aqua-Tronics A6 Pipe & Cable locator.
- Heath Sure- lock Pipe & Cable locator.

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

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

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

PROCEDURE

Magnetic Survey

The Magnetic Survey consisted of acquiring magnetic readings along traverses using a 2.5 foot spacing between traverses over the Site. Magnetic data were downloaded to a computer, processed and contoured to produce Figure 3a the Magnetic Map for the Site. The Magnetic Map is plotted at a Contour Interval of 500nT.

In general buried ferriferous objects will produce stronger positive magnetic anomalies that are shown as red contours on the Magnetic Map. Surface ferriferous objects such as fences or buildings may produce negative magnetic anomalies that are shown as blue contours on the magnetic map. Magnetic Anomalies that may be produced by buried ferrous objects are designated on the map as MA1, MA2, etc.

Ground Penetrating Radar Surveys

Over AREAS that contained suspect USTs, GPR Profiles were acquired using a 250 MHz antenna. The data were processed and interpreted as discussed below. GPR data was also acquired over an asphalt patch.

Pipe and Cable Survey

Hand held magnetic and electromagnetic scanners were used to help identify USTs and utilities.

RESULTS

Results were marked with paint on the ground and are shown on Figure 3 and 4.

Interpretation of Magnetic Anomalies:

- MA1 – Is interpreted to be a possible 4 foot by 6 foot UST underlying a former fuel dispenser.
- MA2 – Is interpreted to be a probable 4 foot by 8 foot UST.
- MA3 – Is interpreted to be a possible 4 foot by 8 foot UST. Radar data strongly suggests either a tank or large utility.

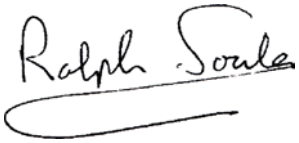
A sewer line and 7 foot by 7 foot dry well were detected and mapped.

All other Magnetic Anomalies on the Site are interpreted to be caused by surface features , subsurface utilities and minor ferric debris.

LIMITATIONS

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

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



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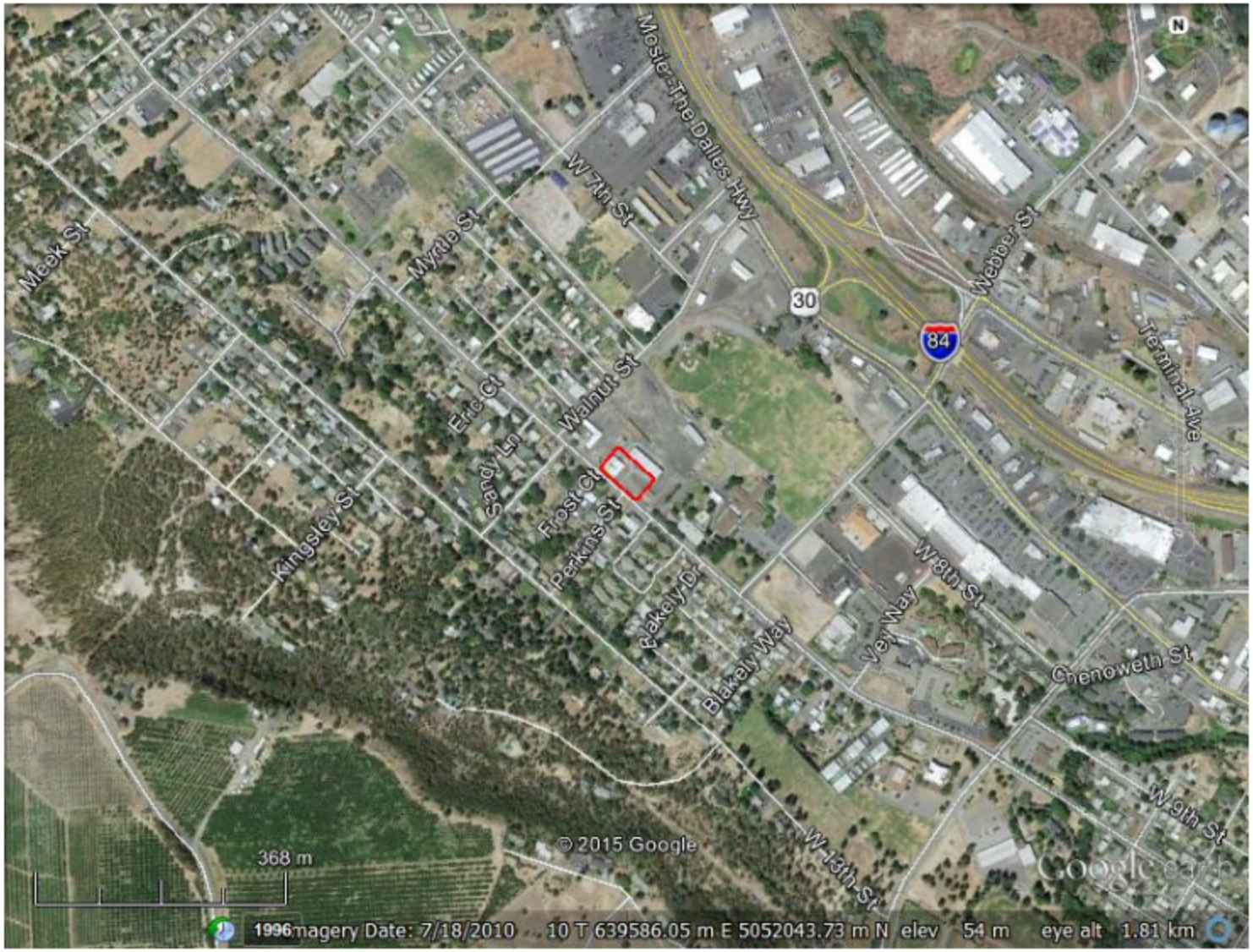
Anthony Bartruff
GeoPotential



GeoPotential

ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22333 East Wild Fern Lane, Brightwood, Oregon 97011 •PH (503) 622-0154 •FAX (503) 622-0526
WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz

DATE: February 23, 2015 *SUBSURFACE MAPPING SURVEY* PROJECT No. 9301

LOCATION: Wasco County Maintenance Yard
1819 West 10th Street
The Dalles, Oregon

CLIENT: Yinger and Associates

Figure 1 Location Map

Area Of Magnetic Survey

Area Of Ground Penetrating Radar Survey

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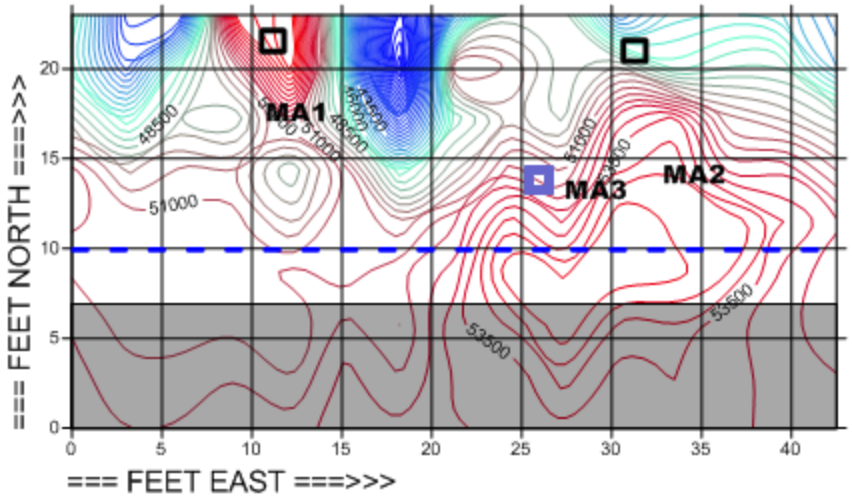
DATE: February 23, 2015 *SUBSURFACE MAPPING SURVEY* PROJECT No. 9301

LOCATION: Wasco County Maintenance Yard
1819 West 10th Street
The Dalles, Oregon

CLIENT: Yinger and Associates

Figure 2 Site Map

Figure 3a Magnetic Map



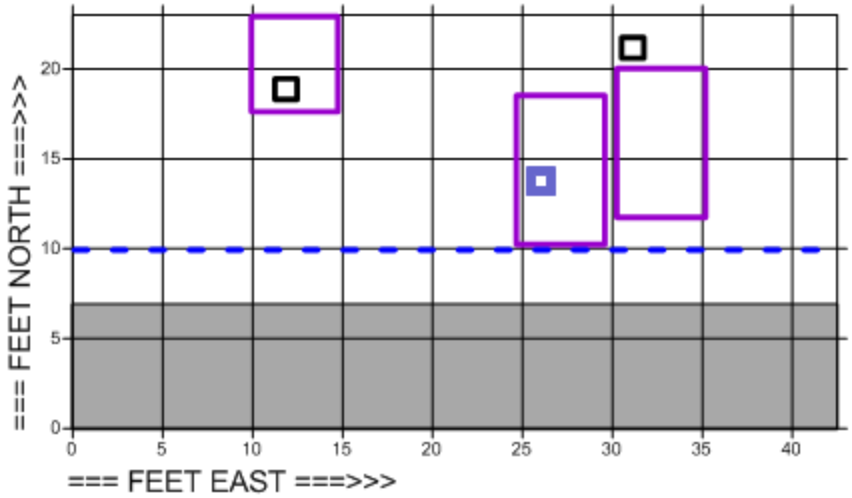
MA: Magnetic Anomaly

Water Meter

Suspect Tank

Fuel Dispenser

Figure 3a Interpretation Map



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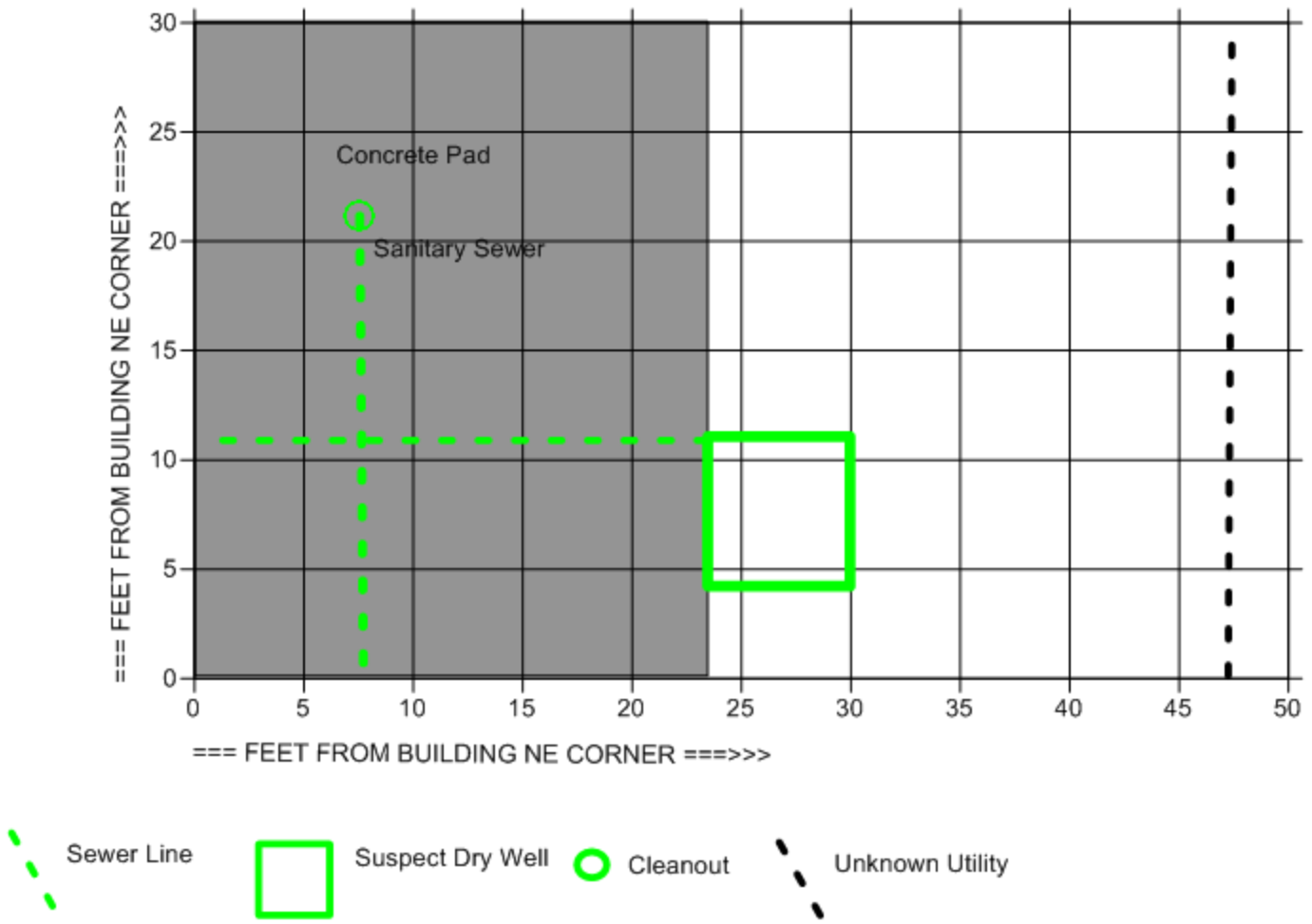
LOCATION: Wasco County Maintenance Yard
1819 West 10th Street
The Dalles, Oregon

CLIENT: Yinger and Associates

Figure 3a: Magnetic Intensity Map
Contour Interval: 500 nanoTeslas

Figure 3b: Interpretation Map



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WEB http://www.geopotential.biz E-MAIL GeoPotential@geopotential.biz

DATE: February 23, 2015 *SUBSURFACE MAPPING SURVEY* PROJECT No. 9301

LOCATION: Wasco County Maintenance Yard
1819 West 10th Street
The Dalles, Oregon

CLIENT: Yinger and Associates

Figure 4 GPR Map

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APPENDIX A
MAGNETOMETER SURVEYS

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

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

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

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

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

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

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

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

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

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APPENDIX B
GROUND PENETRATING RADAR SURVEYS

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

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

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

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

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

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

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

ADVANTAGES - General

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

ADVANTAGES – Site specific

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

LIMITATIONS - General

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

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

LIMITATIONS – Interpretation

- Interpretation can be difficult. Radar data are ambiguous. Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.

- The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce the reflection. Due to "noise", the target may be missed. USTs and deep utilities may be missed if they are under debris and/or other pipes.

- Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).

- Adequate contrast between the ground and the target is required to obtain reflections. UST's may be missed if they are badly corroded. Utilities made of "earth" materials like clay and concrete may not be detected since their electrical properties are similar to the surrounding soil.

- To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties. Even with ground truth at several locations on the same site, changes in material across a site (therefore changes in signal velocity) can cause errors in depth measurements at other locations.

Appendix B
Well Logs

WASC 51647

06-24-2008

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

WELL LABEL # L 66341

START CARD # 1003577

(1) LAND OWNER

Owner Well I.D. _____

First Name _____ Last Name _____

Company CHENOWITH WATER PUD

Address 2312 WEST 8TH STREET

City THE DALLES State OR Zip 97058

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Conversion ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud ☐ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☐ Domestic ☐ Irrigation ☐ Community ☐ Industrial/ Commericial ☐ Livestock ☐ Dewatering ☐ Thermal ☐ Injection ☒ Other Municipal

(5) BORE HOLE CONSTRUCTION

Special Standard ☐ (Attach copy)

Depth of Completed Well 263.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
40	0	10	Concrete	0	10	270	S
17.5	10	210	Cement	10	210	147	S
12	210	263					

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other _____

Backfill placed from _____ ft. to _____ ft. Material _____

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: ☐ Yes Type _____ Amount _____

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
◉	○	18	☐	0	10	.250	◉	○	☒	☐
◉	○	12	☒	2.3	210	.250	◉	○	☒	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____

Temp casing ☒ Yes Dia 18 From 0 To 10

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____ Material _____

Perf/Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size

(8) WELL TESTS: Minimum testing time is 1 hour

○ Pump ○ Bailer ◉ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
880		263	1

Temperature 64 °F Lab analysis ☒ Yes By Owner

Water quality concerns? ☐ Yes (describe below)

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Wasco Twp 2.00 N N/S Range 13.00 E E/W WM

Sec 32 NE 1/4 of the SE 1/4 Tax Lot 2N-13-32DA1200

Tax Map Number _____ Lot _____

Lat 45 ° 36 ' _____ " or 45.60000000 DMS or DD

Long -121 ° 12 ' _____ " or -121.20000000 DMS or DD

◉ Street address of well ○ Nearest address

2321 West 8Th St. The Dalles

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well	06-20-2008			106

Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES Depth water was first found 182

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
06-14-2008	182	203	220			105
06-20-2008	237	251	880			106

(11) WELL LOG

Ground Elevation 174

Material	From	To
Sand	0	8
Silty sandy clay	8	10
Broken rock, clay sand & gravel	10	17
Grey & black basalt Hard	17	40
Broken black basalt/ blue green shale mixed Med	40	54
Broken visicular grey black rock/ blue green shale	54	65
& white rock Soft	54	65
Blue green shale/ black& grey viscular rock Med	65	74
Little broken grey & black basalt/ blue green shale	74	79
in seams Med-Hard	74	79
Grey basalt/ thin seams of shale Hard	79	97
Black & grey basalt/ blue green shale Soft	97	117
Brown & black, red rock Soft to Med	117	143
Grey black basalt visicular/ blue gree shale Soft	143	147
Grey & black basalt little broken	147	152
Grey & black basalt Hard-Med	152	202
Grey basalt Hard	202	232
Grey basalt fractured Hard	232	237
Brown red grey green white visicular rock broken	237	251

Date Started 06-10-2008 Completed 06-20-2008

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number _____ Date _____

Electronically Filed

Signed _____

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1293 Date 06-24-2008

Electronically Filed

Signed JIM J HANSEN (E-filed)

Contact Info (optional) _____

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version: 0.89

WATER SUPPLY WELL REPORT - continuation page

WASC 51647

06-24-2008

WELL I.D. # L 66341

START CARD # 1003577

(5) BORE HOLE CONSTRUCTION

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs

FILTER PACK

From	To	Material	Size

(6) CASING/LINER

Casing Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd

(7) PERFORATIONS/SCREENS

Perf/Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)

Water Quality Concerns

From	To	Description	Amount	Units

(10) STATIC WATER LEVEL

Water Bearing Zones

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) WELL LOG

Material	From	To
Med WB (cont.)	237	251
Grey basalt fractured Hard-Med	251	263

Comments/Remarks

NOTE: Cement with 4% Bentonite

18" temp pipe 0' - 10' concreted to hold in place. Could not remove.

FEB - 3 1998

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form

WATER RESOURCES DEPT.
SALEM, OREGON

WASC 50457

WELL ID # L14032
(START CARD) # 095973

(1) OWNER: Well Number: 1-B
Name Chenowith Irrigation Co-op
Address 2312 W 8th St.
City The Dalles, State OR Zip 97058

(2) TYPE OF WORK:
[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:
[X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger
[ ] Other

(4) PROPOSED USE:
[ ] Domestic [X] Community [ ] Industrial [ ] Irrigation
[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval [ ] Yes [X] No Depth of Completed Well 242 ft.
Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
18"	0	194	Cement	0	165	250 Bags
12"	194	220				
10"	220	242				

How was seal placed: Method [X] A [ ] B [ ] C [ ] D [ ] E
[ ] Other
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	12"	+1.5	165	.250	[X]	[ ]	[X]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s) 165'

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method
[ ] Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour
[ ] Pump [ ] Bailer [X] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
600 +		242	1 hr.

Temperature of Water 64 Depth Artesian Flow found
Was a water analysis done? [ ] Yes By whom
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County Wasco Latitude Longitude
Township 2N N or S. Range 13E E or W. of WM.
Section 32 NE ¼ SE ¼
Tax Lot 1200 Lot Block Subdivision
Street Address of Well (or nearest address)
2312 W. 8th St., The Dalles, Or. 97058

(10) STATIC WATER LEVEL:
135 ft. below land surface. Date 12/27/97
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 13

From	To	Estimated Flow Rate	SWL
13	15	15	6
97	105		
112	116	60	80
135	152	250+	121
229	242	600	135

(12) WELL LOG:
Ground elevation

Material	From	To	SWL
Sand Fine Caving Brown	0	13	
See next line	13	15	6
Gravel Large (Boulders) Caving 15 gpm			
Basalt Hard Gray	15	33	
Basalt Soft Black	33	57	
See next line	57	79	
Basalt Fract. Black w/Clay Seams Green			
Basalt Hard Gray	79	85	
Basalt Fract. Brown	85	97	
Basalt Broken W/Yellow Clay W/B	97	105	
Clay stone Hard Green	105	112	
Basalt soft Black W/Clay W/B 60 gpm	112	116	80
Basalt Hard Gray	116	130	
Basalt Hard Black	130	135	
Basalt Broken W/B 250 gpm	135	152	121
Basalt Hard Gray	152	180	
Basalt Hard Black	180	192	
Basalt Hard Gray	192	229	
Basalt Soft Black W/B	229	240	135
Basalt Broken W/B	240	242	135

Date started 9/4/97 Completed 12/27/97

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number
Signed Date

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 790
Signed Austin Well Drilling Date 1-28-98

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER

WASC 4135

RECEIVED
OCT 23 1995
WATER RESOURCES DEPT.
SALEM, OREGON

02N/13E/32 AC
53847
53847 (START CARD) #

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 1

Name Emmanual Baptist Church
Address 2819 West 10th Street
City The Dalles State Oregon Zip 97058

(2) TYPE OF WORK

[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:

[ ] Rotary Air [ ] Rotary Mud [X] Cable [ ] Auger
[ ] Other

(4) PROPOSED USE:

[ ] Domestic [ ] Community [ ] Industrial [X] Irrigation
[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [X] Yes [ ] No Depth of Completed Well 23 ft.
Explosives used [ ] Yes [ ] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
10	0	18	cement	0	18	12
6	+1	23				

How was seal placed: Method [ ] A [X] B [ ] C [ ] D [ ] E
[ ] Other
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	XXXXXXXXXXXX				[ ]	[ ]	[ ]	[ ]
	6	+1	19	.250	[X]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method
[ ] Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour

[X] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	0		1 hr.

Temperature of water 56 Depth Artesian Flow Found 22
Was a water analysis done? [ ] Yes By whom
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other above 18 ft.
Depth of strata: 8 to 12 ft.
cased and sealed off with cement

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude
Township 2 North N or S Range 13 East E or W. WM.
Section 32 SW 1/4 NW 1/4 NE
Tax Lot 1600 Lot Block Subdivision
Street Address of Well (or nearest address) 2819 W 10th St.
The Dalles, Oregon 97058

(10) STATIC WATER LEVEL:

8 ft. ft. below land surface. Date 9/15/95
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found usuable water 22 ft.

From	To	Estimated Flow Rate	SWL
28 ft.	23 ft.	75 GPM	8

(12) WELL LOG:

Ground Elevation

Material	From	To	SWL
dirt	0	8	
boulders 1 to 2 + ft.	8	12	6
clay tan soft	12	22	
gravel ¼ inch to 1½ minus	22	23	8

Date started 9/1/95 Completed 9/20/95

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed WWC Number 571 Date 10/20/95

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed WWC Number 571 Date 10/20/95

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

3

WASC 1955

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

SEP 30 1991

2N/13E/32 da

(START CARD) # W 31691

(1) OWNER: Well Number:

Name HENRY MOORE
Address 901 JORDAN ST.
City THE DALLES State OR Zip 97058

(2) TYPE OF WORK:
[X] New Well [ ] Deepen [ ] Recondition [ ] Abandon

(3) DRILL METHOD
[X] Rotary Air [ ] Rotary Mud [ ] Cable
[ ] Other

(4) PROPOSED USE:
[X] Domestic [ ] Community [ ] Industrial [ ] Irrigation
[ ] Thermal [ ] Injection [ ] Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes [ ] No [X] Depth of Completed Well 200 ft.
Explosives used Yes [ ] No [X] Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
10"	TOP	59	CEMENT	6	59	15 SACKS
			BENTONITE	TOP	6	7 SACKS
6"	59	200				

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E
[X] Other BENTONITE - DRY
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	TOP	59	.250	[X]	[ ]	[X]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method
[ ] Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour
[ ] Pump [ ] Bailer [X] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
60	100%	190	1 hr.

Temperature of water 62 Depth Artesian Flow Found
Was a water analysis done? [ ] Yes By whom
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County WASCO Latitude Longitude
Township 2 (N) or S. Range 13 (E) or W. WM.
Section 32 NE ¼ SE ¼
Tax Lot 500 Lot Block Subdivision
Street Address of Well (or nearest address) 2400 W 7TH ST
THE DALLES, OR 97058

(10) STATIC WATER LEVEL:
106 ft. below land surface. Date 9-3-91
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 174

From	To	Estimated Flow Rate	SWL
174	189	60 G.P.M.	106

(12) WELL LOG: Ground elevation 146'

Material	From	To	SWL
TOP SOIL	0	5	
SAND & CLAY	5	11	
BLACK BASALT	11	30	
BLUE CLAYSTONE - HARD	30	35	
GRAY BASALT - HARD	35	78	
BLACK BASALT & BLUE CLAYSTONE - HARD	78	83	
GRAY BASALT - HARD	83	96	
BLACK & GREEN BASALT	96	122	
GRAY BASALT - HARD	122	151	
GRAY & RED BASALT - POROUS	151	160	
GRAY & GREEN BASALT - HARD	160	166	
GRAY BASALT - HARD	166	174	
RED & GRAY BASALT - FRACT. (WATER BEARING)	174	189	106
GRAY BASALT - HARD	189	200	

Date started 9-1-91 Completed 9-3-91

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number 1569
Signed [signature] Date 9-5-91

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 731
Signed Charles S Moore Date 9-5-91

WASC 51152

Wasc 51152

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form

WELL ID # L **L56343**
(START CARD) # **148853**

(1) OWNER: Well Number:
Name **Wes Pullen**
Address **2444 West 16th St.**
City **The Dalles,** State **OR** Zip **97058**

(2) TYPE OF WORK:
[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:
[X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger
[ ] Other

(4) PROPOSED USE:
[X] Domestic [ ] Community [ ] Industrial [ ] Irrigation
[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval [ ] Yes [X] No Depth of Completed Well **135** ft.
Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
12"	0	18	Bentonite	0	18	10 Bags
6"	18	135				

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E
[X] Other **Poured Dry**
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	+2	18	.250	[X]	[ ]	[X]	[ ]
Liner:								

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method
[ ] Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

(8) WELL TESTS: Minimum testing time is 1 hour
[ ] Pump [ ] Bailer [X] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
40		135	1 hr.

Temperature of Water **63** Depth Artesian Flow found
Was a water analysis done? [ ] Yes By whom
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County **Wasco** Latitude **13.253** Longitude **36.578**
Township **2N** N or S. Range **13E** E or W. of WM.
Section **32** **SW** 1/4 **SE** 1/4
Tax lot **300** Lot Block Subdivision
Street Address of Well (or nearest address) **2444 West 16th St., The Dalles, Or.**

(10) STATIC WATER LEVEL:
95 ft. below land surface. Date **07/06/2003**
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found **119**

From	To	Estimated Flow Rate	SWL
119	135	40	95

(12) WELL LOG:
Ground elevation **391**

Material	From	To	SWL
Soil	0	2	
Sandstone Fine Hard Brown	2	53	
Sandstone Hard Gray	53	74	
Sandstone Med. Soft Gray	74	82	
Sandstone Med. Soft Tan	82	119	
Gravel Coarse Multi-color Caving	119		
W/B		135	95

RECEIVED
JUL 16 2003
WATER RESOURCES DEPT
SALEM, OREGON

RECEIVED
AUG 14 2003
WATER RESOURCES DEPT
SALEM, OREGON

Date started 7/5/03 Completed 7/7/03

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number
Signed Date

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number **790**
Signed Date **07/12/2003**
Charles Austin

ORIGINAL - WATER RESOURCES DEPARTMENT FIRST COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

Appendix C
Boring Logs

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-1**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 0.2' Crushed rock. 0.2 - 13' Brown silty medium sand, wet at 11.5 feet.	SM	5001		0	▼	Chip bentonite, hydrated
10	13 - 14' Brown broken and weathered basalt, dry. Refusal.						
	Attempted to collect water sample but hole would not recharge.						
20							

Environmental & Ground Water Consultants
Mark Yinger Associates
69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole
10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-2**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 0.2' Asphalt. 0.2 - 10.8' Brown silty medium sand.	SM			0		Chip bentonite, hydrated
10	10.8 - 11.1' Crushed basalt, likely fill material. 11.1 - 12.7' Brown silty medium to coarse sand, wet, slight diesel odor?		5003				
	12.7 - 14.75' Brown broken and weathered basalt, dry. Refusal.						
20							

Environmental & Ground Water Consultants
Mark Yinger Associates
69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole
10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-3**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 0.2' Asphalt. 0.2 - 13.2' Brown silty medium to coarse sand, wet at 11.2'.	SM	5004		0		Chip bentonite, hydrated
10	13.2 - 14.75' Brown broken and weathered basalt and silty medium sand. Refusal.						
20	Water sample collected, 5005.						

Environmental & Ground Water Consultants

Mark Yinger Associates

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Borehole

10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-4**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 2' Crushed rock and sand.						
	2 - 15' Brown silty fine to medium sand, wet at 11.5'.	SM					Chip bentonite, hydrated
10			5006		0		
	Water sample collected, 5007.						
20							

Environmental & Ground Water Consultants

Mark Yinger Associates

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Borehole

10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-5**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 1' Crushed rock and sand.						
	1 - 11' Brown silty fine to medium sand.	SM					Chip bentonite, hydrated
10	11 - 11.1' Black basalt, hard, refusal.						
20							

Environmental & Ground Water Consultants

Mark Yinger Associates

69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole

10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-6**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 1' Crushed rock and sand.						
	1 - 15' Brown silty fine to medium sand, wet at 11'.	SM					Chip bentonite, hydrated
10			5008		0		
	Water sample collected, 5009.						
20							

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Mark Yinger Associates
69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole
10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Geoprobe
Logged by: Mark Yinger, R.G., 3/16/15
Ground surface elev.: n/a

Boring No.: **BH-7**
Borehole Diameter: 2.75 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 0.5' Fine crushed rock and sand.						
	0.5 - 6.5' Brown silt.	ML	5010		0		Chip bentonite, hydrated
	6.5 - 9.5' Brownish gray silt and fine sand.	SM					
10	9.5 - 10' Gray silt.	ML					
	10 - 13.75' Brownish-gray silty medium sand, wet.	SM			0		
	13.75 - 14.75' Brown, broken basalt, refusal.						
	Water sample collected, 5011.						
20							

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Mark Yinger Associates
69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole
10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Hand-Auger
Logged by: Mark Yinger, R.G., 4/15/15
Ground surface elev.: n/a

Boring No.: **BH-8**
Borehole Diameter: 4 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 1.5' Crushed rock and sand, compacted.						
	1.5 - 11' Brown silty fine sand, wet at 10 feet. Refusal on basalt at 11 feet	SM					Native material compacted back into boring
10			5025	0			
20							

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Mark Yinger Associates
69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole
10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Hand-Auger
Logged by: Mark Yinger, R.G., 4/15/15
Ground surface elev.: n/a

Boring No.: **BH-9**
Borehole Diameter: 4 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 1.5' Crushed rock and sand, compacted.						
	1.5 - 5.25' Brown silty fine sand.	SM	5026				Native material compacted back into boring
10							
20							

Environmental & Ground Water Consultants

Mark Yinger Associates

69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole

10th Street Properties, The Dalles, OR

Project: 10th Street Properties
Boring method: Hand-Auger
Logged by: Mark Yinger, R.G., 4/15/15
Ground surface elev.: n/a

Boring No.: **BH-10**
Borehole Diameter: 4 - inch
Sheet: 1 of 1
Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 1.5' Crushed rock and sand, compacted.						
	1.5 - 5.25' Brown silty fine sand.	SM	5027				Native material compacted back into boring
10							
20							

Environmental & Ground Water Consultants

Mark Yinger Associates

69860 Camp Polk Road, Sisters OR, 97759 - 541-549-3030

Borehole

10th Street Properties, The Dalles, OR

Appendix D
Laboratory Reports and Chain of Custodies

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

Tax I.D. 62-0814289

Est. 1970

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Sunday March 29, 2015

Report Number: L754325
Samples Received: 03/18/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By:

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 29,2015

ESC Sample # : L754325-01

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : 10th Str. Properties

Sample ID : 5001

Collected By : M. Yinger
Collection Date : 03/16/15 09:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	80.8	0.0333		%		2540 G-2	03/20/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.62	mg/kg		NWTPHGX	03/19/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		NWTPHGX	03/19/15	1
Diesel Range Organics (DRO)	U	1.3	5.0	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	03/24/15	1
Surrogate Recovery								
o-Terphenyl	79.3			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 03/29/15 11:16 Printed: 03/29/15 11:16

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 29,2015

ESC Sample # : L754325-02

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : 10th Str. Properties

Sample ID : 5003

Collected By : M. Yinger
Collection Date : 03/16/15 10:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	82.8	0.0333		%		2540 G-2	03/20/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.60	mg/kg		NWTPHGX	03/19/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		NWTPHGX	03/19/15	1
Diesel Range Organics (DRO)	U	1.3	4.8	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	6.8	3.3	12.	mg/kg	J	NWTPHDX	03/24/15	1
Surrogate Recovery								
o-Terphenyl	82.0			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 03/29/15 11:16 Printed: 03/29/15 11:16

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Mt. Juliet, TN 37122
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 29, 2015

ESC Sample # : L754325-03

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : 10th Str. Properties

Sample ID : 5004

Collected By : M. Yinger
Collection Date : 03/16/15 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	81.8	0.0333		%		2540 G-2	03/20/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.61	mg/kg		NWTPHGX	03/20/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		NWTPHGX	03/20/15	1
Diesel Range Organics (DRO)	U	1.3	4.9	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	03/24/15	1
Surrogate Recovery								
o-Terphenyl	79.0			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 03/29/15 11:16 Printed: 03/29/15 11:16

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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Mt. Juliet, TN 37122
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 29, 2015

ESC Sample # : L754325-04

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : 10th Str. Properties

Sample ID : 5005

Collected By : M. Yinger
Collection Date : 03/16/15 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Gasoline Range Organics-NWTPH	U	32.	100	ug/l		NWTPHGX	03/20/15	1
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	101.			% Rec.		NWTPHGX	03/20/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	03/28/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	03/28/15	1
Toluene	0.95	0.78	5.0	ug/l	J	8260B	03/28/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	03/28/15	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	03/28/15	1
Naphthalene	U	1.0	5.0	ug/l		8260B	03/28/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	03/28/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	03/28/15	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	03/28/15	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	03/28/15	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	03/28/15	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	03/28/15	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	03/28/15	1
Dibromofluoromethane	104.			% Rec.		8260B	03/28/15	1
4-Bromofluorobenzene	90.2			% Rec.		8260B	03/28/15	1
Diesel Range Organics (DRO)	33.	33.	100	ug/l	J	NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	03/24/15	1
Surrogate Recovery								
o-Terphenyl	79.3			% Rec.		NWTPHDX	03/24/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0080	0.050	ug/l		8270C-S	03/23/15	1
Acenaphthene	0.029	0.010	0.050	ug/l	J	8270C-S	03/23/15	1
Acenaphthylene	U	0.31	0.050	ug/l		8270C-S	03/23/15	1
Benzo(a)anthracene	0.011	0.0029	0.050	ug/l	J	8270C-S	03/23/15	1
Benzo(a)pyrene	U	0.012	0.050	ug/l		8270C-S	03/23/15	1
Benzo(b)fluoranthene	U	0.0021	0.050	ug/l		8270C-S	03/23/15	1
Benzo(g,h,i)perylene	0.0088	0.0023	0.050	ug/l	J	8270C-S	03/23/15	1
Benzo(k)fluoranthene	U	0.014	0.050	ug/l		8270C-S	03/23/15	1
Chrysene	U	0.011	0.050	ug/l		8270C-S	03/23/15	1
Dibenz(a,h)anthracene	U	0.0040	0.050	ug/l		8270C-S	03/23/15	1
Fluoranthene	U	0.016	0.050	ug/l		8270C-S	03/23/15	1
Fluorene	0.039	0.0085	0.050	ug/l	J	8270C-S	03/23/15	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l		8270C-S	03/23/15	1
Naphthalene	0.20	0.020	0.25	ug/l	J	8270C-S	03/23/15	1
Phenanthrene	0.083	0.0082	0.050	ug/l		8270C-S	03/23/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/29/15 11:16 Printed: 03/29/15 11:16

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 29, 2015

ESC Sample # : L754325-04

Date Received : March 18, 2015
Description : 10th Str. Properties

Site ID :

Sample ID : 5005

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Pyrene	0.025	0.012	0.050	ug/l	J	8270C-S	03/23/15	1
1-Methylnaphthalene	0.037	0.0082	0.25	ug/l	J	8270C-S	03/23/15	1
2-Methylnaphthalene	0.042	0.0090	0.25	ug/l	J	8270C-S	03/23/15	1
2-Chloronaphthalene	U	0.0065	0.25	ug/l		8270C-S	03/23/15	1
Surrogate Recovery								
Nitrobenzene-d5	78.4			% Rec.		8270C-S	03/23/15	1
2-Fluorobiphenyl	83.9			% Rec.		8270C-S	03/23/15	1
p-Terphenyl-d14	68.7			% Rec.		8270C-S	03/23/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/29/15 11:16 Printed: 03/29/15 11:16

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L754325-02	WG776691	SAMP	Residual Range Organics (RRO)	R3026582	J
L754325-04	WG776881	SAMP	Diesel Range Organics (DRO)	R3026874	J
	WG777304	SAMP	Toluene	R3027543	J
	WG776616	SAMP	Acenaphthene	R3026621	J
	WG776616	SAMP	Benzo(a)anthracene	R3026621	J
	WG776616	SAMP	Benzo(g,h,i)perylene	R3026621	J
	WG776616	SAMP	Fluorene	R3026621	J
	WG776616	SAMP	Naphthalene	R3026621	J
	WG776616	SAMP	Pyrene	R3026621	J
	WG776616	SAMP	1-Methylnaphthalene	R3026621	J
	WG776616	SAMP	2-Methylnaphthalene	R3026621	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Sisters, OR 97759

Quality Assurance Report
Level II

L754325

March 29, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1-Methylnaphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
2-Chloronaphthalene	< .00005	mg/l			WG776616	03/19/15 07:59
2-Methylnaphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
Acenaphthene	< .00005	mg/l			WG776616	03/19/15 07:59
Acenaphthylene	< .00005	mg/l			WG776616	03/19/15 07:59
Anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(a)anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(a)pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(b)fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(g,h,i)perylene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(k)fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Chrysene	< .00005	mg/l			WG776616	03/19/15 07:59
Dibenz(a,h)anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Fluorene	< .00005	mg/l			WG776616	03/19/15 07:59
Indeno(1,2,3-cd)pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
Naphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
Phenanthrene	< .00005	mg/l			WG776616	03/19/15 07:59
Pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
2-Fluorobiphenyl		% Rec.	95.10	57.7-153	WG776616	03/19/15 07:59
Nitrobenzene-d5		% Rec.	99.90	45.1-170	WG776616	03/19/15 07:59
p-Terphenyl-d14		% Rec.	105.0	53.2-156	WG776616	03/19/15 07:59
Total Solids	< .1	%			WG776782	03/20/15 07:18
Gasoline Range Organics-NWTPH	< .1	mg/l			WG776737	03/19/15 12:48
a,a,a-Trifluorotoluene(FID)		% Rec.	101.0	62-128	WG776737	03/19/15 12:48
Diesel Range Organics (DRO)	< 4	mg/kg			WG776691	03/23/15 22:32
Residual Range Organics (RRO)	< 10	mg/kg			WG776691	03/23/15 22:32
o-Terphenyl		% Rec.	83.70	50-150	WG776691	03/23/15 22:32
Gasoline Range Organics-NWTPH	< .1	mg/kg			WG776739	03/19/15 12:44
a,a,a-Trifluorotoluene(FID)		% Rec.	104.0	59-128	WG776739	03/19/15 12:44
Diesel Range Organics (DRO)	< .1	mg/l			WG776881	03/24/15 15:49
Residual Range Organics (RRO)	< .25	mg/l			WG776881	03/24/15 15:49
o-Terphenyl		% Rec.	81.80	50-150	WG776881	03/24/15 15:49
1,2,4-Trimethylbenzene	< .001	mg/l			WG777304	03/27/15 21:26
1,2-Dibromoethane	< .001	mg/l			WG777304	03/27/15 21:26
1,2-Dichloroethane	< .001	mg/l			WG777304	03/27/15 21:26
1,3,5-Trimethylbenzene	< .001	mg/l			WG777304	03/27/15 21:26
Benzene	< .001	mg/l			WG777304	03/27/15 21:26
Ethylbenzene	< .001	mg/l			WG777304	03/27/15 21:26
Isopropylbenzene	< .001	mg/l			WG777304	03/27/15 21:26
Methyl tert-butyl ether	< .001	mg/l			WG777304	03/27/15 21:26
n-Propylbenzene	< .001	mg/l			WG777304	03/27/15 21:26
Naphthalene	< .005	mg/l			WG777304	03/27/15 21:26
Toluene	< .005	mg/l			WG777304	03/27/15 21:26
Xylenes, Total	< .003	mg/l			WG777304	03/27/15 21:26
4-Bromofluorobenzene		% Rec.	89.80	71-126	WG777304	03/27/15 21:26
Dibromofluoromethane		% Rec.	104.0	78.3-121	WG777304	03/27/15 21:26

* Performance of this Analyte is outside of established criteria.
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L754325

March 29, 2015

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Toluene-d8	% Rec.		106.0		88.5-111		03/27/15 21:26
			Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	80.8	80.6	0.166	5	L754320-09	WG776782

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1-Methylnaphthalene	mg/l	.002	0.00187	93.4	73.2-141	WG776616
2-Chloronaphthalene	mg/l	.002	0.00210	105.	74.2-135	WG776616
2-Methylnaphthalene	mg/l	.002	0.00186	92.8	72.4-141	WG776616
Acenaphthene	mg/l	.002	0.00196	98.0	76.2-136	WG776616
Acenaphthylene	mg/l	.002	0.00212	106.	71.3-139	WG776616
Anthracene	mg/l	.002	0.00213	107.	77.3-144	WG776616
Benzo(a)anthracene	mg/l	.002	0.00195	97.5	71.4-142	WG776616
Benzo(a)pyrene	mg/l	.002	0.00167	83.6	70.8-140	WG776616
Benzo(b)fluoranthene	mg/l	.002	0.00167	83.4	68-142	WG776616
Benzo(g,h,i)perylene	mg/l	.002	0.00186	92.9	62.8-146	WG776616
Benzo(k)fluoranthene	mg/l	.002	0.00148	74.0	70.1-144	WG776616
Chrysene	mg/l	.002	0.00197	98.4	73.6-143	WG776616
Dibenz(a,h)anthracene	mg/l	.002	0.00180	90.0	56.1-147	WG776616
Fluoranthene	mg/l	.002	0.00219	109.	77.9-147	WG776616
Fluorene	mg/l	.002	0.00181	90.3	75.3-136	WG776616
Indeno(1,2,3-cd)pyrene	mg/l	.002	0.00187	93.5	61.6-147	WG776616
Naphthalene	mg/l	.002	0.00195	97.4	72.2-137	WG776616
Phenanthrene	mg/l	.002	0.00198	98.9	76-133	WG776616
Pyrene	mg/l	.002	0.00213	106.	73-139	WG776616
2-Fluorobiphenyl				103.0	57.7-153	WG776616
Nitrobenzene-d5				96.60	45.1-170	WG776616
p-Terphenyl-d14				100.0	53.2-156	WG776616
Total Solids	%	50	50.0	100.	85-115	WG776782
Gasoline Range Organics-NWTPH	mg/l	5.5	5.53	101.	66-123	WG776737
a,a,a-Trifluorotoluene(FID)				102.0	62-128	WG776737
Diesel Range Organics (DRO)	mg/kg	30	27.9	92.8	50-150	WG776691
Residual Range Organics (RRO)	mg/kg	30	23.9	79.7	50-150	WG776691
o-Terphenyl				83.70	50-150	WG776691
Gasoline Range Organics-NWTPH	mg/kg	5.5	5.93	108.	62.2-127	WG776739
a,a,a-Trifluorotoluene(FID)				107.0	59-128	WG776739
Diesel Range Organics (DRO)	mg/l	.75	0.651	86.8	50-150	WG776881
Residual Range Organics (RRO)	mg/l	.75	0.645	85.9	50-150	WG776881
o-Terphenyl				85.00	50-150	WG776881
1,2,4-Trimethylbenzene	mg/l	.025	0.0231	92.5	75-123	WG777304
1,2-Dibromoethane	mg/l	.025	0.0229	91.5	76.6-121	WG777304
1,2-Dichloroethane	mg/l	.025	0.0243	97.4	68.8-124	WG777304
1,3,5-Trimethylbenzene	mg/l	.025	0.0244	97.5	75.6-124	WG777304

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

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L754325

March 29, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Benzene	mg/l	.025	0.0251	100.	74.8-121	WG777304
Ethylbenzene	mg/l	.025	0.0245	97.9	78.8-122	WG777304
Isopropylbenzene	mg/l	.025	0.0240	96.2	78.6-132	WG777304
Methyl tert-butyl ether	mg/l	.025	0.0222	88.7	71.2-126	WG777304
n-Propylbenzene	mg/l	.025	0.0237	94.7	78.2-122	WG777304
Naphthalene	mg/l	.025	0.0189	75.7	68.4-128	WG777304
Toluene	mg/l	.025	0.0246	98.4	79.7-116	WG777304
Xylenes, Total	mg/l	.075	0.0732	97.7	78.7-121	WG777304
4-Bromofluorobenzene				94.20	71-126	WG777304
Dibromofluoromethane				101.0	78.3-121	WG777304
Toluene-d8				104.0	88.5-111	WG777304

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1-Methylnaphthalene	mg/l	0.00185	0.00187	92.0	73.2-141	1.18	20	WG776616
2-Chloronaphthalene	mg/l	0.00215	0.00210	107.	74.2-135	2.31	20	WG776616
2-Methylnaphthalene	mg/l	0.00188	0.00186	94.0	72.4-141	1.02	20	WG776616
Acenaphthene	mg/l	0.00200	0.00196	100.	76.2-136	2.14	20	WG776616
Acenaphthylene	mg/l	0.00214	0.00212	107.	71.3-139	0.690	20	WG776616
Anthracene	mg/l	0.00214	0.00213	107.	77.3-144	0.450	20	WG776616
Benzo(a)anthracene	mg/l	0.00201	0.00195	100.	71.4-142	2.96	20	WG776616
Benzo(a)pyrene	mg/l	0.00173	0.00167	86.0	70.8-140	3.32	20	WG776616
Benzo(b)fluoranthene	mg/l	0.00156	0.00167	78.0	68-142	6.82	20	WG776616
Benzo(g,h,i)perylene	mg/l	0.00199	0.00186	100.	62.8-146	6.93	20	WG776616
Benzo(k)fluoranthene	mg/l	0.00175	0.00148	88.0	70.1-144	16.9	20	WG776616
Chrysene	mg/l	0.00199	0.00197	100.	73.6-143	1.28	20	WG776616
Dibenz(a,h)anthracene	mg/l	0.00196	0.00180	98.0	56.1-147	8.56	20	WG776616
Fluoranthene	mg/l	0.00202	0.00219	101.	77.9-147	7.79	20	WG776616
Fluorene	mg/l	0.00194	0.00181	97.0	75.3-136	7.41	20	WG776616
Indeno(1,2,3-cd)pyrene	mg/l	0.00199	0.00187	100.	61.6-147	6.48	20	WG776616
Naphthalene	mg/l	0.00196	0.00195	98.0	72.2-137	0.580	20	WG776616
Phenanthrene	mg/l	0.00201	0.00198	101.	76-133	1.86	20	WG776616
Pyrene	mg/l	0.00221	0.00213	111.	73-139	3.80	20	WG776616
2-Fluorobiphenyl				108.0	57.7-153			WG776616
Nitrobenzene-d5				96.40	45.1-170			WG776616
p-Terphenyl-d14				107.0	53.2-156			WG776616
Gasoline Range Organics-NWTPH	mg/l	5.75	5.53	105.	66-123	3.91	20	WG776737
a,a,a-Trifluorotoluene(FID)				103.0	62-128			WG776737
Diesel Range Organics (DRO)	mg/kg	24.5	27.9	82.0	50-150	13.0	20	WG776691
Residual Range Organics (RRO)	mg/kg	20.8	23.9	69.0	50-150	14.1	20	WG776691
o-Terphenyl				74.70	50-150			WG776691
Gasoline Range Organics-NWTPH	mg/kg	5.95	5.93	108.	62.2-127	0.350	20	WG776739
a,a,a-Trifluorotoluene(FID)				107.0	59-128			WG776739
Diesel Range Organics (DRO)	mg/l	0.630	0.651	84.0	50-150	3.39	20	WG776881
Residual Range Organics (RRO)	mg/l	0.656	0.645	87.0	50-150	1.74	20	WG776881
o-Terphenyl				81.90	50-150			WG776881
1,2,4-Trimethylbenzene	mg/l	0.0228	0.0231	91.0	75-123	1.43	20	WG777304
1,2-Dibromoethane	mg/l	0.0225	0.0229	90.0	76.6-121	1.68	20	WG777304

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754325

March 29, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,2-Dichloroethane	mg/l	0.0238	0.0243	95.0	68.8-124	2.23	20	WG777304
1,3,5-Trimethylbenzene	mg/l	0.0233	0.0244	93.0	75.6-124	4.60	20	WG777304
Benzene	mg/l	0.0248	0.0251	99.0	74.8-121	1.14	20	WG777304
Ethylbenzene	mg/l	0.0235	0.0245	94.0	78.8-122	4.15	20	WG777304
Isopropylbenzene	mg/l	0.0234	0.0240	94.0	78.6-132	2.65	20	WG777304
Methyl tert-butyl ether	mg/l	0.0220	0.0222	88.0	71.2-126	0.710	20	WG777304
n-Propylbenzene	mg/l	0.0230	0.0237	92.0	78.2-122	2.78	20	WG777304
Naphthalene	mg/l	0.0188	0.0189	75.0	68.4-128	0.720	20	WG777304
Toluene	mg/l	0.0240	0.0246	96.0	79.7-116	2.47	20	WG777304
Xylenes, Total	mg/l	0.0715	0.0732	95.0	78.7-121	2.43	20	WG777304
4-Bromofluorobenzene				92.00	71-126			WG777304
Dibromofluoromethane				97.90	78.3-121			WG777304
Toluene-d8				103.0	88.5-111			WG777304

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Gasoline Range Organics-NWTPH	mg/l	5.78	0.0	5.5	100.	47.5-136	L754240-05	WG776737
a,a,a-Trifluorotoluene(FID)					102.0	62-128		WG776737
Diesel Range Organics (DRO)	mg/kg	25.8	0.937	30	83.0	50-150	L754304-04	WG776691
Residual Range Organics (RRO)	mg/kg	22.1	1.04	30	70.0	50-150	L754304-04	WG776691
o-Terphenyl					77.20	50-150		WG776691
Gasoline Range Organics-NWTPH	mg/kg	28.0	0.237	5.5	100.	20.5-134	L754331-04	WG776739
a,a,a-Trifluorotoluene(FID)					106.0	59-128		WG776739
1,2,4-Trimethylbenzene	mg/l	0.0200	0.0	.025	80.0	57.4-137	L754169-09	WG777304
1,2-Dibromoethane	mg/l	0.0242	0.0	.025	97.0	67.1-125	L754169-09	WG777304
1,2-Dichloroethane	mg/l	0.0282	0.0	.025	110.	60-126	L754169-09	WG777304
1,3,5-Trimethylbenzene	mg/l	0.0206	0.0	.025	82.0	63.6-132	L754169-09	WG777304
Benzene	mg/l	0.0251	0.0	.025	100.	54.3-133	L754169-09	WG777304
Ethylbenzene	mg/l	0.0201	0.0	.025	81.0	61.4-133	L754169-09	WG777304
Isopropylbenzene	mg/l	0.0196	0.0	.025	79.0	66.8-141	L754169-09	WG777304
Methyl tert-butyl ether	mg/l	0.0283	0.0	.025	110.	57.7-134	L754169-09	WG777304
n-Propylbenzene	mg/l	0.0198	0.0	.025	79.0	65.9-131	L754169-09	WG777304
Naphthalene	mg/l	0.0249	0.0	.025	100.	58-135	L754169-09	WG777304
Toluene	mg/l	0.0231	0.0	.025	92.0	61.4-130	L754169-09	WG777304
Xylenes, Total	mg/l	0.0622	0.0	.075	83.0	63.3-131	L754169-09	WG777304
4-Bromofluorobenzene					89.60	71-126		WG777304
Dibromofluoromethane					106.0	78.3-121		WG777304
Toluene-d8					105.0	88.5-111		WG777304

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Gasoline Range Organics-NWTPH	mg/l	5.73	5.78	104.	47.5-136	0.890	20	L754240-05	WG776737
a,a,a-Trifluorotoluene(FID)				102.0	62-128				WG776737
Diesel Range Organics (DRO)	mg/kg	25.6	25.8	82.1	50-150	0.950	20	L754304-04	WG776691
Residual Range Organics (RRO)	mg/kg	26.2	22.1	83.7	50-150	16.8	20	L754304-04	WG776691
o-Terphenyl				76.00	50-150				WG776691
Gasoline Range Organics-NWTPH	mg/kg	29.5	28.0	106.	20.5-134	5.02	23.8	L754331-04	WG776739

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

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Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754325

March 29, 2015

Analyte	Units	Matrix Spike MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
a,a,a-Trifluorotoluene(FID)				106.0	59-128				
1,2,4-Trimethylbenzene	mg/l	0.0211	0.0200	84.2	57.4-137	5.09	20	L754169-09	WG777304
1,2-Dibromoethane	mg/l	0.0250	0.0242	100.	67.1-125	3.35	20	L754169-09	WG777304
1,2-Dichloroethane	mg/l	0.0274	0.0282	110.	60-126	2.69	20	L754169-09	WG777304
1,3,5-Trimethylbenzene	mg/l	0.0213	0.0206	85.4	63.6-132	3.76	20.5	L754169-09	WG777304
Benzene	mg/l	0.0254	0.0251	102.	54.3-133	1.03	20	L754169-09	WG777304
Ethylbenzene	mg/l	0.0210	0.0201	84.0	61.4-133	4.13	20	L754169-09	WG777304
Isopropylbenzene	mg/l	0.0210	0.0196	83.9	66.8-141	6.57	20	L754169-09	WG777304
Methyl tert-butyl ether	mg/l	0.0270	0.0283	108.	57.7-134	4.89	20	L754169-09	WG777304
n-Propylbenzene	mg/l	0.0210	0.0198	84.1	65.9-131	6.06	20	L754169-09	WG777304
Naphthalene	mg/l	0.0244	0.0249	97.7	58-135	1.79	25.5	L754169-09	WG777304
Toluene	mg/l	0.0240	0.0231	96.0	61.4-130	3.79	20	L754169-09	WG777304
Xylenes, Total	mg/l	0.0641	0.0622	85.5	63.3-131	3.03	20	L754169-09	WG777304
4-Bromofluorobenzene				90.90	71-126				WG777304
Dibromofluoromethane				101.0	78.3-121				WG777304
Toluene-d8				104.0	88.5-111				WG777304

Batch number /Run number / Sample number cross reference

WG776616: R3025662 R3025682 R3026621 R3027420: L754325-04
WG776782: R3025831: L754325-01 02 03
WG776737: R3025890: L754325-04
WG776691: R3026582: L754325-01 02 03
WG776739: R3026668: L754325-01 02 03
WG776881: R3026874: L754325-04
WG777304: R3027543: L754325-04

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

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69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754325

March 29, 2015

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

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

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

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

Company Name/Address:	Billing Information:
Mark Yinger Assoc 69860 Camp Polk Rd Sisters, OR 97759	Same
Report to: Mark Yinger	Email To: marky@bendbroadband
Project Description: 10th Str. Properties	City/State Collected: The Dalles OR
Phone: 541-549-3030 Fax:	Client Project # 14-1128	Lab Project #
Collected by (print): M. Yinger	Site/Facility ID #	P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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L·A·B S·C·I·E·N·C·E·S
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Fax: 615-758-5859

L# L754329
J065

Acctnum:
Template:
Prelogin:
TSR: Jarrod Willis
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Extract hold PAHSIM NoPres	Hold for 8260 RBDM 40ml Amb HCl	NWTPHDX 100ml Amb HCL	NWTPHDX 4oz Clr	NWTPHGX 40ml Amb HCl	NWTPHGX 4oz Clear	PAHSIM	8260 RBDM			Rem./Contaminant	Sample # (lab only)
5001		SS		3/16/15	9:30am	2				X		X						-01
5003		SS		↓	10:00	2				X		X						02
5004		SS			10:30	2				X		X						03
5005		GW		↓	11:15	10	X	X	X		X		X	X				04

Soil sample with highest GX run 8260 RBDM
Soil sample with highest DX run PAHs

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other______

Remarks: 627286106200

pH ______ Temp ______
Flow ______ Other ______

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	3/17/15	1:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ______

Temp: 3.2 °C Bottles Received: 16

Date: 3-18-15 Time: 0900

Condition: (lab use only)

COC Seal Intact: ___Y ___N ✓ NA

pH Checked: NCF:

Jeremy W. Watkins

ESC Lab Sciences
Non-Conformance Form

Login #: L754325	Client: YINGERSOR	Date: 3/18/15	Evaluated by: Jeremy W

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:
For 5005 client has EXRACT-Hold PAHSIM and HOLD for 8260RBDM and also have them marked to Run. Does client want to RUN or HOLD?

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials:	Client Contact:								

Login Instructions:

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Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Tuesday March 31, 2015

Report Number: L754321
Samples Received: 03/18/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By:

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-01

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5006

Collected By : M. Yinger
Collection Date : 03/16/15 12:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	87.1	0.0333		%		2540 G-2	03/20/15	1
Mercury	0.0034	0.0028	0.023	mg/kg	J	7471A	03/25/15	1
Arsenic	1.8	0.65	2.3	mg/kg	J	6010B	03/25/15	1
Barium	62.	0.17	0.57	mg/kg		6010B	03/25/15	1
Cadmium	U	0.070	0.57	mg/kg		6010B	03/25/15	1
Chromium	10.	0.14	1.1	mg/kg		6010B	03/25/15	1
Lead	4.7	0.19	0.57	mg/kg		6010B	03/25/15	1
Selenium	1.0	0.74	2.3	mg/kg	J	6010B	03/25/15	1
Silver	U	0.28	1.1	mg/kg		6010B	03/25/15	1
Volatile Organics								
Acetone	U	0.050	0.29	mg/kg		8260B	03/26/15	5
Acrylonitrile	U	0.0090	0.057	mg/kg		8260B	03/26/15	5
Benzene	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Bromobenzene	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Bromodichloromethane	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
Bromoform	U	0.0021	0.0057	mg/kg		8260B	03/26/15	5
Bromomethane	U	0.0067	0.029	mg/kg		8260B	03/26/15	5
n-Butylbenzene	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
sec-Butylbenzene	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
tert-Butylbenzene	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
Carbon tetrachloride	U	0.0016	0.0057	mg/kg		8260B	03/26/15	5
Chlorobenzene	U	0.0011	0.0057	mg/kg		8260B	03/26/15	5
Chlorodibromomethane	U	0.0019	0.0057	mg/kg		8260B	03/26/15	5
Chloroethane	U	0.0047	0.029	mg/kg		8260B	03/26/15	5
2-Chloroethyl vinyl ether	U	0.012	0.29	mg/kg		8260B	03/26/15	5
Chloroform	U	0.0011	0.029	mg/kg		8260B	03/26/15	5
Chloromethane	U	0.0019	0.014	mg/kg		8260B	03/26/15	5
2-Chlorotoluene	U	0.0015	0.0057	mg/kg		8260B	03/26/15	5
4-Chlorotoluene	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.029	mg/kg		8260B	03/26/15	5
1,2-Dibromoethane	U	0.0017	0.0057	mg/kg		8260B	03/26/15	5
Dibromomethane	U	0.0019	0.0057	mg/kg		8260B	03/26/15	5
1,2-Dichlorobenzene	U	0.0015	0.0057	mg/kg		8260B	03/26/15	5
1,3-Dichlorobenzene	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5
1,4-Dichlorobenzene	U	0.0011	0.0057	mg/kg		8260B	03/26/15	5
Dichlorodifluoromethane	U	0.0036	0.029	mg/kg		8260B	03/26/15	5
1,1-Dichloroethane	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
1,2-Dichloroethane	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
1,1-Dichloroethene	U	0.0015	0.0057	mg/kg		8260B	03/26/15	5
cis-1,2-Dichloroethene	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 03/31/15 17:11 Printed: 03/31/15 17:16

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-01

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5006

Collected By : M. Yinger
Collection Date : 03/16/15 12:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
1,2-Dichloropropane	U	0.0018	0.0057	mg/kg		8260B	03/26/15	5
1,1-Dichloropropene	U	0.0016	0.0057	mg/kg		8260B	03/26/15	5
1,3-Dichloropropane	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
cis-1,3-Dichloropropene	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
trans-1,3-Dichloropropene	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
2,2-Dichloropropane	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Di-isopropyl ether	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5
Ethylbenzene	U	0.0015	0.0057	mg/kg		8260B	03/26/15	5
Hexachloro-1,3-butadiene	U	0.0017	0.0057	mg/kg		8260B	03/26/15	5
Isopropylbenzene	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5
p-Isopropyltoluene	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
2-Butanone (MEK)	U	0.023	0.057	mg/kg		8260B	03/26/15	5
Methylene Chloride	0.013	0.0050	0.029	mg/kg	J	8260B	03/26/15	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.057	mg/kg		8260B	03/26/15	5
Methyl tert-butyl ether	U	0.0011	0.0057	mg/kg		8260B	03/26/15	5
Naphthalene	U	0.0050	0.029	mg/kg		8260B	03/26/15	5
n-Propylbenzene	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
Styrene	U	0.0012	0.0057	mg/kg		8260B	03/26/15	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0057	mg/kg		8260B	03/26/15	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0057	mg/kg		8260B	03/26/15	5
Tetrachloroethene	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Toluene	U	0.0022	0.029	mg/kg		8260B	03/26/15	5
1,2,3-Trichlorobenzene	U	0.0015	0.0057	mg/kg		8260B	03/26/15	5
1,2,4-Trichlorobenzene	U	0.0019	0.0057	mg/kg		8260B	03/26/15	5
1,1,1-Trichloroethane	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
1,1,2-Trichloroethane	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Trichloroethene	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Trichlorofluoromethane	U	0.0019	0.029	mg/kg		8260B	03/26/15	5
1,2,3-Trichloropropane	U	0.0037	0.014	mg/kg		8260B	03/26/15	5
1,2,4-Trimethylbenzene	U	0.0010	0.0057	mg/kg		8260B	03/26/15	5
1,2,3-Trimethylbenzene	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
1,3,5-Trimethylbenzene	U	0.0013	0.0057	mg/kg		8260B	03/26/15	5
Vinyl chloride	U	0.0014	0.0057	mg/kg		8260B	03/26/15	5
Xylenes, Total	U	0.0035	0.017	mg/kg		8260B	03/26/15	5
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	03/26/15	1
Dibromofluoromethane	103.			% Rec.		8260B	03/26/15	1
4-Bromofluorobenzene	111.			% Rec.		8260B	03/26/15	1
Diesel Range Organics (DRO)	U	1.3	4.6	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	3.3	11.	mg/kg		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-01

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5006

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 12:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Surrogate Recovery								
o-Terphenyl	65.8			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

ESC Sample # : L754321-02

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5007

Collected By : M. Yinger
Collection Date : 03/16/15 12:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Mercury	U	0.049	0.20	ug/l		7470A	03/20/15	1
Arsenic	U	6.5	20.	ug/l		6010B	03/22/15	1
Barium	76.	1.7	5.0	ug/l		6010B	03/22/15	1
Cadmium	U	0.70	5.0	ug/l		6010B	03/22/15	1
Chromium	2.5	1.4	10.	ug/l	J	6010B	03/22/15	1
Lead	9.0	1.9	5.0	ug/l		6010B	03/22/15	1
Selenium	U	7.4	20.	ug/l		6010B	03/22/15	1
Silver	U	2.8	10.	ug/l		6010B	03/23/15	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	03/27/15	1
Acrolein	U	8.9	50.	ug/l		8260B	03/27/15	1
Acrylonitrile	U	1.9	10.	ug/l		8260B	03/27/15	1
Benzene	U	0.33	1.0	ug/l		8260B	03/27/15	1
Bromobenzene	U	0.35	1.0	ug/l		8260B	03/27/15	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	03/27/15	1
Bromoform	U	0.47	1.0	ug/l		8260B	03/27/15	1
Bromomethane	U	0.87	5.0	ug/l		8260B	03/27/15	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/27/15	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/27/15	1
tert-Butylbenzene	U	0.40	1.0	ug/l		8260B	03/27/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	03/27/15	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	03/27/15	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	03/27/15	1
Chloroethane	U	0.45	5.0	ug/l		8260B	03/27/15	1
2-Chloroethyl vinyl ether	U	3.0	50.	ug/l		8260B	03/27/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	03/27/15	1
Chloromethane	U	0.28	2.5	ug/l		8260B	03/27/15	1
2-Chlorotoluene	U	0.38	1.0	ug/l		8260B	03/27/15	1
4-Chlorotoluene	U	0.35	1.0	ug/l		8260B	03/27/15	1
1,2-Dibromo-3-Chloropropane	U	1.3	5.0	ug/l		8260B	03/27/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	03/27/15	1
Dibromomethane	U	0.35	1.0	ug/l		8260B	03/27/15	1
1,2-Dichlorobenzene	U	0.35	1.0	ug/l		8260B	03/27/15	1
1,3-Dichlorobenzene	U	0.22	1.0	ug/l		8260B	03/27/15	1
1,4-Dichlorobenzene	U	0.27	1.0	ug/l		8260B	03/27/15	1
Dichlorodifluoromethane	U	0.55	5.0	ug/l		8260B	03/27/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	03/27/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	03/27/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/27/15	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	03/27/15	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/27/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

ESC Sample # : L754321-02

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5007

Collected By : M. Yinger
Collection Date : 03/16/15 12:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	03/27/15	1
1,1-Dichloropropene	U	0.35	1.0	ug/l		8260B	03/27/15	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	03/27/15	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/27/15	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/27/15	1
2,2-Dichloropropane	U	0.32	1.0	ug/l		8260B	03/27/15	1
Di-isopropyl ether	U	0.32	1.0	ug/l		8260B	03/27/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	03/27/15	1
Hexachloro-1,3-butadiene	U	0.26	1.0	ug/l		8260B	03/27/15	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	03/27/15	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	03/27/15	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	03/27/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	03/27/15	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	03/27/15	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	03/27/15	1
Naphthalene	U	1.0	5.0	ug/l		8260B	03/27/15	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	03/27/15	1
Styrene	U	0.31	1.0	ug/l		8260B	03/27/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	03/27/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	03/27/15	1
1,1,2-Trichlorotrifluoroethane	U	0.30	1.0	ug/l		8260B	03/27/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	03/27/15	1
Toluene	U	0.78	5.0	ug/l		8260B	03/27/15	1
1,2,3-Trichlorobenzene	U	0.23	1.0	ug/l		8260B	03/27/15	1
1,2,4-Trichlorobenzene	U	0.36	1.0	ug/l		8260B	03/27/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	03/27/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	03/27/15	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	03/27/15	1
Trichlorofluoromethane	U	1.2	5.0	ug/l		8260B	03/27/15	1
1,2,3-Trichloropropane	U	0.81	2.5	ug/l		8260B	03/27/15	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	03/27/15	1
1,2,3-Trimethylbenzene	U	0.32	1.0	ug/l		8260B	03/27/15	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	03/27/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	03/27/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	03/27/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	03/27/15	1
Dibromofluoromethane	101.			% Rec.		8260B	03/27/15	1
4-Bromofluorobenzene	93.0			% Rec.		8260B	03/27/15	1
Diesel Range Organics (DRO)	100	33.	100	ug/l		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	210	82.	250	ug/l	J	NWTPHDX	03/24/15	1
Surrogate Recovery								

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5007

Collected By : M. Yinger
Collection Date : 03/16/15 12:30

ESC Sample # : L754321-02

Site ID :

Project # : 14-1128

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
o-Terphenyl	85.5			% Rec.		NWTPHDX	03/24/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.022	0.0080	0.050	ug/l	J	8270C-S	03/23/15	1
Acenaphthene	0.020	0.010	0.050	ug/l	J	8270C-S	03/23/15	1
Acenaphthylene	U	0.31	0.050	ug/l		8270C-S	03/23/15	1
Benzo(a)anthracene	0.0087	0.0029	0.050	ug/l	J	8270C-S	03/23/15	1
Benzo(a)pyrene	U	0.012	0.050	ug/l		8270C-S	03/23/15	1
Benzo(b)fluoranthene	0.0025	0.0021	0.050	ug/l	J	8270C-S	03/23/15	1
Benzo(g,h,i)perylene	U	0.0023	0.050	ug/l		8270C-S	03/23/15	1
Benzo(k)fluoranthene	U	0.014	0.050	ug/l		8270C-S	03/23/15	1
Chrysene	U	0.011	0.050	ug/l		8270C-S	03/23/15	1
Dibenz(a,h)anthracene	U	0.0040	0.050	ug/l		8270C-S	03/23/15	1
Fluoranthene	U	0.016	0.050	ug/l		8270C-S	03/23/15	1
Fluorene	0.022	0.0085	0.050	ug/l	J	8270C-S	03/23/15	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l		8270C-S	03/23/15	1
Naphthalene	0.10	0.020	0.25	ug/l	J	8270C-S	03/23/15	1
Phenanthrene	0.062	0.0082	0.050	ug/l		8270C-S	03/23/15	1
Pyrene	0.020	0.012	0.050	ug/l	J	8270C-S	03/23/15	1
1-Methylnaphthalene	0.024	0.0082	0.25	ug/l	J	8270C-S	03/23/15	1
2-Methylnaphthalene	0.029	0.0090	0.25	ug/l	J	8270C-S	03/23/15	1
2-Chloronaphthalene	U	0.0065	0.25	ug/l		8270C-S	03/23/15	1
Surrogate Recovery								
Nitrobenzene-d5	84.4			% Rec.		8270C-S	03/23/15	1
2-Fluorobiphenyl	83.8			% Rec.		8270C-S	03/23/15	1
p-Terphenyl-d14	78.6			% Rec.		8270C-S	03/23/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-03

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5008

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 13:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	80.1	0.0333		%		2540 G-2	03/20/15	1
Mercury	0.0040	0.0028	0.025	mg/kg	J	7471A	03/25/15	1
Arsenic	1.6	0.65	2.5	mg/kg	J	6010B	03/25/15	1
Barium	60.	0.17	0.62	mg/kg		6010B	03/25/15	1
Cadmium	U	0.070	0.62	mg/kg		6010B	03/25/15	1
Chromium	7.0	0.14	1.2	mg/kg		6010B	03/25/15	1
Lead	2.7	0.19	0.62	mg/kg		6010B	03/25/15	1
Selenium	U	0.74	2.5	mg/kg		6010B	03/25/15	1
Silver	U	0.28	1.2	mg/kg		6010B	03/25/15	1
Volatile Organics								
Acetone	U	0.050	0.31	mg/kg		8260B	03/26/15	5
Acrylonitrile	U	0.0090	0.062	mg/kg		8260B	03/26/15	5
Benzene	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Bromobenzene	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Bromodichloromethane	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
Bromoform	U	0.0021	0.0062	mg/kg		8260B	03/26/15	5
Bromomethane	U	0.0067	0.031	mg/kg		8260B	03/26/15	5
n-Butylbenzene	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
sec-Butylbenzene	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
tert-Butylbenzene	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
Carbon tetrachloride	U	0.0016	0.0062	mg/kg		8260B	03/26/15	5
Chlorobenzene	U	0.0011	0.0062	mg/kg		8260B	03/26/15	5
Chlorodibromomethane	U	0.0019	0.0062	mg/kg		8260B	03/26/15	5
Chloroethane	U	0.0047	0.031	mg/kg		8260B	03/26/15	5
2-Chloroethyl vinyl ether	U	0.012	0.31	mg/kg		8260B	03/26/15	5
Chloroform	U	0.0011	0.031	mg/kg		8260B	03/26/15	5
Chloromethane	U	0.0019	0.016	mg/kg		8260B	03/26/15	5
2-Chlorotoluene	U	0.0015	0.0062	mg/kg		8260B	03/26/15	5
4-Chlorotoluene	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.031	mg/kg		8260B	03/26/15	5
1,2-Dibromoethane	U	0.0017	0.0062	mg/kg		8260B	03/26/15	5
Dibromomethane	U	0.0019	0.0062	mg/kg		8260B	03/26/15	5
1,2-Dichlorobenzene	U	0.0015	0.0062	mg/kg		8260B	03/26/15	5
1,3-Dichlorobenzene	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5
1,4-Dichlorobenzene	U	0.0011	0.0062	mg/kg		8260B	03/26/15	5
Dichlorodifluoromethane	U	0.0036	0.031	mg/kg		8260B	03/26/15	5
1,1-Dichloroethane	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
1,2-Dichloroethane	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
1,1-Dichloroethene	U	0.0015	0.0062	mg/kg		8260B	03/26/15	5
cis-1,2-Dichloroethene	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-03

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5008

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 13:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
1,2-Dichloropropane	U	0.0018	0.0062	mg/kg		8260B	03/26/15	5
1,1-Dichloropropene	U	0.0016	0.0062	mg/kg		8260B	03/26/15	5
1,3-Dichloropropane	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
cis-1,3-Dichloropropene	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
trans-1,3-Dichloropropene	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
2,2-Dichloropropane	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Di-isopropyl ether	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5
Ethylbenzene	U	0.0015	0.0062	mg/kg		8260B	03/26/15	5
Hexachloro-1,3-butadiene	U	0.0017	0.0062	mg/kg		8260B	03/26/15	5
Isopropylbenzene	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5
p-Isopropyltoluene	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
2-Butanone (MEK)	U	0.023	0.062	mg/kg		8260B	03/26/15	5
Methylene Chloride	U	0.0050	0.031	mg/kg		8260B	03/26/15	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.062	mg/kg		8260B	03/26/15	5
Methyl tert-butyl ether	U	0.0011	0.0062	mg/kg		8260B	03/26/15	5
Naphthalene	U	0.0050	0.031	mg/kg		8260B	03/26/15	5
n-Propylbenzene	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
Styrene	U	0.0012	0.0062	mg/kg		8260B	03/26/15	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0062	mg/kg		8260B	03/26/15	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0062	mg/kg		8260B	03/26/15	5
Tetrachloroethene	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Toluene	U	0.0022	0.031	mg/kg		8260B	03/26/15	5
1,2,3-Trichlorobenzene	U	0.0015	0.0062	mg/kg		8260B	03/26/15	5
1,2,4-Trichlorobenzene	U	0.0019	0.0062	mg/kg		8260B	03/26/15	5
1,1,1-Trichloroethane	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
1,1,2-Trichloroethane	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Trichloroethene	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Trichlorofluoromethane	U	0.0019	0.031	mg/kg		8260B	03/26/15	5
1,2,3-Trichloropropane	U	0.0037	0.016	mg/kg		8260B	03/26/15	5
1,2,4-Trimethylbenzene	U	0.0010	0.0062	mg/kg		8260B	03/26/15	5
1,2,3-Trimethylbenzene	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
1,3,5-Trimethylbenzene	U	0.0013	0.0062	mg/kg		8260B	03/26/15	5
Vinyl chloride	U	0.0014	0.0062	mg/kg		8260B	03/26/15	5
Xylenes, Total	U	0.0035	0.019	mg/kg		8260B	03/26/15	5
Surrogate Recovery								
Toluene-d8	108.			% Rec.		8260B	03/26/15	1
Dibromofluoromethane	103.			% Rec.		8260B	03/26/15	1
4-Bromofluorobenzene	110.			% Rec.		8260B	03/26/15	1
Diesel Range Organics (DRO)	U	1.3	5.0	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-03

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5008

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 13:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Surrogate Recovery								
o-Terphenyl	55.5			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

ESC Sample # : L754321-04

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5009

Collected By : M. Yinger
Collection Date : 03/16/15 13:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Mercury	U	0.049	0.20	ug/l		7470A	03/20/15	1
Arsenic	U	6.5	20.	ug/l		6010B	03/22/15	1
Barium	150	1.7	5.0	ug/l		6010B	03/22/15	1
Cadmium	U	0.70	5.0	ug/l		6010B	03/22/15	1
Chromium	7.7	1.4	10.	ug/l	J	6010B	03/22/15	1
Lead	18.	1.9	5.0	ug/l		6010B	03/22/15	1
Selenium	U	7.4	20.	ug/l		6010B	03/22/15	1
Silver	U	2.8	10.	ug/l		6010B	03/23/15	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	03/20/15	1
Acrolein	U	8.9	50.	ug/l		8260B	03/20/15	1
Acrylonitrile	U	1.9	10.	ug/l		8260B	03/20/15	1
Benzene	U	0.33	1.0	ug/l		8260B	03/20/15	1
Bromobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Bromoform	U	0.47	1.0	ug/l		8260B	03/20/15	1
Bromomethane	U	0.87	5.0	ug/l		8260B	03/20/15	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
tert-Butylbenzene	U	0.40	1.0	ug/l		8260B	03/20/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	03/20/15	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	03/20/15	1
Chloroethane	U	0.45	5.0	ug/l		8260B	03/20/15	1
2-Chloroethyl vinyl ether	U	3.0	50.	ug/l		8260B	03/20/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	03/20/15	1
Chloromethane	U	0.28	2.5	ug/l		8260B	03/20/15	1
2-Chlorotoluene	U	0.38	1.0	ug/l		8260B	03/20/15	1
4-Chlorotoluene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,2-Dibromo-3-Chloropropane	U	1.3	5.0	ug/l		8260B	03/20/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Dibromomethane	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,2-Dichlorobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,3-Dichlorobenzene	U	0.22	1.0	ug/l		8260B	03/20/15	1
1,4-Dichlorobenzene	U	0.27	1.0	ug/l		8260B	03/20/15	1
Dichlorodifluoromethane	U	0.55	5.0	ug/l		8260B	03/20/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	03/20/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	03/20/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	03/20/15	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

ESC Sample # : L754321-04

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5009

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 13:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	03/20/15	1
1,1-Dichloropropene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	03/20/15	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/20/15	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/20/15	1
2,2-Dichloropropane	U	0.32	1.0	ug/l		8260B	03/20/15	1
Di-isopropyl ether	U	0.32	1.0	ug/l		8260B	03/20/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	03/20/15	1
Hexachloro-1,3-butadiene	U	0.26	1.0	ug/l		8260B	03/20/15	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	03/20/15	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	03/20/15	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	03/20/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	03/20/15	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	03/20/15	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	03/20/15	1
Naphthalene	U	1.0	5.0	ug/l		8260B	03/20/15	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Styrene	U	0.31	1.0	ug/l		8260B	03/20/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	03/20/15	1
1,1,2-Trichlorotrifluoroethane	U	0.30	1.0	ug/l		8260B	03/20/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	03/20/15	1
Toluene	1.7	0.78	5.0	ug/l	J	8260B	03/20/15	1
1,2,3-Trichlorobenzene	U	0.23	1.0	ug/l		8260B	03/20/15	1
1,2,4-Trichlorobenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	03/20/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1
Trichlorofluoromethane	U	1.2	5.0	ug/l		8260B	03/20/15	1
1,2,3-Trichloropropane	U	0.81	2.5	ug/l		8260B	03/20/15	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	03/20/15	1
1,2,3-Trimethylbenzene	U	0.32	1.0	ug/l		8260B	03/20/15	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	03/20/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	03/20/15	1
Xylenes, Total	1.3	1.1	3.0	ug/l	J	8260B	03/20/15	1
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	03/20/15	1
Dibromofluoromethane	100.			% Rec.		8260B	03/20/15	1
4-Bromofluorobenzene	109.			% Rec.		8260B	03/20/15	1
Diesel Range Organics (DRO)	47.	33.	100	ug/l	J	NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	120	82.	250	ug/l	J	NWTPHDX	03/24/15	1
Surrogate Recovery								

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31,2015

ESC Sample # : L754321-04

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5009

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 13:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
o-Terphenyl	84.9			% Rec.		NWTPHDX	03/24/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-05

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5010

Collected By : M. Yinger
Collection Date : 03/16/15 14:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	79.5	0.0333		%		2540 G-2	03/20/15	1
Mercury	0.0053	0.0028	0.025	mg/kg	J	7471A	03/25/15	1
Arsenic	1.6	0.65	2.5	mg/kg	J	6010B	03/25/15	1
Barium	70.	0.17	0.63	mg/kg		6010B	03/25/15	1
Cadmium	U	0.070	0.63	mg/kg		6010B	03/25/15	1
Chromium	8.9	0.14	1.2	mg/kg		6010B	03/25/15	1
Lead	3.1	0.19	0.63	mg/kg		6010B	03/25/15	1
Selenium	U	0.74	2.5	mg/kg		6010B	03/25/15	1
Silver	U	0.28	1.2	mg/kg		6010B	03/25/15	1
Volatile Organics								
Acetone	U	0.050	0.31	mg/kg		8260B	03/26/15	5
Acrylonitrile	U	0.0090	0.063	mg/kg		8260B	03/26/15	5
Benzene	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Bromobenzene	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Bromodichloromethane	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
Bromoform	U	0.0021	0.0063	mg/kg		8260B	03/26/15	5
Bromomethane	U	0.0067	0.031	mg/kg		8260B	03/26/15	5
n-Butylbenzene	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
sec-Butylbenzene	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
tert-Butylbenzene	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
Carbon tetrachloride	U	0.0016	0.0063	mg/kg		8260B	03/26/15	5
Chlorobenzene	U	0.0011	0.0063	mg/kg		8260B	03/26/15	5
Chlorodibromomethane	U	0.0019	0.0063	mg/kg		8260B	03/26/15	5
Chloroethane	U	0.0047	0.031	mg/kg		8260B	03/26/15	5
2-Chloroethyl vinyl ether	U	0.012	0.31	mg/kg		8260B	03/26/15	5
Chloroform	U	0.0011	0.031	mg/kg		8260B	03/26/15	5
Chloromethane	U	0.0019	0.016	mg/kg		8260B	03/26/15	5
2-Chlorotoluene	U	0.0015	0.0063	mg/kg		8260B	03/26/15	5
4-Chlorotoluene	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.031	mg/kg		8260B	03/26/15	5
1,2-Dibromoethane	U	0.0017	0.0063	mg/kg		8260B	03/26/15	5
Dibromomethane	U	0.0019	0.0063	mg/kg		8260B	03/26/15	5
1,2-Dichlorobenzene	U	0.0015	0.0063	mg/kg		8260B	03/26/15	5
1,3-Dichlorobenzene	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5
1,4-Dichlorobenzene	U	0.0011	0.0063	mg/kg		8260B	03/26/15	5
Dichlorodifluoromethane	U	0.0036	0.031	mg/kg		8260B	03/26/15	5
1,1-Dichloroethane	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
1,2-Dichloroethane	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
1,1-Dichloroethene	U	0.0015	0.0063	mg/kg		8260B	03/26/15	5
cis-1,2-Dichloroethene	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-05

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5010

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 14:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
1,2-Dichloropropane	U	0.0018	0.0063	mg/kg		8260B	03/26/15	5
1,1-Dichloropropene	U	0.0016	0.0063	mg/kg		8260B	03/26/15	5
1,3-Dichloropropane	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
cis-1,3-Dichloropropene	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
trans-1,3-Dichloropropene	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
2,2-Dichloropropane	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Di-isopropyl ether	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5
Ethylbenzene	U	0.0015	0.0063	mg/kg		8260B	03/26/15	5
Hexachloro-1,3-butadiene	U	0.0017	0.0063	mg/kg		8260B	03/26/15	5
Isopropylbenzene	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5
p-Isopropyltoluene	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
2-Butanone (MEK)	U	0.023	0.063	mg/kg		8260B	03/26/15	5
Methylene Chloride	U	0.0050	0.031	mg/kg		8260B	03/26/15	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.063	mg/kg		8260B	03/26/15	5
Methyl tert-butyl ether	U	0.0011	0.0063	mg/kg		8260B	03/26/15	5
Naphthalene	U	0.0050	0.031	mg/kg		8260B	03/26/15	5
n-Propylbenzene	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
Styrene	U	0.0012	0.0063	mg/kg		8260B	03/26/15	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0063	mg/kg		8260B	03/26/15	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0063	mg/kg		8260B	03/26/15	5
Tetrachloroethene	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Toluene	U	0.0022	0.031	mg/kg		8260B	03/26/15	5
1,2,3-Trichlorobenzene	U	0.0015	0.0063	mg/kg		8260B	03/26/15	5
1,2,4-Trichlorobenzene	U	0.0019	0.0063	mg/kg		8260B	03/26/15	5
1,1,1-Trichloroethane	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
1,1,2-Trichloroethane	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Trichloroethene	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Trichlorofluoromethane	U	0.0019	0.031	mg/kg		8260B	03/26/15	5
1,2,3-Trichloropropane	U	0.0037	0.016	mg/kg		8260B	03/26/15	5
1,2,4-Trimethylbenzene	U	0.0010	0.0063	mg/kg		8260B	03/26/15	5
1,2,3-Trimethylbenzene	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
1,3,5-Trimethylbenzene	U	0.0013	0.0063	mg/kg		8260B	03/26/15	5
Vinyl chloride	U	0.0014	0.0063	mg/kg		8260B	03/26/15	5
Xylenes, Total	U	0.0035	0.019	mg/kg		8260B	03/26/15	5
Surrogate Recovery								
Toluene-d8	110.			% Rec.		8260B	03/26/15	1
Dibromofluoromethane	99.4			% Rec.		8260B	03/26/15	1
4-Bromofluorobenzene	106.			% Rec.		8260B	03/26/15	1
Diesel Range Organics (DRO)	U	1.3	5.0	mg/kg		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-05

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5010

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 14:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Surrogate Recovery								
o-Terphenyl	75.6			% Rec.		NWTPHDX	03/24/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-06

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5011

Collected By : M. Yinger
Collection Date : 03/16/15 14:20

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Mercury	0.14	0.049	0.20	ug/l	J	7470A	03/20/15	1
Arsenic	24.	6.5	20.	ug/l		6010B	03/22/15	1
Barium	480	1.7	5.0	ug/l		6010B	03/22/15	1
Cadmium	U	0.70	5.0	ug/l		6010B	03/22/15	1
Chromium	76.	1.4	10.	ug/l		6010B	03/22/15	1
Lead	23.	1.9	5.0	ug/l		6010B	03/22/15	1
Selenium	9.8	7.4	20.	ug/l	J	6010B	03/22/15	1
Silver	U	2.8	10.	ug/l		6010B	03/23/15	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	03/20/15	1
Acrolein	U	8.9	50.	ug/l		8260B	03/20/15	1
Acrylonitrile	U	1.9	10.	ug/l		8260B	03/20/15	1
Benzene	U	0.33	1.0	ug/l		8260B	03/20/15	1
Bromobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Bromoform	U	0.47	1.0	ug/l		8260B	03/20/15	1
Bromomethane	U	0.87	5.0	ug/l		8260B	03/20/15	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
tert-Butylbenzene	U	0.40	1.0	ug/l		8260B	03/20/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	03/20/15	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	03/20/15	1
Chloroethane	U	0.45	5.0	ug/l		8260B	03/20/15	1
2-Chloroethyl vinyl ether	U	3.0	50.	ug/l		8260B	03/20/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	03/20/15	1
Chloromethane	U	0.28	2.5	ug/l		8260B	03/20/15	1
2-Chlorotoluene	U	0.38	1.0	ug/l		8260B	03/20/15	1
4-Chlorotoluene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,2-Dibromo-3-Chloropropane	U	1.3	5.0	ug/l		8260B	03/20/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Dibromomethane	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,2-Dichlorobenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,3-Dichlorobenzene	U	0.22	1.0	ug/l		8260B	03/20/15	1
1,4-Dichlorobenzene	U	0.27	1.0	ug/l		8260B	03/20/15	1
Dichlorodifluoromethane	U	0.55	5.0	ug/l		8260B	03/20/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	03/20/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	03/20/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	03/20/15	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-06

Site ID :

Project # : 14-1128

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Sample ID : 5011

Collected By : M. Yinger
Collection Date : 03/16/15 14:20

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	03/20/15	1
1,1-Dichloropropene	U	0.35	1.0	ug/l		8260B	03/20/15	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	03/20/15	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/20/15	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	03/20/15	1
2,2-Dichloropropane	U	0.32	1.0	ug/l		8260B	03/20/15	1
Di-isopropyl ether	U	0.32	1.0	ug/l		8260B	03/20/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	03/20/15	1
Hexachloro-1,3-butadiene	U	0.26	1.0	ug/l		8260B	03/20/15	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	03/20/15	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	03/20/15	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	03/20/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	03/20/15	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	03/20/15	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	03/20/15	1
Naphthalene	U	1.0	5.0	ug/l		8260B	03/20/15	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	03/20/15	1
Styrene	U	0.31	1.0	ug/l		8260B	03/20/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	03/20/15	1
1,1,2-Trichlorotrifluoroethane	U	0.30	1.0	ug/l		8260B	03/20/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	03/20/15	1
Toluene	U	0.78	5.0	ug/l		8260B	03/20/15	1
1,2,3-Trichlorobenzene	U	0.23	1.0	ug/l		8260B	03/20/15	1
1,2,4-Trichlorobenzene	U	0.36	1.0	ug/l		8260B	03/20/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	03/20/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	03/20/15	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	03/20/15	1
Trichlorofluoromethane	U	1.2	5.0	ug/l		8260B	03/20/15	1
1,2,3-Trichloropropane	U	0.81	2.5	ug/l		8260B	03/20/15	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	03/20/15	1
1,2,3-Trimethylbenzene	U	0.32	1.0	ug/l		8260B	03/20/15	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	03/20/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	03/20/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	03/20/15	1
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	03/20/15	1
Dibromofluoromethane	102.			% Rec.		8260B	03/20/15	1
4-Bromofluorobenzene	107.			% Rec.		8260B	03/20/15	1
Diesel Range Organics (DRO)	U	33.	100	ug/l		NWTPHDX	03/24/15	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	03/24/15	1
Surrogate Recovery								

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

March 31, 2015

ESC Sample # : L754321-06

Date Received : March 18, 2015
Description : Wasco County Road Dept. Facility

Site ID :

Sample ID : 5011

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 03/16/15 14:20

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
o-Terphenyl	85.8			% Rec.		NWTPHDX	03/24/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/31/15 17:11 Printed: 03/31/15 17:16

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L754321-01	WG777003	SAMP	Methylene Chloride	R3027211	J
	WG776999	SAMP	Arsenic	R3026863	J
	WG776999	SAMP	Selenium	R3026863	J
	WG777952	SAMP	Mercury	R3026890	J
L754321-02	WG776881	SAMP	Residual Range Organics (RRO)	R3026874	J
	WG776616	SAMP	Anthracene	R3026621	J
	WG776616	SAMP	Acenaphthene	R3026621	J
	WG776616	SAMP	Benzo(a)anthracene	R3026621	J
	WG776616	SAMP	Benzo(b)fluoranthene	R3026621	J
	WG776616	SAMP	Fluorene	R3026621	J
	WG776616	SAMP	Naphthalene	R3026621	J
	WG776616	SAMP	Pyrene	R3026621	J
	WG776616	SAMP	1-Methylnaphthalene	R3026621	J
	WG776616	SAMP	2-Methylnaphthalene	R3026621	J
	WG777100	SAMP	Chromium	R3026146	J
L754321-03	WG776999	SAMP	Arsenic	R3026863	J
	WG777952	SAMP	Mercury	R3026890	J
L754321-04	WG776881	SAMP	Diesel Range Organics (DRO)	R3026874	J
	WG776881	SAMP	Residual Range Organics (RRO)	R3026874	J
	WG777041	SAMP	Toluene	R3026130	J
	WG777041	SAMP	Xylenes, Total	R3026130	J
	WG777100	SAMP	Chromium	R3026146	J
L754321-05	WG776999	SAMP	Arsenic	R3026863	J
	WG777952	SAMP	Mercury	R3026890	J
L754321-06	WG777100	SAMP	Selenium	R3026146	J
	WG776991	SAMP	Mercury	R3026061	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1-Methylnaphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
2-Chloronaphthalene	< .00005	mg/l			WG776616	03/19/15 07:59
2-Methylnaphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
Acenaphthene	< .00005	mg/l			WG776616	03/19/15 07:59
Acenaphthylene	< .00005	mg/l			WG776616	03/19/15 07:59
Anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(a)anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(a)pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(b)fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(g,h,i)perylene	< .00005	mg/l			WG776616	03/19/15 07:59
Benzo(k)fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Chrysene	< .00005	mg/l			WG776616	03/19/15 07:59
Dibenz(a,h)anthracene	< .00005	mg/l			WG776616	03/19/15 07:59
Fluoranthene	< .00005	mg/l			WG776616	03/19/15 07:59
Fluorene	< .00005	mg/l			WG776616	03/19/15 07:59
Indeno(1,2,3-cd)pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
Naphthalene	< .00025	mg/l			WG776616	03/19/15 07:59
Phenanthrene	< .00005	mg/l			WG776616	03/19/15 07:59
Pyrene	< .00005	mg/l			WG776616	03/19/15 07:59
2-Fluorobiphenyl		% Rec.	95.10	57.7-153	WG776616	03/19/15 07:59
Nitrobenzene-d5		% Rec.	99.90	45.1-170	WG776616	03/19/15 07:59
p-Terphenyl-d14		% Rec.	105.0	53.2-156	WG776616	03/19/15 07:59
Total Solids	< .1	%			WG776782	03/20/15 07:18
Mercury	< .0002	mg/l			WG776991	03/20/15 17:24
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1,1-Trichloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1,2-Trichloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1-Dichloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,1-Dichloroethene	< .001	mg/l			WG777041	03/20/15 12:24
1,1-Dichloropropene	< .001	mg/l			WG777041	03/20/15 12:24
1,2,3-Trichlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,2,3-Trichloropropane	< .001	mg/l			WG777041	03/20/15 12:24
1,2,3-Trimethylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,2,4-Trichlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,2,4-Trimethylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG777041	03/20/15 12:24
1,2-Dibromoethane	< .001	mg/l			WG777041	03/20/15 12:24
1,2-Dichlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,2-Dichloroethane	< .001	mg/l			WG777041	03/20/15 12:24
1,2-Dichloropropane	< .001	mg/l			WG777041	03/20/15 12:24
1,3,5-Trimethylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,3-Dichlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
1,3-Dichloropropane	< .001	mg/l			WG777041	03/20/15 12:24
1,4-Dichlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
2,2-Dichloropropane	< .001	mg/l			WG777041	03/20/15 12:24
2-Butanone (MEK)	< .01	mg/l			WG777041	03/20/15 12:24
2-Chloroethyl vinyl ether	< .05	mg/l			WG777041	03/20/15 12:24
2-Chlorotoluene	< .001	mg/l			WG777041	03/20/15 12:24
4-Chlorotoluene	< .001	mg/l			WG777041	03/20/15 12:24
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG777041	03/20/15 12:24
Acetone	< .05	mg/l			WG777041	03/20/15 12:24

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Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Acrolein	< .025	mg/l			WG777041	03/20/15 12:24
Acrylonitrile	< .01	mg/l			WG777041	03/20/15 12:24
Benzene	< .001	mg/l			WG777041	03/20/15 12:24
Bromobenzene	< .001	mg/l			WG777041	03/20/15 12:24
Bromodichloromethane	< .001	mg/l			WG777041	03/20/15 12:24
Bromoform	< .001	mg/l			WG777041	03/20/15 12:24
Bromomethane	< .005	mg/l			WG777041	03/20/15 12:24
Carbon tetrachloride	< .001	mg/l			WG777041	03/20/15 12:24
Chlorobenzene	< .001	mg/l			WG777041	03/20/15 12:24
Chlorodibromomethane	< .001	mg/l			WG777041	03/20/15 12:24
Chloroethane	< .005	mg/l			WG777041	03/20/15 12:24
Chloroform	< .005	mg/l			WG777041	03/20/15 12:24
Chloromethane	< .0025	mg/l			WG777041	03/20/15 12:24
cis-1,2-Dichloroethene	< .001	mg/l			WG777041	03/20/15 12:24
cis-1,3-Dichloropropene	< .001	mg/l			WG777041	03/20/15 12:24
Di-isopropyl ether	< .001	mg/l			WG777041	03/20/15 12:24
Dibromomethane	< .001	mg/l			WG777041	03/20/15 12:24
Dichlorodifluoromethane	< .005	mg/l			WG777041	03/20/15 12:24
Ethylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
Hexachloro-1,3-butadiene	< .001	mg/l			WG777041	03/20/15 12:24
Isopropylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
Methyl tert-butyl ether	< .001	mg/l			WG777041	03/20/15 12:24
Methylene Chloride	< .005	mg/l			WG777041	03/20/15 12:24
n-Butylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
n-Propylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
Naphthalene	< .005	mg/l			WG777041	03/20/15 12:24
p-Isopropyltoluene	< .001	mg/l			WG777041	03/20/15 12:24
sec-Butylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
Styrene	< .001	mg/l			WG777041	03/20/15 12:24
tert-Butylbenzene	< .001	mg/l			WG777041	03/20/15 12:24
Tetrachloroethene	< .001	mg/l			WG777041	03/20/15 12:24
Toluene	< .005	mg/l			WG777041	03/20/15 12:24
trans-1,2-Dichloroethene	< .001	mg/l			WG777041	03/20/15 12:24
trans-1,3-Dichloropropene	< .001	mg/l			WG777041	03/20/15 12:24
Trichloroethene	< .001	mg/l			WG777041	03/20/15 12:24
Trichlorofluoromethane	< .005	mg/l			WG777041	03/20/15 12:24
Vinyl chloride	< .001	mg/l			WG777041	03/20/15 12:24
Xylenes, Total	< .003	mg/l			WG777041	03/20/15 12:24
4-Bromofluorobenzene		% Rec.	108.0	71-126	WG777041	03/20/15 12:24
Dibromofluoromethane		% Rec.	100.0	78.3-121	WG777041	03/20/15 12:24
Toluene-d8		% Rec.	109.0	88.5-111	WG777041	03/20/15 12:24
Arsenic	< .02	mg/l			WG777100	03/22/15 05:19
Barium	< .005	mg/l			WG777100	03/22/15 05:19
Cadmium	< .005	mg/l			WG777100	03/22/15 05:19
Chromium	< .01	mg/l			WG777100	03/22/15 05:19
Lead	< .005	mg/l			WG777100	03/22/15 05:19
Selenium	< .02	mg/l			WG777100	03/22/15 05:19
Silver	< .01	mg/l			WG777100	03/23/15 02:02
Diesel Range Organics (DRO)	< 4	mg/kg			WG776691	03/23/15 22:32
Residual Range Organics (RRO)	< 10	mg/kg			WG776691	03/23/15 22:32
o-Terphenyl		% Rec.	83.70	50-150	WG776691	03/23/15 22:32
Arsenic	< 2	mg/kg			WG776999	03/25/15 10:20
Barium	< .5	mg/kg			WG776999	03/25/15 10:20

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Level II

L754321

March 31, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Cadmium	< .5	mg/kg			WG776999	03/25/15 10:20
Chromium	< 1	mg/kg			WG776999	03/25/15 10:20
Lead	< .5	mg/kg			WG776999	03/25/15 10:20
Selenium	< 2	mg/kg			WG776999	03/25/15 10:20
Silver	< 1	mg/kg			WG776999	03/25/15 10:20
Diesel Range Organics (DRO)	< .1	mg/l			WG776881	03/24/15 15:49
Residual Range Organics (RRO)	< .25	mg/l			WG776881	03/24/15 15:49
o-Terphenyl		% Rec.	81.80	50-150	WG776881	03/24/15 15:49
Mercury	< .02	mg/kg			WG777952	03/25/15 12:35
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1,1-Trichloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1,2-Trichloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1-Dichloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,1-Dichloroethene	< .001	mg/kg			WG777003	03/26/15 01:44
1,1-Dichloropropene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2,3-Trichlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2,3-Trichloropropane	< .0025	mg/kg			WG777003	03/26/15 01:44
1,2,3-Trimethylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2,4-Trichlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2,4-Trimethylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG777003	03/26/15 01:44
1,2-Dibromoethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,2-Dichlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,2-Dichloroethane	< .001	mg/kg			WG777003	03/26/15 01:44
1,2-Dichloropropane	< .001	mg/kg			WG777003	03/26/15 01:44
1,3,5-Trimethylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,3-Dichlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
1,3-Dichloropropane	< .001	mg/kg			WG777003	03/26/15 01:44
1,4-Dichlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
2,2-Dichloropropane	< .001	mg/kg			WG777003	03/26/15 01:44
2-Butanone (MEK)	< .01	mg/kg			WG777003	03/26/15 01:44
2-Chloroethyl vinyl ether	< .05	mg/kg			WG777003	03/26/15 01:44
2-Chlorotoluene	< .001	mg/kg			WG777003	03/26/15 01:44
4-Chlorotoluene	< .001	mg/kg			WG777003	03/26/15 01:44
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG777003	03/26/15 01:44
Acetone	< .05	mg/kg			WG777003	03/26/15 01:44
Acrylonitrile	< .01	mg/kg			WG777003	03/26/15 01:44
Benzene	< .001	mg/kg			WG777003	03/26/15 01:44
Bromobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Bromodichloromethane	< .001	mg/kg			WG777003	03/26/15 01:44
Bromoform	< .001	mg/kg			WG777003	03/26/15 01:44
Bromomethane	< .005	mg/kg			WG777003	03/26/15 01:44
Carbon tetrachloride	< .001	mg/kg			WG777003	03/26/15 01:44
Chlorobenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Chlorodibromomethane	< .001	mg/kg			WG777003	03/26/15 01:44
Chloroethane	< .005	mg/kg			WG777003	03/26/15 01:44
Chloroform	< .005	mg/kg			WG777003	03/26/15 01:44
Chloromethane	< .0025	mg/kg			WG777003	03/26/15 01:44
cis-1,2-Dichloroethene	< .001	mg/kg			WG777003	03/26/15 01:44
cis-1,3-Dichloropropene	< .001	mg/kg			WG777003	03/26/15 01:44
Di-isopropyl ether	< .001	mg/kg			WG777003	03/26/15 01:44

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Level II

L754321

March 31, 2015

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Dibromomethane	< .001	mg/kg			WG777003	03/26/15 01:44
Dichlorodifluoromethane	< .005	mg/kg			WG777003	03/26/15 01:44
Ethylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Hexachloro-1,3-butadiene	< .001	mg/kg			WG777003	03/26/15 01:44
Isopropylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Methyl tert-butyl ether	< .001	mg/kg			WG777003	03/26/15 01:44
Methylene Chloride	< .005	mg/kg			WG777003	03/26/15 01:44
n-Butylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
n-Propylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Naphthalene	< .005	mg/kg			WG777003	03/26/15 01:44
p-Isopropyltoluene	< .001	mg/kg			WG777003	03/26/15 01:44
sec-Butylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Styrene	< .001	mg/kg			WG777003	03/26/15 01:44
tert-Butylbenzene	< .001	mg/kg			WG777003	03/26/15 01:44
Tetrachloroethene	< .001	mg/kg			WG777003	03/26/15 01:44
Toluene	< .005	mg/kg			WG777003	03/26/15 01:44
trans-1,2-Dichloroethene	< .001	mg/kg			WG777003	03/26/15 01:44
trans-1,3-Dichloropropene	< .001	mg/kg			WG777003	03/26/15 01:44
Trichloroethene	< .001	mg/kg			WG777003	03/26/15 01:44
Trichlorofluoromethane	< .005	mg/kg			WG777003	03/26/15 01:44
Vinyl chloride	< .001	mg/kg			WG777003	03/26/15 01:44
Xylenes, Total	< .003	mg/kg			WG777003	03/26/15 01:44
4-Bromofluorobenzene		% Rec.	107.0	71-126	WG777003	03/26/15 01:44
Dibromofluoromethane		% Rec.	103.0	78.3-121	WG777003	03/26/15 01:44
Toluene-d8		% Rec.	109.0	88.5-111	WG777003	03/26/15 01:44
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1,1-Trichloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1,2-Trichloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1-Dichloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,1-Dichloroethene	< .001	mg/l			WG776954	03/27/15 00:21
1,1-Dichloropropene	< .001	mg/l			WG776954	03/27/15 00:21
1,2,3-Trichlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,2,3-Trichloropropane	< .001	mg/l			WG776954	03/27/15 00:21
1,2,3-Trimethylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,2,4-Trichlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,2,4-Trimethylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG776954	03/27/15 00:21
1,2-Dibromoethane	< .001	mg/l			WG776954	03/27/15 00:21
1,2-Dichlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,2-Dichloroethane	< .001	mg/l			WG776954	03/27/15 00:21
1,2-Dichloropropane	< .001	mg/l			WG776954	03/27/15 00:21
1,3,5-Trimethylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,3-Dichlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
1,3-Dichloropropane	< .001	mg/l			WG776954	03/27/15 00:21
1,4-Dichlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
2,2-Dichloropropane	< .001	mg/l			WG776954	03/27/15 00:21
2-Butanone (MEK)	< .01	mg/l			WG776954	03/27/15 00:21
2-Chloroethyl vinyl ether	< .05	mg/l			WG776954	03/27/15 00:21
2-Chlorotoluene	< .001	mg/l			WG776954	03/27/15 00:21
4-Chlorotoluene	< .001	mg/l			WG776954	03/27/15 00:21
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG776954	03/27/15 00:21
Acetone	< .05	mg/l			WG776954	03/27/15 00:21
Acrolein	< .025	mg/l			WG776954	03/27/15 00:21
Acrylonitrile	< .01	mg/l			WG776954	03/27/15 00:21
Benzene	< .001	mg/l			WG776954	03/27/15 00:21

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Level II

L754321

March 31, 2015

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Bromobenzene	< .001	mg/l			WG776954	03/27/15 00:21
Bromodichloromethane	< .001	mg/l			WG776954	03/27/15 00:21
Bromoform	< .001	mg/l			WG776954	03/27/15 00:21
Bromomethane	< .005	mg/l			WG776954	03/27/15 00:21
Carbon tetrachloride	< .001	mg/l			WG776954	03/27/15 00:21
Chlorobenzene	< .001	mg/l			WG776954	03/27/15 00:21
Chlorodibromomethane	< .001	mg/l			WG776954	03/27/15 00:21
Chloroethane	< .005	mg/l			WG776954	03/27/15 00:21
Chloroform	< .005	mg/l			WG776954	03/27/15 00:21
Chloromethane	< .0025	mg/l			WG776954	03/27/15 00:21
cis-1,2-Dichloroethene	< .001	mg/l			WG776954	03/27/15 00:21
cis-1,3-Dichloropropene	< .001	mg/l			WG776954	03/27/15 00:21
Di-isopropyl ether	< .001	mg/l			WG776954	03/27/15 00:21
Dibromomethane	< .001	mg/l			WG776954	03/27/15 00:21
Dichlorodifluoromethane	< .005	mg/l			WG776954	03/27/15 00:21
Ethylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
Hexachloro-1,3-butadiene	< .001	mg/l			WG776954	03/27/15 00:21
Isopropylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
Methyl tert-butyl ether	< .001	mg/l			WG776954	03/27/15 00:21
Methylene Chloride	< .005	mg/l			WG776954	03/27/15 00:21
n-Butylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
n-Propylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
Naphthalene	< .005	mg/l			WG776954	03/27/15 00:21
p-Isopropyltoluene	< .001	mg/l			WG776954	03/27/15 00:21
sec-Butylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
Styrene	< .001	mg/l			WG776954	03/27/15 00:21
tert-Butylbenzene	< .001	mg/l			WG776954	03/27/15 00:21
Tetrachloroethene	< .001	mg/l			WG776954	03/27/15 00:21
Toluene	< .005	mg/l			WG776954	03/27/15 00:21
trans-1,2-Dichloroethene	< .001	mg/l			WG776954	03/27/15 00:21
trans-1,3-Dichloropropene	< .001	mg/l			WG776954	03/27/15 00:21
Trichloroethene	< .001	mg/l			WG776954	03/27/15 00:21
Trichlorofluoromethane	< .005	mg/l			WG776954	03/27/15 00:21
Vinyl chloride	< .001	mg/l			WG776954	03/27/15 00:21
Xylenes, Total	< .003	mg/l			WG776954	03/27/15 00:21
4-Bromofluorobenzene		% Rec.	95.50	71-126	WG776954	03/27/15 00:21
Dibromofluoromethane		% Rec.	101.0	78.3-121	WG776954	03/27/15 00:21
Toluene-d8		% Rec.	103.0	88.5-111	WG776954	03/27/15 00:21

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	80.8	80.6	0.166	5	L754320-09	WG776782

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
1-Methylnaphthalene	mg/l	.002	0.00187	93.4	73.2-141	WG776616
2-Chloronaphthalene	mg/l	.002	0.00210	105.	74.2-135	WG776616
2-Methylnaphthalene	mg/l	.002	0.00186	92.8	72.4-141	WG776616
Acenaphthene	mg/l	.002	0.00196	98.0	76.2-136	WG776616
Acenaphthylene	mg/l	.002	0.00212	106.	71.3-139	WG776616
Anthracene	mg/l	.002	0.00213	107.	77.3-144	WG776616
Benzo(a)anthracene	mg/l	.002	0.00195	97.5	71.4-142	WG776616
Benzo(a)pyrene	mg/l	.002	0.00167	83.6	70.8-140	WG776616
Benzo(b)fluoranthene	mg/l	.002	0.00167	83.4	68-142	WG776616
Benzo(g,h,i)perylene	mg/l	.002	0.00186	92.9	62.8-146	WG776616
Benzo(k)fluoranthene	mg/l	.002	0.00148	74.0	70.1-144	WG776616
Chrysene	mg/l	.002	0.00197	98.4	73.6-143	WG776616

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March 31, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Dibenz(a,h)anthracene	mg/l	.002	0.00180	90.0	56.1-147	WG776616
Fluoranthene	mg/l	.002	0.00219	109.	77.9-147	WG776616
Fluorene	mg/l	.002	0.00181	90.3	75.3-136	WG776616
Indeno(1,2,3-cd)pyrene	mg/l	.002	0.00187	93.5	61.6-147	WG776616
Naphthalene	mg/l	.002	0.00195	97.4	72.2-137	WG776616
Phenanthrene	mg/l	.002	0.00198	98.9	76-133	WG776616
Pyrene	mg/l	.002	0.00213	106.	73-139	WG776616
2-Fluorobiphenyl				103.0	57.7-153	WG776616
Nitrobenzene-d5				96.60	45.1-170	WG776616
p-Terphenyl-d14				100.0	53.2-156	WG776616
Total Solids	%	50	50.0	100.	85-115	WG776782
Mercury	mg/l	.003	0.00271	90.0	85-115	WG776991
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0266	106.	74.2-124	WG777041
1,1,1-Trichloroethane	mg/l	.025	0.0257	103.	73.2-123	WG777041
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0257	103.	70.7-122	WG777041
1,1,2-Trichloroethane	mg/l	.025	0.0260	104.	77.7-118	WG777041
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0266	106.	67.2-143	WG777041
1,1-Dichloroethane	mg/l	.025	0.0247	99.0	70.7-126	WG777041
1,1-Dichloroethene	mg/l	.025	0.0266	107.	67.8-129	WG777041
1,1-Dichloropropene	mg/l	.025	0.0263	105.	73.1-125	WG777041
1,2,3-Trichlorobenzene	mg/l	.025	0.0272	109.	64.9-135	WG777041
1,2,3-Trichloropropane	mg/l	.025	0.0250	100.	71.8-121	WG777041
1,2,3-Trimethylbenzene	mg/l	.025	0.0260	104.	72.3-116	WG777041
1,2,4-Trichlorobenzene	mg/l	.025	0.0283	113.	69.7-136	WG777041
1,2,4-Trimethylbenzene	mg/l	.025	0.0263	105.	75-123	WG777041
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0248	99.4	65.4-128	WG777041
1,2-Dibromoethane	mg/l	.025	0.0264	106.	76.6-121	WG777041
1,2-Dichlorobenzene	mg/l	.025	0.0273	109.	78.4-117	WG777041
1,2-Dichloroethane	mg/l	.025	0.0237	94.7	68.8-124	WG777041
1,2-Dichloropropane	mg/l	.025	0.0253	101.	76.5-119	WG777041
1,3,5-Trimethylbenzene	mg/l	.025	0.0268	107.	75.6-124	WG777041
1,3-Dichlorobenzene	mg/l	.025	0.0275	110.	70.8-128	WG777041
1,3-Dichloropropane	mg/l	.025	0.0251	100.	77.4-117	WG777041
1,4-Dichlorobenzene	mg/l	.025	0.0259	104.	78.8-115	WG777041
2,2-Dichloropropane	mg/l	.025	0.0270	108.	62.4-133	WG777041
2-Butanone (MEK)	mg/l	.125	0.118	94.7	55-149	WG777041
2-Chloroethyl vinyl ether	mg/l	.125	0.144	116.	43.8-150	WG777041
2-Chlorotoluene	mg/l	.025	0.0275	110.	74.7-122	WG777041
4-Chlorotoluene	mg/l	.025	0.0283	113.	77.5-120	WG777041
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.140	112.	70.5-133	WG777041
Acetone	mg/l	.125	0.0845	67.6	35.6-163	WG777041
Acrolein	mg/l	.125	0.172	138.	10-190	WG777041
Acrylonitrile	mg/l	.125	0.114	91.3	55.2-130	WG777041
Benzene	mg/l	.025	0.0243	97.3	74.8-121	WG777041
Bromobenzene	mg/l	.025	0.0274	110.	77.5-116	WG777041
Bromodichloromethane	mg/l	.025	0.0274	110.	75.1-116	WG777041
Bromoform	mg/l	.025	0.0272	109.	67.5-130	WG777041
Bromomethane	mg/l	.025	0.0268	107.	49.9-162	WG777041
Carbon tetrachloride	mg/l	.025	0.0282	113.	70.2-123	WG777041
Chlorobenzene	mg/l	.025	0.0280	112.	78.1-119	WG777041
Chlorodibromomethane	mg/l	.025	0.0253	101.	74-121	WG777041
Chloroethane	mg/l	.025	0.0252	101.	61.7-135	WG777041
Chloroform	mg/l	.025	0.0241	96.6	76-121	WG777041

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Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Chloromethane	mg/l	.025	0.0241	96.4	61.5-129	WG777041
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.2	76-119	WG777041
cis-1,3-Dichloropropene	mg/l	.025	0.0270	108.	78.2-120	WG777041
Di-isopropyl ether	mg/l	.025	0.0245	98.0	65.6-132	WG777041
Dibromomethane	mg/l	.025	0.0261	104.	79.5-118	WG777041
Dichlorodifluoromethane	mg/l	.025	0.0292	117.	54.8-135	WG777041
Ethylbenzene	mg/l	.025	0.0273	109.	78.8-122	WG777041
Hexachloro-1,3-butadiene	mg/l	.025	0.0272	109.	64.7-129	WG777041
Isopropylbenzene	mg/l	.025	0.0279	112.	78.6-132	WG777041
Methyl tert-butyl ether	mg/l	.025	0.0242	96.8	71.2-126	WG777041
Methylene Chloride	mg/l	.025	0.0236	94.4	70.3-120	WG777041
n-Butylbenzene	mg/l	.025	0.0286	114.	76.2-126	WG777041
n-Propylbenzene	mg/l	.025	0.0285	114.	78.2-122	WG777041
Naphthalene	mg/l	.025	0.0261	104.	68.4-128	WG777041
p-Isopropyltoluene	mg/l	.025	0.0281	112.	74-131	WG777041
sec-Butylbenzene	mg/l	.025	0.0282	113.	74.4-127	WG777041
Styrene	mg/l	.025	0.0283	113.	80.4-126	WG777041
tert-Butylbenzene	mg/l	.025	0.0274	110.	75.3-126	WG777041
Tetrachloroethene	mg/l	.025	0.0294	118.	72.6-126	WG777041
Toluene	mg/l	.025	0.0257	103.	79.7-116	WG777041
trans-1,2-Dichloroethene	mg/l	.025	0.0257	103.	72.6-121	WG777041
trans-1,3-Dichloropropene	mg/l	.025	0.0255	102.	74.3-123	WG777041
Trichloroethene	mg/l	.025	0.0263	105.	77.7-118	WG777041
Trichlorofluoromethane	mg/l	.025	0.0272	109.	63.5-135	WG777041
Vinyl chloride	mg/l	.025	0.0260	104.	65.9-128	WG777041
Xylenes, Total	mg/l	.075	0.0834	111.	78.7-121	WG777041
4-Bromofluorobenzene				109.0	71-126	WG777041
Dibromofluoromethane				102.0	78.3-121	WG777041
Toluene-d8				111.0	88.5-111	WG777041
Arsenic	mg/l	1	1.02	102.	80-120	WG777100
Barium	mg/l	1	1.06	106.	80-120	WG777100
Cadmium	mg/l	1	1.06	106.	80-120	WG777100
Chromium	mg/l	1	1.08	108.	80-120	WG777100
Lead	mg/l	1	1.11	111.	80-120	WG777100
Selenium	mg/l	1	1.05	105.	80-120	WG777100
Silver	mg/l	1	0.987	99.0	80-120	WG777100
Diesel Range Organics (DRO)	mg/kg	30	27.9	92.8	50-150	WG776691
Residual Range Organics (RRO)	mg/kg	30	23.9	79.7	50-150	WG776691
o-Terphenyl				83.70	50-150	WG776691
Arsenic	mg/kg	100	104.	104.	80-120	WG776999
Barium	mg/kg	100	112.	112.	80-120	WG776999
Cadmium	mg/kg	100	103.	103.	80-120	WG776999
Chromium	mg/kg	100	104.	104.	80-120	WG776999
Lead	mg/kg	100	101.	101.	80-120	WG776999
Selenium	mg/kg	100	105.	105.	80-120	WG776999
Silver	mg/kg	100	102.	102.	80-120	WG776999
Diesel Range Organics (DRO)	mg/l	.75	0.651	86.8	50-150	WG776881
Residual Range Organics (RRO)	mg/l	.75	0.645	85.9	50-150	WG776881
o-Terphenyl				85.00	50-150	WG776881

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Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Mercury	mg/kg	.458	0.454	99.0	80-120	WG777952
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0292	117.	72.9-124	WG777003
1,1,1-Trichloroethane	mg/kg	.025	0.0272	109.	73.7-124	WG777003
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0255	102.	69.4-122	WG777003
1,1,2-Trichloroethane	mg/kg	.025	0.0268	107.	79.1-118	WG777003
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0278	111.	70-146	WG777003
1,1-Dichloroethane	mg/kg	.025	0.0267	107.	75-124	WG777003
1,1-Dichloroethene	mg/kg	.025	0.0272	109.	70.4-129	WG777003
1,1-Dichloropropene	mg/kg	.025	0.0270	108.	74.9-124	WG777003
1,2,3-Trichlorobenzene	mg/kg	.025	0.0285	114.	69.3-131	WG777003
1,2,3-Trichloropropane	mg/kg	.025	0.0241	96.3	71.4-123	WG777003
1,2,3-Trimethylbenzene	mg/kg	.025	0.0277	111.	73.6-113	WG777003
1,2,4-Trichlorobenzene	mg/kg	.025	0.0280	112.	71.9-137	WG777003
1,2,4-Trimethylbenzene	mg/kg	.025	0.0271	108.	75.5-122	WG777003
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0241	96.5	62.8-133	WG777003
1,2-Dibromoethane	mg/kg	.025	0.0265	106.	78.6-120	WG777003
1,2-Dichlorobenzene	mg/kg	.025	0.0269	108.	78.3-118	WG777003
1,2-Dichloroethane	mg/kg	.025	0.0255	102.	70.1-124	WG777003
1,2-Dichloropropane	mg/kg	.025	0.0272	109.	77.9-119	WG777003
1,3,5-Trimethylbenzene	mg/kg	.025	0.0278	111.	75.9-124	WG777003
1,3-Dichlorobenzene	mg/kg	.025	0.0271	109.	72-126	WG777003
1,3-Dichloropropane	mg/kg	.025	0.0248	99.2	79.1-117	WG777003
1,4-Dichlorobenzene	mg/kg	.025	0.0267	107.	78.3-117	WG777003
2,2-Dichloropropane	mg/kg	.025	0.0271	109.	61.3-136	WG777003
2-Butanone (MEK)	mg/kg	.125	0.112	90.0	53.7-153	WG777003
2-Chloroethyl vinyl ether	mg/kg	.125	0.144	115.	37.7-157	WG777003
2-Chlorotoluene	mg/kg	.025	0.0278	111.	75.6-121	WG777003
4-Chlorotoluene	mg/kg	.025	0.0271	108.	77.3-120	WG777003
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.129	103.	70.4-137	WG777003
Acetone	mg/kg	.125	0.0661	52.9	35.1-175	WG777003
Acrylonitrile	mg/kg	.125	0.116	92.5	56.4-128	WG777003
Benzene	mg/kg	.025	0.0265	106.	77.1-121	WG777003
Bromobenzene	mg/kg	.025	0.0259	103.	78.2-115	WG777003
Bromodichloromethane	mg/kg	.025	0.0257	103.	74.9-115	WG777003
Bromoform	mg/kg	.025	0.0257	103.	65.9-132	WG777003
Bromomethane	mg/kg	.025	0.0270	108.	48.7-165	WG777003
Carbon tetrachloride	mg/kg	.025	0.0272	109.	70-124	WG777003
Chlorobenzene	mg/kg	.025	0.0273	109.	79.1-119	WG777003
Chlorodibromomethane	mg/kg	.025	0.0266	107.	73.5-121	WG777003
Chloroethane	mg/kg	.025	0.0272	109.	66.2-132	WG777003
Chloroform	mg/kg	.025	0.0263	105.	76.7-122	WG777003
Chloromethane	mg/kg	.025	0.0256	102.	63.4-131	WG777003
cis-1,2-Dichloroethene	mg/kg	.025	0.0264	106.	78.2-119	WG777003
cis-1,3-Dichloropropene	mg/kg	.025	0.0269	107.	79.6-120	WG777003
Di-isopropyl ether	mg/kg	.025	0.0264	106.	70.4-133	WG777003
Dibromomethane	mg/kg	.025	0.0252	101.	79.4-120	WG777003
Dichlorodifluoromethane	mg/kg	.025	0.0271	108.	57.1-137	WG777003
Ethylbenzene	mg/kg	.025	0.0276	110.	79.7-122	WG777003
Hexachloro-1,3-butadiene	mg/kg	.025	0.0292	117.	68.2-123	WG777003
Isopropylbenzene	mg/kg	.025	0.0288	115.	80-135	WG777003
Methyl tert-butyl ether	mg/kg	.025	0.0253	101.	73-129	WG777003
Methylene Chloride	mg/kg	.025	0.0289	115.	72.6-120	WG777003
n-Butylbenzene	mg/kg	.025	0.0273	109.	77.5-126	WG777003
n-Propylbenzene	mg/kg	.025	0.0280	112.	77.9-123	WG777003
Naphthalene	mg/kg	.025	0.0255	102.	69.8-128	WG777003
p-Isopropyltoluene	mg/kg	.025	0.0277	111.	75.8-129	WG777003
sec-Butylbenzene	mg/kg	.025	0.0281	112.	75.8-126	WG777003

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Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Styrene	mg/kg	.025	0.0276	110.	82.4-126	WG777003
tert-Butylbenzene	mg/kg	.025	0.0285	114.	76.4-126	WG777003
Tetrachloroethene	mg/kg	.025	0.0288	115.	73.9-125	WG777003
Toluene	mg/kg	.025	0.0262	105.	79.7-118	WG777003
trans-1,2-Dichloroethene	mg/kg	.025	0.0272	109.	73.8-122	WG777003
trans-1,3-Dichloropropene	mg/kg	.025	0.0259	104.	75.9-124	WG777003
Trichloroethene	mg/kg	.025	0.0275	110.	77.9-118	WG777003
Trichlorofluoromethane	mg/kg	.025	0.0273	109.	67.7-131	WG777003
Vinyl chloride	mg/kg	.025	0.0263	105.	66.7-130	WG777003
Xylenes, Total	mg/kg	.075	0.0846	113.	78.8-121	WG777003
4-Bromofluorobenzene				104.0	71-126	WG777003
Dibromofluoromethane				103.0	78.3-121	WG777003
Toluene-d8				108.0	88.5-111	WG777003
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0268	107.	74.2-124	WG776954
1,1,1-Trichloroethane	mg/l	.025	0.0272	109.	73.2-123	WG776954
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0237	94.7	70.7-122	WG776954
1,1,2-Trichloroethane	mg/l	.025	0.0250	100.	77.7-118	WG776954
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0260	104.	67.2-143	WG776954
1,1-Dichloroethane	mg/l	.025	0.0278	111.	70.7-126	WG776954
1,1-Dichloroethene	mg/l	.025	0.0292	117.	67.8-129	WG776954
1,1-Dichloropropene	mg/l	.025	0.0270	108.	73.1-125	WG776954
1,2,3-Trichlorobenzene	mg/l	.025	0.0243	97.1	64.9-135	WG776954
1,2,3-Trichloropropane	mg/l	.025	0.0228	91.3	71.8-121	WG776954
1,2,3-Trimethylbenzene	mg/l	.025	0.0270	108.	72.3-116	WG776954
1,2,4-Trichlorobenzene	mg/l	.025	0.0257	103.	69.7-136	WG776954
1,2,4-Trimethylbenzene	mg/l	.025	0.0253	101.	75-123	WG776954
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0204	81.6	65.4-128	WG776954
1,2-Dibromoethane	mg/l	.025	0.0245	97.9	76.6-121	WG776954
1,2-Dichlorobenzene	mg/l	.025	0.0259	104.	78.4-117	WG776954
1,2-Dichloroethane	mg/l	.025	0.0270	108.	68.8-124	WG776954
1,2-Dichloropropane	mg/l	.025	0.0267	107.	76.5-119	WG776954
1,3,5-Trimethylbenzene	mg/l	.025	0.0257	103.	75.6-124	WG776954
1,3-Dichlorobenzene	mg/l	.025	0.0246	98.3	70.8-128	WG776954
1,3-Dichloropropane	mg/l	.025	0.0252	101.	77.4-117	WG776954
1,4-Dichlorobenzene	mg/l	.025	0.0254	102.	78.8-115	WG776954
2,2-Dichloropropane	mg/l	.025	0.0323	129.	62.4-133	WG776954
2-Butanone (MEK)	mg/l	.125	0.121	96.5	55-149	WG776954
2-Chloroethyl vinyl ether	mg/l	.125	0.140	112.	43.8-150	WG776954
2-Chlorotoluene	mg/l	.025	0.0250	99.9	74.7-122	WG776954
4-Chlorotoluene	mg/l	.025	0.0264	106.	77.5-120	WG776954
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.127	101.	70.5-133	WG776954
Acetone	mg/l	.125	0.0937	75.0	35.6-163	WG776954
Acrolein	mg/l	.125	0.108	86.6	10-190	WG776954
Acrylonitrile	mg/l	.125	0.116	92.5	55.2-130	WG776954
Benzene	mg/l	.025	0.0267	107.	74.8-121	WG776954
Bromobenzene	mg/l	.025	0.0261	104.	77.5-116	WG776954
Bromodichloromethane	mg/l	.025	0.0260	104.	75.1-116	WG776954
Bromoform	mg/l	.025	0.0253	101.	67.5-130	WG776954
Bromomethane	mg/l	.025	0.0262	105.	49.9-162	WG776954
Carbon tetrachloride	mg/l	.025	0.0282	113.	70.2-123	WG776954
Chlorobenzene	mg/l	.025	0.0258	103.	78.1-119	WG776954
Chlorodibromomethane	mg/l	.025	0.0260	104.	74-121	WG776954
Chloroethane	mg/l	.025	0.0269	107.	61.7-135	WG776954
Chloroform	mg/l	.025	0.0261	104.	76-121	WG776954
Chloromethane	mg/l	.025	0.0236	94.5	61.5-129	WG776954
cis-1,2-Dichloroethene	mg/l	.025	0.0262	105.	76-119	WG776954
cis-1,3-Dichloropropene	mg/l	.025	0.0273	109.	78.2-120	WG776954

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Tax I.D. 62-0814289

Est. 1970

Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Di-isopropyl ether	mg/l	.025	0.0273	109.	65.6-132	WG776954
Dibromomethane	mg/l	.025	0.0250	100.	79.5-118	WG776954
Dichlorodifluoromethane	mg/l	.025	0.0230	92.1	54.8-135	WG776954
Ethylbenzene	mg/l	.025	0.0267	107.	78.8-122	WG776954
Hexachloro-1,3-butadiene	mg/l	.025	0.0257	103.	64.7-129	WG776954
Isopropylbenzene	mg/l	.025	0.0263	105.	78.6-132	WG776954
Methyl tert-butyl ether	mg/l	.025	0.0252	101.	71.2-126	WG776954
Methylene Chloride	mg/l	.025	0.0268	107.	70.3-120	WG776954
n-Butylbenzene	mg/l	.025	0.0298	119.	76.2-126	WG776954
n-Propylbenzene	mg/l	.025	0.0263	105.	78.2-122	WG776954
Naphthalene	mg/l	.025	0.0225	90.2	68.4-128	WG776954
p-Isopropyltoluene	mg/l	.025	0.0261	105.	74-131	WG776954
sec-Butylbenzene	mg/l	.025	0.0262	105.	74.4-127	WG776954
Styrene	mg/l	.025	0.0266	106.	80.4-126	WG776954
tert-Butylbenzene	mg/l	.025	0.0257	103.	75.3-126	WG776954
Tetrachloroethene	mg/l	.025	0.0274	110.	72.6-126	WG776954
Toluene	mg/l	.025	0.0256	102.	79.7-116	WG776954
trans-1,2-Dichloroethene	mg/l	.025	0.0271	108.	72.6-121	WG776954
trans-1,3-Dichloropropene	mg/l	.025	0.0261	104.	74.3-123	WG776954
Trichloroethene	mg/l	.025	0.0254	101.	77.7-118	WG776954
Trichlorofluoromethane	mg/l	.025	0.0251	101.	63.5-135	WG776954
Vinyl chloride	mg/l	.025	0.0268	107.	65.9-128	WG776954
Xylenes, Total	mg/l	.075	0.0790	105.	78.7-121	WG776954
4-Bromofluorobenzene				97.50	71-126	WG776954
Dibromofluoromethane				103.0	78.3-121	WG776954
Toluene-d8				105.0	88.5-111	WG776954

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
1-Methylnaphthalene	mg/l	0.00185	0.00187	92.0	73.2-141	1.18	20	WG776616
2-Chloronaphthalene	mg/l	0.00215	0.00210	107.	74.2-135	2.31	20	WG776616
2-Methylnaphthalene	mg/l	0.00188	0.00186	94.0	72.4-141	1.02	20	WG776616
Acenaphthene	mg/l	0.00200	0.00196	100.	76.2-136	2.14	20	WG776616
Acenaphthylene	mg/l	0.00214	0.00212	107.	71.3-139	0.690	20	WG776616
Anthracene	mg/l	0.00214	0.00213	107.	77.3-144	0.450	20	WG776616
Benzo(a)anthracene	mg/l	0.00201	0.00195	100.	71.4-142	2.96	20	WG776616
Benzo(a)pyrene	mg/l	0.00173	0.00167	86.0	70.8-140	3.32	20	WG776616
Benzo(b)fluoranthene	mg/l	0.00156	0.00167	78.0	68-142	6.82	20	WG776616
Benzo(g,h,i)perylene	mg/l	0.00199	0.00186	100.	62.8-146	6.93	20	WG776616
Benzo(k)fluoranthene	mg/l	0.00175	0.00148	88.0	70.1-144	16.9	20	WG776616
Chrysene	mg/l	0.00199	0.00197	100.	73.6-143	1.28	20	WG776616
Dibenz(a,h)anthracene	mg/l	0.00196	0.00180	98.0	56.1-147	8.56	20	WG776616
Fluoranthene	mg/l	0.00202	0.00219	101.	77.9-147	7.79	20	WG776616
Fluorene	mg/l	0.00194	0.00181	97.0	75.3-136	7.41	20	WG776616
Indeno(1,2,3-cd)pyrene	mg/l	0.00199	0.00187	100.	61.6-147	6.48	20	WG776616
Naphthalene	mg/l	0.00196	0.00195	98.0	72.2-137	0.580	20	WG776616
Phenanthrene	mg/l	0.00201	0.00198	101.	76-133	1.86	20	WG776616
Pyrene	mg/l	0.00221	0.00213	111.	73-139	3.80	20	WG776616
2-Fluorobiphenyl				108.0	57.7-153			WG776616
Nitrobenzene-d5				96.40	45.1-170			WG776616
p-Terphenyl-d14				107.0	53.2-156			WG776616
Mercury	mg/l	0.00287	0.00271	96.0	85-115	6.00	20	WG776991
1,1,1,2-Tetrachloroethane	mg/l	0.0263	0.0266	105.	74.2-124	1.21	20	WG777041
1,1,1-Trichloroethane	mg/l	0.0258	0.0257	103.	73.2-123	0.140	20	WG777041

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Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
1,1,2,2-Tetrachloroethane	mg/l	0.0259	0.0257	104.	70.7-122	0.980	20	WG777041
1,1,2-Trichloroethane	mg/l	0.0254	0.0260	102.	77.7-118	2.03	20	WG777041
1,1,2-Trichlorotrifluoroethane	mg/l	0.0262	0.0266	105.	67.2-143	1.41	20	WG777041
1,1-Dichloroethane	mg/l	0.0244	0.0247	97.0	70.7-126	1.61	20	WG777041
1,1-Dichloroethene	mg/l	0.0257	0.0266	103.	67.8-129	3.40	20	WG777041
1,1-Dichloropropene	mg/l	0.0258	0.0263	103.	73.1-125	2.08	20	WG777041
1,2,3-Trichlorobenzene	mg/l	0.0277	0.0272	111.	64.9-135	1.70	20	WG777041
1,2,3-Trichloropropane	mg/l	0.0252	0.0250	101.	71.8-121	0.860	20	WG777041
1,2,3-Trimethylbenzene	mg/l	0.0259	0.0260	103.	72.3-116	0.450	20	WG777041
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0283	114.	69.7-136	0.320	20	WG777041
1,2,4-Trimethylbenzene	mg/l	0.0262	0.0263	105.	75-123	0.350	20	WG777041
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0.0248	104.	65.4-128	4.08	20	WG777041
1,2-Dibromoethane	mg/l	0.0260	0.0264	104.	76.6-121	1.66	20	WG777041
1,2-Dichlorobenzene	mg/l	0.0268	0.0273	107.	78.4-117	1.77	20	WG777041
1,2-Dichloroethane	mg/l	0.0235	0.0237	94.0	68.8-124	0.890	20	WG777041
1,2-Dichloropropane	mg/l	0.0247	0.0253	99.0	76.5-119	2.33	20	WG777041
1,3,5-Trimethylbenzene	mg/l	0.0263	0.0268	105.	75.6-124	2.00	20	WG777041
1,3-Dichlorobenzene	mg/l	0.0270	0.0275	108.	70.8-128	1.64	20	WG777041
1,3-Dichloropropane	mg/l	0.0249	0.0251	100.	77.4-117	0.580	20	WG777041
1,4-Dichlorobenzene	mg/l	0.0256	0.0259	102.	78.8-115	1.25	20	WG777041
2,2-Dichloropropane	mg/l	0.0273	0.0270	109.	62.4-133	0.970	20	WG777041
2-Butanone (MEK)	mg/l	0.121	0.118	96.0	55-149	1.87	20	WG777041
2-Chloroethyl vinyl ether	mg/l	0.148	0.144	118.	43.8-150	2.44	20	WG777041
2-Chlorotoluene	mg/l	0.0264	0.0275	105.	74.7-122	4.32	20	WG777041
4-Chlorotoluene	mg/l	0.0281	0.0283	112.	77.5-120	0.760	20	WG777041
4-Methyl-2-pentanone (MIBK)	mg/l	0.145	0.140	116.	70.5-133	3.39	20	WG777041
Acetone	mg/l	0.0843	0.0845	67.0	35.6-163	0.310	23.9	WG777041
Acrolein	mg/l	0.173	0.172	138.	10-190	0.440	28.1	WG777041
Acrylonitrile	mg/l	0.116	0.114	93.0	55.2-130	2.07	20	WG777041
Benzene	mg/l	0.0243	0.0243	97.0	74.8-121	0.220	20	WG777041
Bromobenzene	mg/l	0.0270	0.0274	108.	77.5-116	1.45	20	WG777041
Bromodichloromethane	mg/l	0.0272	0.0274	109.	75.1-116	0.880	20	WG777041
Bromoform	mg/l	0.0269	0.0272	107.	67.5-130	1.19	20	WG777041
Bromomethane	mg/l	0.0261	0.0268	104.	49.9-162	2.67	20	WG777041
Carbon tetrachloride	mg/l	0.0286	0.0282	114.	70.2-123	1.40	20	WG777041
Chlorobenzene	mg/l	0.0274	0.0280	110.	78.1-119	1.99	20	WG777041
Chlorodibromomethane	mg/l	0.0253	0.0253	101.	74-121	0.0600	20	WG777041
Chloroethane	mg/l	0.0249	0.0252	100.	61.7-135	1.15	20	WG777041
Chloroform	mg/l	0.0241	0.0241	96.0	76-121	0.270	20	WG777041
Chloromethane	mg/l	0.0240	0.0241	96.0	61.5-129	0.440	20	WG777041
cis-1,2-Dichloroethene	mg/l	0.0245	0.0246	98.0	76-119	0.210	20	WG777041
cis-1,3-Dichloropropene	mg/l	0.0265	0.0270	106.	78.2-120	1.88	20	WG777041
Di-isopropyl ether	mg/l	0.0242	0.0245	97.0	65.6-132	1.32	20	WG777041
Dibromomethane	mg/l	0.0257	0.0261	103.	79.5-118	1.44	20	WG777041
Dichlorodifluoromethane	mg/l	0.0290	0.0292	116.	54.8-135	0.730	20	WG777041
Ethylbenzene	mg/l	0.0270	0.0273	108.	78.8-122	1.09	20	WG777041
Hexachloro-1,3-butadiene	mg/l	0.0270	0.0272	108.	64.7-129	0.910	20	WG777041
Isopropylbenzene	mg/l	0.0274	0.0279	110.	78.6-132	1.84	20	WG777041
Methyl tert-butyl ether	mg/l	0.0244	0.0242	98.0	71.2-126	0.840	20	WG777041
Methylene Chloride	mg/l	0.0238	0.0236	95.0	70.3-120	0.910	20	WG777041
n-Butylbenzene	mg/l	0.0286	0.0286	114.	76.2-126	0.170	20	WG777041
n-Propylbenzene	mg/l	0.0279	0.0285	112.	78.2-122	2.01	20	WG777041
Naphthalene	mg/l	0.0271	0.0261	108.	68.4-128	3.70	20	WG777041
p-Isopropyltoluene	mg/l	0.0279	0.0281	112.	74-131	0.830	20	WG777041
sec-Butylbenzene	mg/l	0.0279	0.0282	112.	74.4-127	0.970	20	WG777041
Styrene	mg/l	0.0280	0.0283	112.	80.4-126	0.950	20	WG777041
tert-Butylbenzene	mg/l	0.0269	0.0274	107.	75.3-126	2.02	20	WG777041
Tetrachloroethene	mg/l	0.0286	0.0294	114.	72.6-126	2.64	20	WG777041
Toluene	mg/l	0.0256	0.0257	102.	79.7-116	0.610	20	WG777041

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Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
trans-1,2-Dichloroethene	mg/l	0.0255	0.0257	102.	72.6-121	0.760	20	WG777041
trans-1,3-Dichloropropene	mg/l	0.0251	0.0255	100.	74.3-123	1.27	20	WG777041
Trichloroethene	mg/l	0.0263	0.0263	105.	77.7-118	0.170	20	WG777041
Trichlorofluoromethane	mg/l	0.0266	0.0272	106.	63.5-135	2.25	20	WG777041
Vinyl chloride	mg/l	0.0259	0.0260	104.	65.9-128	0.180	20	WG777041
Xylenes, Total	mg/l	0.0816	0.0834	109.	78.7-121	2.22	20	WG777041
4-Bromofluorobenzene				109.0	71-126			WG777041
Dibromofluoromethane				102.0	78.3-121			WG777041
Toluene-d8				110.0	88.5-111			WG777041
Arsenic	mg/l	1.03	1.02	103.	80-120	1.00	20	WG777100
Barium	mg/l	1.06	1.06	106.	80-120	0.0	20	WG777100
Cadmium	mg/l	1.06	1.06	106.	80-120	0.0	20	WG777100
Chromium	mg/l	1.08	1.08	108.	80-120	0.0	20	WG777100
Lead	mg/l	1.11	1.11	111.	80-120	0.0	20	WG777100
Selenium	mg/l	1.05	1.05	105.	80-120	1.00	20	WG777100
Silver	mg/l	1.01	0.987	101.	80-120	2.00	20	WG777100
Diesel Range Organics (DRO)	mg/kg	24.5	27.9	82.0	50-150	13.0	20	WG776691
Residual Range Organics (RRO)	mg/kg	20.8	23.9	69.0	50-150	14.1	20	WG776691
o-Terphenyl				74.70	50-150			WG776691
Arsenic	mg/kg	108.	104.	108.	80-120	4.00	20	WG776999
Barium	mg/kg	115.	112.	115.	80-120	3.00	20	WG776999
Cadmium	mg/kg	107.	103.	107.	80-120	3.00	20	WG776999
Chromium	mg/kg	108.	104.	108.	80-120	4.00	20	WG776999
Lead	mg/kg	104.	101.	104.	80-120	3.00	20	WG776999
Selenium	mg/kg	109.	105.	109.	80-120	4.00	20	WG776999
Silver	mg/kg	105.	102.	105.	80-120	3.00	20	WG776999
Diesel Range Organics (DRO)	mg/l	0.630	0.651	84.0	50-150	3.39	20	WG776881
Residual Range Organics (RRO)	mg/l	0.656	0.645	87.0	50-150	1.74	20	WG776881
o-Terphenyl				81.90	50-150			WG776881
Mercury	mg/kg	0.385	0.454	84.0	80-120	16.0	20	WG777952
1,1,1,2-Tetrachloroethane	mg/kg	0.0285	0.0292	114.	72.9-124	2.29	20	WG777003
1,1,1-Trichloroethane	mg/kg	0.0268	0.0272	107.	73.7-124	1.71	20	WG777003
1,1,2,2-Tetrachloroethane	mg/kg	0.0259	0.0255	104.	69.4-122	1.63	20	WG777003
1,1,2-Trichloroethane	mg/kg	0.0269	0.0268	108.	79.1-118	0.240	20	WG777003
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0279	0.0278	112.	70-146	0.570	20	WG777003
1,1-Dichloroethane	mg/kg	0.0267	0.0267	107.	75-124	0.0800	20	WG777003
1,1-Dichloroethene	mg/kg	0.0269	0.0272	108.	70.4-129	1.21	20	WG777003
1,1-Dichloropropene	mg/kg	0.0265	0.0270	106.	74.9-124	1.88	20	WG777003
1,2,3-Trichlorobenzene	mg/kg	0.0282	0.0285	113.	69.3-131	1.24	20	WG777003
1,2,3-Trichloropropane	mg/kg	0.0256	0.0241	102.	71.4-123	6.28	20	WG777003
1,2,3-Trimethylbenzene	mg/kg	0.0270	0.0277	108.	73.6-113	2.53	20	WG777003
1,2,4-Trichlorobenzene	mg/kg	0.0273	0.0280	109.	71.9-137	2.77	20	WG777003
1,2,4-Trimethylbenzene	mg/kg	0.0269	0.0271	108.	75.5-122	0.860	20	WG777003
1,2-Dibromo-3-Chloropropane	mg/kg	0.0244	0.0241	98.0	62.8-133	1.29	20	WG777003
1,2-Dibromoethane	mg/kg	0.0277	0.0265	111.	78.6-120	4.57	20	WG777003
1,2-Dichlorobenzene	mg/kg	0.0272	0.0269	109.	78.3-118	1.02	20	WG777003
1,2-Dichloroethane	mg/kg	0.0258	0.0255	103.	70.1-124	1.04	20	WG777003

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Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
1,2-Dichloropropane	mg/kg	0.0268	0.0272	107.	77.9-119	1.72	20	WG777003
1,3,5-Trimethylbenzene	mg/kg	0.0275	0.0278	110.	75.9-124	1.09	20	WG777003
1,3-Dichlorobenzene	mg/kg	0.0275	0.0271	110.	72-126	1.50	20	WG777003
1,3-Dichloropropane	mg/kg	0.0253	0.0248	101.	79.1-117	2.02	20	WG777003
1,4-Dichlorobenzene	mg/kg	0.0267	0.0267	107.	78.3-117	0.0900	20	WG777003
2,2-Dichloropropane	mg/kg	0.0274	0.0271	110.	61.3-136	1.00	20	WG777003
2-Butanone (MEK)	mg/kg	0.118	0.112	94.0	53.7-153	4.93	21.2	WG777003
2-Chloroethyl vinyl ether	mg/kg	0.148	0.144	119.	37.7-157	3.12	20	WG777003
2-Chlorotoluene	mg/kg	0.0279	0.0278	112.	75.6-121	0.140	20	WG777003
4-Chlorotoluene	mg/kg	0.0273	0.0271	109.	77.3-120	0.830	20	WG777003
4-Methyl-2-pentanone (MIBK)	mg/kg	0.136	0.129	109.	70.4-137	5.67	20	WG777003
Acetone	mg/kg	0.0735	0.0661	59.0	35.1-175	10.7	26.1	WG777003
Acrylonitrile	mg/kg	0.127	0.116	102.	56.4-128	9.45	20	WG777003
Benzene	mg/kg	0.0266	0.0265	106.	77.1-121	0.360	20	WG777003
Bromobenzene	mg/kg	0.0262	0.0259	105.	78.2-115	1.14	20	WG777003
Bromodichloromethane	mg/kg	0.0263	0.0257	105.	74.9-115	2.07	20	WG777003
Bromoform	mg/kg	0.0267	0.0257	107.	65.9-132	3.83	20	WG777003
Bromomethane	mg/kg	0.0261	0.0270	104.	48.7-165	3.29	20	WG777003
Carbon tetrachloride	mg/kg	0.0269	0.0272	107.	70-124	1.26	20	WG777003
Chlorobenzene	mg/kg	0.0279	0.0273	112.	79.1-119	2.19	20	WG777003
Chlorodibromomethane	mg/kg	0.0274	0.0266	110.	73.5-121	2.78	20	WG777003
Chloroethane	mg/kg	0.0266	0.0272	106.	66.2-132	2.01	20	WG777003
Chloroform	mg/kg	0.0262	0.0263	105.	76.7-122	0.280	20	WG777003
Chloromethane	mg/kg	0.0250	0.0256	100.	63.4-131	2.58	20	WG777003
cis-1,2-Dichloroethene	mg/kg	0.0259	0.0264	104.	78.2-119	1.88	20	WG777003
cis-1,3-Dichloropropene	mg/kg	0.0266	0.0269	106.	79.6-120	1.09	20	WG777003
Di-isopropyl ether	mg/kg	0.0267	0.0264	107.	70.4-133	1.12	20	WG777003
Dibromomethane	mg/kg	0.0259	0.0252	104.	79.4-120	3.04	20	WG777003
Dichlorodifluoromethane	mg/kg	0.0271	0.0271	108.	57.1-137	0.0400	20	WG777003
Ethylbenzene	mg/kg	0.0279	0.0276	112.	79.7-122	1.24	20	WG777003
Hexachloro-1,3-butadiene	mg/kg	0.0278	0.0292	111.	68.2-123	4.68	20	WG777003
Isopropylbenzene	mg/kg	0.0285	0.0288	114.	80-135	1.07	20	WG777003
Methyl tert-butyl ether	mg/kg	0.0253	0.0253	101.	73-129	0.100	20	WG777003
Methylene Chloride	mg/kg	0.0292	0.0289	117.	72.6-120	1.11	20	WG777003
n-Butylbenzene	mg/kg	0.0273	0.0273	109.	77.5-126	0.120	20	WG777003
n-Propylbenzene	mg/kg	0.0282	0.0280	113.	77.9-123	0.710	20	WG777003
Naphthalene	mg/kg	0.0249	0.0255	100.	69.8-128	2.08	20	WG777003
p-Isopropyltoluene	mg/kg	0.0272	0.0277	109.	75.8-129	1.79	20	WG777003
sec-Butylbenzene	mg/kg	0.0278	0.0281	111.	75.8-126	1.19	20	WG777003
Styrene	mg/kg	0.0279	0.0276	112.	82.4-126	1.11	20	WG777003
tert-Butylbenzene	mg/kg	0.0279	0.0285	112.	76.4-126	1.90	20	WG777003
Tetrachloroethene	mg/kg	0.0286	0.0288	114.	73.9-125	0.520	20	WG777003
Toluene	mg/kg	0.0269	0.0262	108.	79.7-118	2.48	20	WG777003
trans-1,2-Dichloroethene	mg/kg	0.0273	0.0272	109.	73.8-122	0.380	20	WG777003
trans-1,3-Dichloropropene	mg/kg	0.0266	0.0259	106.	75.9-124	2.72	20	WG777003
Trichloroethene	mg/kg	0.0280	0.0275	112.	77.9-118	2.04	20	WG777003
Trichlorofluoromethane	mg/kg	0.0273	0.0273	109.	67.7-131	0.0100	20	WG777003
Vinyl chloride	mg/kg	0.0259	0.0263	103.	66.7-130	1.89	20	WG777003
Xylenes, Total	mg/kg	0.0853	0.0846	114.	78.8-121	0.840	20	WG777003
4-Bromofluorobenzene				105.0	71-126			WG777003
Dibromofluoromethane				103.0	78.3-121			WG777003
Toluene-d8				109.0	88.5-111			WG777003
1,1,1,2-Tetrachloroethane	mg/l	0.0257	0.0268	103.	74.2-124	3.92	20	WG776954
1,1,1-Trichloroethane	mg/l	0.0274	0.0272	109.	73.2-123	0.480	20	WG776954
1,1,2,2-Tetrachloroethane	mg/l	0.0231	0.0237	92.0	70.7-122	2.39	20	WG776954
1,1,2-Trichloroethane	mg/l	0.0238	0.0250	95.0	77.7-118	4.83	20	WG776954
1,1,2-Trichlorotrifluoroethane	mg/l	0.0254	0.0260	102.	67.2-143	2.46	20	WG776954

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
1,1-Dichloroethane	mg/l	0.0268	0.0278	107.	70.7-126	3.49	20	WG776954
1,1-Dichloroethene	mg/l	0.0286	0.0292	114.	67.8-129	1.94	20	WG776954
1,1-Dichloropropene	mg/l	0.0269	0.0270	108.	73.1-125	0.430	20	WG776954
1,2,3-Trichlorobenzene	mg/l	0.0226	0.0243	90.0	64.9-135	7.23	20	WG776954
1,2,3-Trichloropropane	mg/l	0.0224	0.0228	90.0	71.8-121	1.88	20	WG776954
1,2,3-Trimethylbenzene	mg/l	0.0265	0.0270	106.	72.3-116	1.53	20	WG776954
1,2,4-Trichlorobenzene	mg/l	0.0249	0.0257	100.	69.7-136	3.01	20	WG776954
1,2,4-Trimethylbenzene	mg/l	0.0242	0.0253	97.0	75-123	4.72	20	WG776954
1,2-Dibromo-3-Chloropropane	mg/l	0.0208	0.0204	83.0	65.4-128	1.90	20	WG776954
1,2-Dibromoethane	mg/l	0.0235	0.0245	94.0	76.6-121	4.20	20	WG776954
1,2-Dichlorobenzene	mg/l	0.0254	0.0259	101.	78.4-117	2.04	20	WG776954
1,2-Dichloroethane	mg/l	0.0262	0.0270	105.	68.8-124	3.13	20	WG776954
1,2-Dichloropropane	mg/l	0.0261	0.0267	104.	76.5-119	2.54	20	WG776954
1,3,5-Trimethylbenzene	mg/l	0.0247	0.0257	99.0	75.6-124	3.62	20	WG776954
1,3-Dichlorobenzene	mg/l	0.0241	0.0246	96.0	70.8-128	1.93	20	WG776954
1,3-Dichloropropane	mg/l	0.0245	0.0252	98.0	77.4-117	3.13	20	WG776954
1,4-Dichlorobenzene	mg/l	0.0249	0.0254	100.	78.8-115	2.01	20	WG776954
2,2-Dichloropropane	mg/l	0.0322	0.0323	129.	62.4-133	0.370	20	WG776954
2-Butanone (MEK)	mg/l	0.119	0.121	95.0	55-149	1.22	20	WG776954
2-Chloroethyl vinyl ether	mg/l	0.135	0.140	108.	43.8-150	3.00	20	WG776954
2-Chlorotoluene	mg/l	0.0254	0.0250	102.	74.7-122	1.71	20	WG776954
4-Chlorotoluene	mg/l	0.0258	0.0264	103.	77.5-120	2.21	20	WG776954
4-Methyl-2-pentanone (MIBK)	mg/l	0.123	0.127	98.0	70.5-133	3.22	20	WG776954
Acetone	mg/l	0.0877	0.0937	70.0	35.6-163	6.60	23.9	WG776954
Acrolein	mg/l	0.105	0.108	84.0	10-190	2.69	28.1	WG776954
Acrylonitrile	mg/l	0.115	0.116	92.0	55.2-130	0.180	20	WG776954
Benzene	mg/l	0.0262	0.0267	105.	74.8-121	2.03	20	WG776954
Bromobenzene	mg/l	0.0250	0.0261	100.	77.5-116	4.35	20	WG776954
Bromodichloromethane	mg/l	0.0258	0.0260	103.	75.1-116	0.810	20	WG776954
Bromoform	mg/l	0.0243	0.0253	97.0	67.5-130	3.86	20	WG776954
Bromomethane	mg/l	0.0259	0.0262	104.	49.9-162	1.34	20	WG776954
Carbon tetrachloride	mg/l	0.0271	0.0282	108.	70.2-123	4.01	20	WG776954
Chlorobenzene	mg/l	0.0251	0.0258	100.	78.1-119	2.74	20	WG776954
Chlorodibromomethane	mg/l	0.0255	0.0260	102.	74-121	1.85	20	WG776954
Chloroethane	mg/l	0.0253	0.0269	101.	61.7-135	6.15	20	WG776954
Chloroform	mg/l	0.0251	0.0261	100.	76-121	3.91	20	WG776954
Chloromethane	mg/l	0.0230	0.0236	92.0	61.5-129	2.60	20	WG776954
cis-1,2-Dichloroethene	mg/l	0.0259	0.0262	103.	76-119	1.20	20	WG776954
cis-1,3-Dichloropropene	mg/l	0.0271	0.0273	108.	78.2-120	0.920	20	WG776954
Di-isopropyl ether	mg/l	0.0267	0.0273	107.	65.6-132	2.03	20	WG776954
Dibromomethane	mg/l	0.0237	0.0250	95.0	79.5-118	5.48	20	WG776954
Dichlorodifluoromethane	mg/l	0.0231	0.0230	92.0	54.8-135	0.410	20	WG776954
Ethylbenzene	mg/l	0.0261	0.0267	104.	78.8-122	2.27	20	WG776954
Hexachloro-1,3-butadiene	mg/l	0.0248	0.0257	99.0	64.7-129	3.65	20	WG776954
Isopropylbenzene	mg/l	0.0255	0.0263	102.	78.6-132	3.21	20	WG776954
Methyl tert-butyl ether	mg/l	0.0243	0.0252	97.0	71.2-126	3.42	20	WG776954
Methylene Chloride	mg/l	0.0259	0.0268	104.	70.3-120	3.59	20	WG776954
n-Butylbenzene	mg/l	0.0286	0.0298	114.	76.2-126	4.25	20	WG776954
n-Propylbenzene	mg/l	0.0256	0.0263	102.	78.2-122	2.62	20	WG776954
Naphthalene	mg/l	0.0219	0.0225	88.0	68.4-128	2.84	20	WG776954
p-Isopropyltoluene	mg/l	0.0253	0.0261	101.	74-131	3.26	20	WG776954
sec-Butylbenzene	mg/l	0.0255	0.0262	102.	74.4-127	2.76	20	WG776954
Styrene	mg/l	0.0256	0.0266	102.	80.4-126	3.92	20	WG776954
tert-Butylbenzene	mg/l	0.0247	0.0257	99.0	75.3-126	3.87	20	WG776954
Tetrachloroethene	mg/l	0.0262	0.0274	105.	72.6-126	4.28	20	WG776954
Toluene	mg/l	0.0250	0.0256	100.	79.7-116	2.24	20	WG776954
trans-1,2-Dichloroethene	mg/l	0.0264	0.0271	106.	72.6-121	2.57	20	WG776954
trans-1,3-Dichloropropene	mg/l	0.0256	0.0261	102.	74.3-123	1.99	20	WG776954
Trichloroethene	mg/l	0.0249	0.0254	100.	77.7-118	1.66	20	WG776954

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Quality Assurance Report
Level II

L754321

March 31, 2015

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Trichlorofluoromethane	mg/l	0.0245	0.0251	98.0	63.5-135	2.41	20	WG776954
Vinyl chloride	mg/l	0.0260	0.0268	104.	65.9-128	3.32	20	WG776954
Xylenes, Total	mg/l	0.0763	0.0790	102.	78.7-121	3.46	20	WG776954
4-Bromofluorobenzene				95.80	71-126			WG776954
Dibromofluoromethane				101.0	78.3-121			WG776954
Toluene-d8				106.0	88.5-111			WG776954

		Matrix Spike						
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Mercury	mg/l	0.00277	-0.000038	.003	92.0	80-120	L754237-01	WG776991
Arsenic	mg/l	1.03	0.00595	1	100.	75-125	L754240-05	WG777100
Barium	mg/l	1.06	0.0233	1	100.	75-125	L754240-05	WG777100
Cadmium	mg/l	1.07	-0.000034	1	110.	75-125	L754240-05	WG777100
Chromium	mg/l	1.08	-0.000836	1	110.	75-125	L754240-05	WG777100
Lead	mg/l	1.13	0.00170	1	110.	75-125	L754240-05	WG777100
Selenium	mg/l	1.06	-0.000221	1	110.	75-125	L754240-05	WG777100
Silver	mg/l	1.02	-0.000200	1	100.	75-125	L754240-05	WG777100
Diesel Range Organics (DRO)	mg/kg	25.8	0.937	30	83.0	50-150	L754304-04	WG776691
Residual Range Organics (RRO)	mg/kg	22.1	1.04	30	70.0	50-150	L754304-04	WG776691
o-Terphenyl					77.20	50-150		WG776691
Arsenic	mg/kg	86.4	2.11	100	84.0	75-125	L754348-21	WG776999
Barium	mg/kg	112.	13.1	100	98.0	75-125	L754348-21	WG776999
Cadmium	mg/kg	86.1	-0.0426	100	86.0	75-125	L754348-21	WG776999
Chromium	mg/kg	96.4	6.69	100	90.0	75-125	L754348-21	WG776999
Lead	mg/kg	91.8	2.74	100	89.0	75-125	L754348-21	WG776999
Selenium	mg/kg	86.6	0.349	100	86.0	75-125	L754348-21	WG776999
Silver	mg/kg	86.2	-0.171	100	86.0	75-125	L754348-21	WG776999
Mercury	mg/kg	0.401	0.00182	.458	87.0	75-125	L754286-01	WG777952
1,1,1,2-Tetrachloroethane	mg/kg	0.135	0.0	.025	110.	64-128	L754321-03	WG777003
1,1,1-Trichloroethane	mg/kg	0.134	0.0	.025	110.	58.7-134	L754321-03	WG777003
1,1,2,2-Tetrachloroethane	mg/kg	0.127	0.0	.025	100.	56-132	L754321-03	WG777003
1,1,2-Trichloroethane	mg/kg	0.128	0.0	.025	100.	66.3-125	L754321-03	WG777003
1,1,2-Trichlorotrifluoroethane	mg/kg	0.126	0.0	.025	100.	54.8-154	L754321-03	WG777003
1,1-Dichloroethane	mg/kg	0.131	0.0	.025	100.	58.5-132	L754321-03	WG777003
1,1-Dichloroethene	mg/kg	0.130	0.0	.025	100.	51.1-140	L754321-03	WG777003
1,1-Dichloropropene	mg/kg	0.127	0.0	.025	100.	57.3-136	L754321-03	WG777003
1,2,3-Trichlorobenzene	mg/kg	0.117	0.0	.025	93.0	59.1-138	L754321-03	WG777003
1,2,3-Trichloropropane	mg/kg	0.123	0.0	.025	98.0	61.4-128	L754321-03	WG777003
1,2,3-Trimethylbenzene	mg/kg	0.126	0.0	.025	100.	61.3-122	L754321-03	WG777003
1,2,4-Trichlorobenzene	mg/kg	0.113	0.0	.025	91.0	63.6-143	L754321-03	WG777003
1,2,4-Trimethylbenzene	mg/kg	0.125	0.0	.025	100.	57.4-137	L754321-03	WG777003
1,2-Dibromo-3-Chloropropane	mg/kg	0.126	0.0	.025	100.	57.3-136	L754321-03	WG777003
1,2-Dibromoethane	mg/kg	0.129	0.0	.025	100.	67.1-125	L754321-03	WG777003
1,2-Dichlorobenzene	mg/kg	0.128	0.0	.025	100.	68.2-123	L754321-03	WG777003
1,2-Dichloroethane	mg/kg	0.126	0.0	.025	100.	60-126	L754321-03	WG777003
1,2-Dichloropropane	mg/kg	0.131	0.0	.025	100.	64.2-123	L754321-03	WG777003
1,3,5-Trimethylbenzene	mg/kg	0.125	0.0	.025	100.	63.6-132	L754321-03	WG777003
1,3-Dichlorobenzene	mg/kg	0.126	0.0	.025	100.	63.1-131	L754321-03	WG777003

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Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,3-Dichloropropane	mg/kg	0.121	0.0	.025	97.0	67.9-121	L754321-03	WG777003
1,4-Dichlorobenzene	mg/kg	0.123	0.0	.025	98.0	68.6-123	L754321-03	WG777003
2,2-Dichloropropane	mg/kg	0.135	0.0	.025	110.	50.5-144	L754321-03	WG777003
2-Butanone (MEK)	mg/kg	0.532	0.0	.125	85.0	22.4-138	L754321-03	WG777003
2-Chloroethyl vinyl ether	mg/kg	0.709	0.0	.125	110.	10-155	L754321-03	WG777003
2-Chlorotoluene	mg/kg	0.128	0.0	.025	100.	63.6-128	L754321-03	WG777003
4-Chlorotoluene	mg/kg	0.126	0.0	.025	100.	65.7-127	L754321-03	WG777003
4-Methyl-2-pentanone (MIBK)	mg/kg	0.685	0.0	.125	110.	60.8-140	L754321-03	WG777003
Acetone	mg/kg	0.378	0.0212	.125	57.0	10-130	L754321-03	WG777003
Acrylonitrile	mg/kg	0.593	0.0	.125	95.0	49.4-133	L754321-03	WG777003
Benzene	mg/kg	0.129	0.0	.025	100.	54.3-133	L754321-03	WG777003
Bromobenzene	mg/kg	0.121	0.0	.025	97.0	63.9-124	L754321-03	WG777003
Bromodichloromethane	mg/kg	0.124	0.0	.025	100.	63.9-121	L754321-03	WG777003
Bromoform	mg/kg	0.128	0.0	.025	100.	59.5-134	L754321-03	WG777003
Bromomethane	mg/kg	0.130	0.0	.025	100.	41.7-155	L754321-03	WG777003
Carbon tetrachloride	mg/kg	0.130	0.0	.025	100.	55.7-134	L754321-03	WG777003
Chlorobenzene	mg/kg	0.130	0.0	.025	100.	67-125	L754321-03	WG777003
Chlorodibromomethane	mg/kg	0.129	0.0	.025	100.	64.3-125	L754321-03	WG777003
Chloroethane	mg/kg	0.133	0.0	.025	110.	51.5-136	L754321-03	WG777003
Chloroform	mg/kg	0.128	0.0	.025	100.	63-129	L754321-03	WG777003
Chloromethane	mg/kg	0.127	0.0	.025	100.	42.4-135	L754321-03	WG777003
cis-1,2-Dichloroethene	mg/kg	0.128	0.0	.025	100.	59.2-129	L754321-03	WG777003
cis-1,3-Dichloropropene	mg/kg	0.128	0.0	.025	100.	66.4-125	L754321-03	WG777003
Di-isopropyl ether	mg/kg	0.127	0.0	.025	100.	56.9-136	L754321-03	WG777003
Dibromomethane	mg/kg	0.124	0.0	.025	99.0	68.2-124	L754321-03	WG777003
Dichlorodifluoromethane	mg/kg	0.133	0.0	.025	110.	40.6-144	L754321-03	WG777003
Ethylbenzene	mg/kg	0.130	0.0	.025	100.	61.4-133	L754321-03	WG777003
Hexachloro-1,3-butadiene	mg/kg	0.111	0.0	.025	89.0	55.1-136	L754321-03	WG777003
Isopropylbenzene	mg/kg	0.132	0.0	.025	110.	66.8-141	L754321-03	WG777003
Methyl tert-butyl ether	mg/kg	0.124	0.0	.025	99.0	57.7-134	L754321-03	WG777003
Methylene Chloride	mg/kg	0.128	0.00147	.025	100.	58.1-122	L754321-03	WG777003
n-Butylbenzene	mg/kg	0.115	0.0	.025	92.0	62.7-140	L754321-03	WG777003
n-Propylbenzene	mg/kg	0.128	0.0	.025	100.	10-176	L754321-03	WG777003
Naphthalene	mg/kg	0.114	0.0	.025	91.0	58-135	L754321-03	WG777003
p-Isopropyltoluene	mg/kg	0.121	0.0	.025	97.0	63.2-139	L754321-03	WG777003
sec-Butylbenzene	mg/kg	0.125	0.0	.025	100.	62.2-136	L754321-03	WG777003
Styrene	mg/kg	0.131	0.0	.025	100.	66.8-133	L754321-03	WG777003
tert-Butylbenzene	mg/kg	0.131	0.0	.025	100.	63.3-134	L754321-03	WG777003
Tetrachloroethene	mg/kg	0.130	0.0	.025	100.	53-139	L754321-03	WG777003
Toluene	mg/kg	0.128	0.0	.025	100.	61.4-130	L754321-03	WG777003
trans-1,2-Dichloroethene	mg/kg	0.133	0.0	.025	110.	56.5-129	L754321-03	WG777003
trans-1,3-Dichloropropene	mg/kg	0.129	0.0	.025	100.	64.1-128	L754321-03	WG777003
Trichloroethene	mg/kg	0.131	0.0	.025	100.	44.1-149	L754321-03	WG777003
Trichlorofluoromethane	mg/kg	0.133	0.0	.025	110.	49.6-145	L754321-03	WG777003
Vinyl chloride	mg/kg	0.129	0.0	.025	100.	47.8-137	L754321-03	WG777003
Xylenes, Total	mg/kg	0.397	0.0	.075	110.	63.3-131	L754321-03	WG777003
4-Bromofluorobenzene					103.0	71-126		WG777003
Dibromofluoromethane					103.0	78.3-121		WG777003
Toluene-d8					109.0	88.5-111		WG777003
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0	.025	94.0	64-128	L754257-01	WG776954
1,1,1-Trichloroethane	mg/l	0.0259	0.0	.025	100.	58.7-134	L754257-01	WG776954
1,1,2,2-Tetrachloroethane	mg/l	0.0226	0.0	.025	90.0	56-132	L754257-01	WG776954
1,1,2-Trichloroethane	mg/l	0.0235	0.0	.025	94.0	66.3-125	L754257-01	WG776954
1,1,2-Trichlorotrifluoroethane	mg/l	0.0244	0.0	.025	98.0	54.8-154	L754257-01	WG776954
1,1-Dichloroethane	mg/l	0.0257	0.0	.025	100.	58.5-132	L754257-01	WG776954
1,1-Dichloroethene	mg/l	0.0264	0.0	.025	100.	51.1-140	L754257-01	WG776954
1,1-Dichloropropene	mg/l	0.0252	0.0	.025	100.	57.3-136	L754257-01	WG776954

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Est. 1970

Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

March 31, 2015

L754321

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,2,3-Trichlorobenzene	mg/l	0.0210	0.0	.025	84.0	59.1-138	L754257-01	WG776954
1,2,3-Trichloropropane	mg/l	0.0215	0.0	.025	86.0	61.4-128	L754257-01	WG776954
1,2,3-Trimethylbenzene	mg/l	0.0247	0.0	.025	99.0	61.3-122	L754257-01	WG776954
1,2,4-Trichlorobenzene	mg/l	0.0229	0.0	.025	92.0	63.6-143	L754257-01	WG776954
1,2,4-Trimethylbenzene	mg/l	0.0233	0.0	.025	93.0	57.4-137	L754257-01	WG776954
1,2-Dibromo-3-Chloropropane	mg/l	0.0199	0.0	.025	80.0	57.3-136	L754257-01	WG776954
1,2-Dibromoethane	mg/l	0.0224	0.0	.025	90.0	67.1-125	L754257-01	WG776954
1,2-Dichlorobenzene	mg/l	0.0238	0.0	.025	95.0	68.2-123	L754257-01	WG776954
1,2-Dichloroethane	mg/l	0.0255	0.0	.025	100.	60-126	L754257-01	WG776954
1,2-Dichloropropane	mg/l	0.0244	0.0	.025	98.0	64.2-123	L754257-01	WG776954
1,3,5-Trimethylbenzene	mg/l	0.0233	0.0	.025	93.0	63.6-132	L754257-01	WG776954
1,3-Dichlorobenzene	mg/l	0.0225	0.0	.025	90.0	63.1-131	L754257-01	WG776954
1,3-Dichloropropane	mg/l	0.0230	0.0	.025	92.0	67.9-121	L754257-01	WG776954
1,4-Dichlorobenzene	mg/l	0.0228	0.0	.025	91.0	68.6-123	L754257-01	WG776954
2,2-Dichloropropane	mg/l	0.0303	0.0	.025	120.	50.5-144	L754257-01	WG776954
2-Butanone (MEK)	mg/l	0.118	0.0	.125	94.0	22.4-138	L754257-01	WG776954
2-Chloroethyl vinyl ether	mg/l	0.00280	0.0	.125	2.20*	10-155	L754257-01	WG776954
2-Chlorotoluene	mg/l	0.0235	0.0	.025	94.0	63.6-128	L754257-01	WG776954
4-Chlorotoluene	mg/l	0.0239	0.0	.025	96.0	65.7-127	L754257-01	WG776954
4-Methyl-2-pentanone (MIBK)	mg/l	0.121	0.0	.125	97.0	60.8-140	L754257-01	WG776954
Acetone	mg/l	0.0988	0.00142	.125	78.0	10-130	L754257-01	WG776954
Acrolein	mg/l	0.114	0.0	.125	91.0	10-200	L754257-01	WG776954
Acrylonitrile	mg/l	0.111	0.0	.125	89.0	49.4-133	L754257-01	WG776954
Benzene	mg/l	0.0250	0.0	.025	100.	54.3-133	L754257-01	WG776954
Bromobenzene	mg/l	0.0236	0.0	.025	94.0	63.9-124	L754257-01	WG776954
Bromodichloromethane	mg/l	0.0238	0.0	.025	95.0	63.9-121	L754257-01	WG776954
Bromoform	mg/l	0.0228	0.0	.025	91.0	59.5-134	L754257-01	WG776954
Bromomethane	mg/l	0.0244	0.0	.025	98.0	41.7-155	L754257-01	WG776954
Carbon tetrachloride	mg/l	0.0261	0.0	.025	100.	55.7-134	L754257-01	WG776954
Chlorobenzene	mg/l	0.0237	0.0	.025	95.0	67-125	L754257-01	WG776954
Chlorodibromomethane	mg/l	0.0236	0.0	.025	94.0	64.3-125	L754257-01	WG776954
Chloroethane	mg/l	0.0250	0.0	.025	100.	51.5-136	L754257-01	WG776954
Chloroform	mg/l	0.0239	0.0	.025	95.0	63-129	L754257-01	WG776954
Chloromethane	mg/l	0.0218	0.0	.025	87.0	42.4-135	L754257-01	WG776954
cis-1,2-Dichloroethene	mg/l	0.0248	0.0	.025	99.0	59.2-129	L754257-01	WG776954
cis-1,3-Dichloropropene	mg/l	0.0255	0.0	.025	100.	66.4-125	L754257-01	WG776954
Di-isopropyl ether	mg/l	0.0253	0.0	.025	100.	56.9-136	L754257-01	WG776954
Dibromomethane	mg/l	0.0230	0.0	.025	92.0	68.2-124	L754257-01	WG776954
Dichlorodifluoromethane	mg/l	0.0241	0.0	.025	96.0	40.6-144	L754257-01	WG776954
Ethylbenzene	mg/l	0.0246	0.0	.025	98.0	61.4-133	L754257-01	WG776954
Hexachloro-1,3-butadiene	mg/l	0.0235	0.0	.025	94.0	55.1-136	L754257-01	WG776954
Isopropylbenzene	mg/l	0.0239	0.0	.025	96.0	66.8-141	L754257-01	WG776954
Methyl tert-butyl ether	mg/l	0.0239	0.0	.025	96.0	57.7-134	L754257-01	WG776954
Methylene Chloride	mg/l	0.0238	0.0	.025	95.0	58.1-122	L754257-01	WG776954
n-Butylbenzene	mg/l	0.0268	0.0	.025	110.	62.7-140	L754257-01	WG776954
n-Propylbenzene	mg/l	0.0241	0.0	.025	96.0	65.9-131	L754257-01	WG776954
Naphthalene	mg/l	0.0208	0.0	.025	83.0	58-135	L754257-01	WG776954
p-Isopropyltoluene	mg/l	0.0239	0.0	.025	96.0	63.2-139	L754257-01	WG776954
sec-Butylbenzene	mg/l	0.0243	0.0	.025	97.0	62.2-136	L754257-01	WG776954
Styrene	mg/l	0.0238	0.0	.025	95.0	66.8-133	L754257-01	WG776954
tert-Butylbenzene	mg/l	0.0237	0.0	.025	95.0	63.3-134	L754257-01	WG776954
Tetrachloroethene	mg/l	0.0246	0.0	.025	98.0	53-139	L754257-01	WG776954
Toluene	mg/l	0.0236	0.0	.025	94.0	61.4-130	L754257-01	WG776954
trans-1,2-Dichloroethene	mg/l	0.0255	0.0	.025	100.	56.5-129	L754257-01	WG776954
trans-1,3-Dichloropropene	mg/l	0.0228	0.0	.025	91.0	64.1-128	L754257-01	WG776954
Trichloroethene	mg/l	0.0235	0.0	.025	94.0	44.1-149	L754257-01	WG776954
Trichlorofluoromethane	mg/l	0.0228	0.0	.025	91.0	49.6-145	L754257-01	WG776954
Vinyl chloride	mg/l	0.0250	0.0	.025	100.	47.8-137	L754257-01	WG776954
Xylenes, Total	mg/l	0.0718	0.0	.075	96.0	63.3-131	L754257-01	WG776954

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Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
4-Bromofluorobenzene				95.20	71-126				
Dibromofluoromethane				102.0	78.3-121				
Toluene-d8				103.0	88.5-111				

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Mercury	mg/l	0.00235	0.00277	79.5*	80-120	17.0	20	L754237-01	WG776991
Arsenic	mg/l	1.02	1.03	102.	75-125	1.00	20	L754240-05	WG777100
Barium	mg/l	1.04	1.06	102.	75-125	1.00	20	L754240-05	WG777100
Cadmium	mg/l	1.05	1.07	105.	75-125	2.00	20	L754240-05	WG777100
Chromium	mg/l	1.07	1.08	108.	75-125	0.0	20	L754240-05	WG777100
Lead	mg/l	1.10	1.13	110.	75-125	2.00	20	L754240-05	WG777100
Selenium	mg/l	1.05	1.06	104.	75-125	2.00	20	L754240-05	WG777100
Silver	mg/l	0.992	1.02	99.2	75-125	3.00	20	L754240-05	WG777100
Diesel Range Organics (DRO)	mg/kg	25.6	25.8	82.1	50-150	0.950	20	L754304-04	WG776691
Residual Range Organics (RRO)	mg/kg	26.2	22.1	83.7	50-150	16.8	20	L754304-04	WG776691
o-Terphenyl				76.00	50-150				WG776691
Arsenic	mg/kg	96.5	86.4	94.4	75-125	11.0	20	L754348-21	WG776999
Barium	mg/kg	122.	112.	109.	75-125	9.00	20	L754348-21	WG776999
Cadmium	mg/kg	95.9	86.1	95.9	75-125	11.0	20	L754348-21	WG776999
Chromium	mg/kg	111.	96.4	104.	75-125	14.0	20	L754348-21	WG776999
Lead	mg/kg	102.	91.8	99.2	75-125	10.0	20	L754348-21	WG776999
Selenium	mg/kg	97.2	86.6	96.9	75-125	12.0	20	L754348-21	WG776999
Silver	mg/kg	98.9	86.2	99.0	75-125	14.0	20	L754348-21	WG776999
Mercury	mg/kg	0.425	0.401	92.5	75-125	6.00	20	L754286-01	WG777952
1,1,1,2-Tetrachloroethane	mg/kg	0.141	0.135	113.	64-128	4.27	20	L754321-03	WG777003
1,1,1-Trichloroethane	mg/kg	0.134	0.134	107.	58.7-134	0.0400	20	L754321-03	WG777003
1,1,2,2-Tetrachloroethane	mg/kg	0.133	0.127	106.	56-132	4.44	22.2	L754321-03	WG777003
1,1,2-Trichloroethane	mg/kg	0.134	0.128	107.	66.3-125	4.91	20	L754321-03	WG777003
1,1,2-Trichlorotrifluoroethane	mg/kg	0.130	0.126	104.	54.8-154	3.66	22.5	L754321-03	WG777003
1,1-Dichloroethane	mg/kg	0.133	0.131	106.	58.5-132	1.35	20	L754321-03	WG777003
1,1-Dichloroethene	mg/kg	0.132	0.130	106.	51.1-140	1.92	20.2	L754321-03	WG777003
1,1-Dichloropropene	mg/kg	0.129	0.127	103.	57.3-136	1.84	20	L754321-03	WG777003
1,2,3-Trichlorobenzene	mg/kg	0.128	0.117	102.	59.1-138	9.04	23.7	L754321-03	WG777003
1,2,3-Trichloropropane	mg/kg	0.129	0.123	103.	61.4-128	5.11	22.4	L754321-03	WG777003
1,2,3-Trimethylbenzene	mg/kg	0.130	0.126	104.	61.3-122	3.29	20	L754321-03	WG777003
1,2,4-Trichlorobenzene	mg/kg	0.121	0.113	96.5	63.6-143	6.23	21.9	L754321-03	WG777003
1,2,4-Trimethylbenzene	mg/kg	0.130	0.125	104.	57.4-137	3.75	20	L754321-03	WG777003
1,2-Dibromo-3-Chloropropane	mg/kg	0.130	0.126	104.	57.3-136	3.04	27	L754321-03	WG777003
1,2-Dibromoethane	mg/kg	0.135	0.129	108.	67.1-125	4.36	20	L754321-03	WG777003
1,2-Dichlorobenzene	mg/kg	0.130	0.128	104.	68.2-123	1.31	20	L754321-03	WG777003
1,2-Dichloroethane	mg/kg	0.130	0.126	104.	60-126	2.59	20	L754321-03	WG777003
1,2-Dichloropropane	mg/kg	0.132	0.131	106.	64.2-123	0.750	20	L754321-03	WG777003
1,3,5-Trimethylbenzene	mg/kg	0.131	0.125	105.	63.6-132	5.31	20.5	L754321-03	WG777003
1,3-Dichlorobenzene	mg/kg	0.131	0.126	105.	63.1-131	4.04	20	L754321-03	WG777003
1,3-Dichloropropane	mg/kg	0.126	0.121	101.	67.9-121	4.42	20	L754321-03	WG777003
1,4-Dichlorobenzene	mg/kg	0.125	0.123	100.	68.6-123	2.10	20	L754321-03	WG777003
2,2-Dichloropropane	mg/kg	0.137	0.135	110.	50.5-144	1.26	21.9	L754321-03	WG777003

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Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
2-Butanone (MEK)	mg/kg	0.629	0.532	101.	22.4-138	16.6	27	L754321-03	WG777003
2-Chloroethyl vinyl ether	mg/kg	0.748	0.709	120.	10-155	5.29	40	L754321-03	WG777003
2-Chlorotoluene	mg/kg	0.133	0.128	106.	63.6-128	3.56	20	L754321-03	WG777003
4-Chlorotoluene	mg/kg	0.131	0.126	105.	65.7-127	4.30	20	L754321-03	WG777003
4-Methyl-2-pentanone (MIBK)	mg/kg	0.707	0.685	113.	60.8-140	3.11	25.1	L754321-03	WG777003
Acetone	mg/kg	0.369	0.378	55.6	10-130	2.38	27.9	L754321-03	WG777003
Acrylonitrile	mg/kg	0.617	0.593	98.6	49.4-133	3.95	25.3	L754321-03	WG777003
Benzene	mg/kg	0.131	0.129	104.	54.3-133	1.45	20	L754321-03	WG777003
Bromobenzene	mg/kg	0.128	0.121	102.	63.9-124	5.01	20	L754321-03	WG777003
Bromodichloromethane	mg/kg	0.128	0.124	102.	63.9-121	2.95	20	L754321-03	WG777003
Bromoform	mg/kg	0.137	0.128	110.	59.5-134	7.23	20.8	L754321-03	WG777003
Bromomethane	mg/kg	0.130	0.130	104.	41.7-155	0.0200	20.5	L754321-03	WG777003
Carbon tetrachloride	mg/kg	0.132	0.130	106.	55.7-134	1.28	20.3	L754321-03	WG777003
Chlorobenzene	mg/kg	0.133	0.130	107.	67-125	2.86	20	L754321-03	WG777003
Chlorodibromomethane	mg/kg	0.135	0.129	108.	64.3-125	4.90	20	L754321-03	WG777003
Chloroethane	mg/kg	0.134	0.133	107.	51.5-136	0.460	20.8	L754321-03	WG777003
Chloroform	mg/kg	0.127	0.128	102.	63-129	0.380	20	L754321-03	WG777003
Chloromethane	mg/kg	0.129	0.127	103.	42.4-135	1.23	20	L754321-03	WG777003
cis-1,2-Dichloroethene	mg/kg	0.128	0.128	102.	59.2-129	0.460	20	L754321-03	WG777003
cis-1,3-Dichloropropene	mg/kg	0.132	0.128	106.	66.4-125	2.79	20	L754321-03	WG777003
Di-isopropyl ether	mg/kg	0.132	0.127	105.	56.9-136	3.57	20	L754321-03	WG777003
Dibromomethane	mg/kg	0.125	0.124	100.	68.2-124	1.37	20	L754321-03	WG777003
Dichlorodifluoromethane	mg/kg	0.135	0.133	108.	40.6-144	0.840	20.2	L754321-03	WG777003
Ethylbenzene	mg/kg	0.133	0.130	106.	61.4-133	2.06	20	L754321-03	WG777003
Hexachloro-1,3-butadiene	mg/kg	0.124	0.111	99.2	55.1-136	10.9	23.6	L754321-03	WG777003
Isopropylbenzene	mg/kg	0.138	0.132	111.	66.8-141	4.45	20	L754321-03	WG777003
Methyl tert-butyl ether	mg/kg	0.125	0.124	100.	57.7-134	1.12	20	L754321-03	WG777003
Methylene Chloride	mg/kg	0.128	0.128	102.	58.1-122	0.170	20	L754321-03	WG777003
n-Butylbenzene	mg/kg	0.121	0.115	96.8	62.7-140	5.07	20	L754321-03	WG777003
n-Propylbenzene	mg/kg	0.132	0.128	105.	10-176	2.80	26.6	L754321-03	WG777003
Naphthalene	mg/kg	0.126	0.114	101.	58-135	10.1	25.5	L754321-03	WG777003
p-Isopropyltoluene	mg/kg	0.128	0.121	102.	63.2-139	5.63	20.4	L754321-03	WG777003
sec-Butylbenzene	mg/kg	0.133	0.125	106.	62.2-136	5.82	20.3	L754321-03	WG777003
Styrene	mg/kg	0.135	0.131	108.	66.8-133	2.75	20	L754321-03	WG777003
tert-Butylbenzene	mg/kg	0.139	0.131	111.	63.3-134	5.76	20.3	L754321-03	WG777003
Tetrachloroethene	mg/kg	0.132	0.130	105.	53-139	1.63	20	L754321-03	WG777003
Toluene	mg/kg	0.130	0.128	104.	61.4-130	1.19	20	L754321-03	WG777003
trans-1,2-Dichloroethene	mg/kg	0.131	0.133	105.	56.5-129	1.02	20	L754321-03	WG777003
trans-1,3-Dichloropropene	mg/kg	0.132	0.129	106.	64.1-128	1.99	20	L754321-03	WG777003
Trichloroethene	mg/kg	0.134	0.131	107.	44.1-149	1.58	20	L754321-03	WG777003
Trichlorofluoromethane	mg/kg	0.133	0.133	106.	49.6-145	0.0300	21.2	L754321-03	WG777003
Vinyl chloride	mg/kg	0.132	0.129	106.	47.8-137	2.27	20	L754321-03	WG777003
Xylenes, Total	mg/kg	0.410	0.397	109.	63.3-131	3.22	20	L754321-03	WG777003
4-Bromofluorobenzene				104.0	71-126				WG777003
Dibromofluoromethane				103.0	78.3-121				WG777003
Toluene-d8				109.0	88.5-111				WG777003
1,1,1,2-Tetrachloroethane	mg/l	0.0255	0.0236	102.	64-128	7.97	20	L754257-01	WG776954
1,1,1-Trichloroethane	mg/l	0.0274	0.0259	110.	58.7-134	5.62	20	L754257-01	WG776954
1,1,2,2-Tetrachloroethane	mg/l	0.0246	0.0226	98.4	56-132	8.39	22.2	L754257-01	WG776954
1,1,2-Trichloroethane	mg/l	0.0250	0.0235	100.	66.3-125	6.29	20	L754257-01	WG776954
1,1,2-Trichlorotrifluoroethane	mg/l	0.0260	0.0244	104.	54.8-154	6.38	22.5	L754257-01	WG776954
1,1-Dichloroethane	mg/l	0.0283	0.0257	113.	58.5-132	9.48	20	L754257-01	WG776954
1,1-Dichloroethene	mg/l	0.0287	0.0264	115.	51.1-140	8.58	20.2	L754257-01	WG776954
1,1-Dichloropropene	mg/l	0.0273	0.0252	109.	57.3-136	7.84	20	L754257-01	WG776954
1,2,3-Trichlorobenzene	mg/l	0.0224	0.0210	89.4	59.1-138	6.35	23.7	L754257-01	WG776954
1,2,3-Trichloropropane	mg/l	0.0244	0.0215	97.8	61.4-128	12.7	22.4	L754257-01	WG776954
1,2,3-Trimethylbenzene	mg/l	0.0259	0.0247	104.	61.3-122	4.87	20	L754257-01	WG776954

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

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,2,4-Trichlorobenzene	mg/l	0.0249	0.0229	99.7	63.6-143	8.30	21.9	L754257-01	WG776954
1,2,4-Trimethylbenzene	mg/l	0.0244	0.0233	97.6	57.4-137	4.40	20	L754257-01	WG776954
1,2-Dibromo-3-Chloropropane	mg/l	0.0220	0.0199	88.2	57.3-136	10.3	27	L754257-01	WG776954
1,2-Dibromoethane	mg/l	0.0241	0.0224	96.4	67.1-125	7.13	20	L754257-01	WG776954
1,2-Dichlorobenzene	mg/l	0.0250	0.0238	100.	68.2-123	5.18	20	L754257-01	WG776954
1,2-Dichloroethane	mg/l	0.0264	0.0255	106.	60-126	3.44	20	L754257-01	WG776954
1,2-Dichloropropane	mg/l	0.0264	0.0244	106.	64.2-123	8.09	20	L754257-01	WG776954
1,3,5-Trimethylbenzene	mg/l	0.0247	0.0233	98.6	63.6-132	5.49	20.5	L754257-01	WG776954
1,3-Dichlorobenzene	mg/l	0.0239	0.0225	95.7	63.1-131	6.09	20	L754257-01	WG776954
1,3-Dichloropropane	mg/l	0.0247	0.0230	98.7	67.9-121	6.91	20	L754257-01	WG776954
1,4-Dichlorobenzene	mg/l	0.0246	0.0228	98.5	68.6-123	7.83	20	L754257-01	WG776954
2,2-Dichloropropane	mg/l	0.0331	0.0303	132.	50.5-144	9.02	21.9	L754257-01	WG776954
2-Butanone (MEK)	mg/l	0.129	0.118	103.	22.4-138	9.29	27	L754257-01	WG776954
2-Chloroethyl vinyl ether	mg/l	0.00122	0.00280	0.973*	10-155	78.7*	20	L754257-01	WG776954
2-Chlorotoluene	mg/l	0.0250	0.0235	99.9	63.6-128	6.28	20	L754257-01	WG776954
4-Chlorotoluene	mg/l	0.0257	0.0239	103.	65.7-127	7.29	20	L754257-01	WG776954
4-Methyl-2-pentanone (MIBK)	mg/l	0.134	0.121	107.	60.8-140	10.1	25.1	L754257-01	WG776954
Acetone	mg/l	0.104	0.0988	82.4	10-130	5.62	27.9	L754257-01	WG776954
Acrolein	mg/l	0.119	0.114	95.0	10-200	4.15	27.7	L754257-01	WG776954
Acrylonitrile	mg/l	0.125	0.111	100.	49.4-133	12.3	25.3	L754257-01	WG776954
Benzene	mg/l	0.0269	0.0250	107.	54.3-133	7.33	20	L754257-01	WG776954
Bromobenzene	mg/l	0.0252	0.0236	101.	63.9-124	6.62	20	L754257-01	WG776954
Bromodichloromethane	mg/l	0.0268	0.0238	107.	63.9-121	11.8	20	L754257-01	WG776954
Bromoform	mg/l	0.0248	0.0228	99.1	59.5-134	8.53	20.5	L754257-01	WG776954
Bromomethane	mg/l	0.0263	0.0244	105.	41.7-155	7.74	21.9	L754257-01	WG776954
Carbon tetrachloride	mg/l	0.0278	0.0261	111.	55.7-134	6.45	20	L754257-01	WG776954
Chlorobenzene	mg/l	0.0253	0.0237	101.	67-125	6.17	20	L754257-01	WG776954
Chlorodibromomethane	mg/l	0.0258	0.0236	103.	64.3-125	8.84	20.8	L754257-01	WG776954
Chloroethane	mg/l	0.0268	0.0250	107.	51.5-136	6.79	40	L754257-01	WG776954
Chloroform	mg/l	0.0259	0.0239	104.	63-129	8.18	20	L754257-01	WG776954
Chloromethane	mg/l	0.0240	0.0218	96.0	42.4-135	9.74	20	L754257-01	WG776954
cis-1,2-Dichloroethene	mg/l	0.0264	0.0248	106.	59.2-129	6.18	20	L754257-01	WG776954
cis-1,3-Dichloropropene	mg/l	0.0271	0.0255	108.	66.4-125	6.07	20	L754257-01	WG776954
Di-isopropyl ether	mg/l	0.0270	0.0253	108.	56.9-136	6.53	20	L754257-01	WG776954
Dibromomethane	mg/l	0.0243	0.0230	97.3	68.2-124	5.62	20	L754257-01	WG776954
Dichlorodifluoromethane	mg/l	0.0251	0.0241	100.	40.6-144	4.01	20.2	L754257-01	WG776954
Ethylbenzene	mg/l	0.0260	0.0246	104.	61.4-133	5.53	20	L754257-01	WG776954
Hexachloro-1,3-butadiene	mg/l	0.0250	0.0235	100.	55.1-136	5.99	23.6	L754257-01	WG776954
Isopropylbenzene	mg/l	0.0254	0.0239	101.	66.8-141	5.99	20	L754257-01	WG776954
Methyl tert-butyl ether	mg/l	0.0253	0.0239	101.	57.7-134	5.93	20	L754257-01	WG776954
Methylene Chloride	mg/l	0.0261	0.0238	104.	58.1-122	9.13	20	L754257-01	WG776954
n-Butylbenzene	mg/l	0.0288	0.0268	115.	62.7-140	7.07	20.3	L754257-01	WG776954
n-Propylbenzene	mg/l	0.0259	0.0241	104.	65.9-131	7.39	20	L754257-01	WG776954
Naphthalene	mg/l	0.0225	0.0208	89.8	58-135	7.55	25.5	L754257-01	WG776954
p-Isopropyltoluene	mg/l	0.0256	0.0239	102.	63.2-139	6.80	20.4	L754257-01	WG776954
sec-Butylbenzene	mg/l	0.0255	0.0243	102.	62.2-136	5.03	20.3	L754257-01	WG776954
Styrene	mg/l	0.0250	0.0238	100.	66.8-133	4.92	20	L754257-01	WG776954
tert-Butylbenzene	mg/l	0.0254	0.0237	102.	63.3-134	6.87	21	L754257-01	WG776954
Tetrachloroethene	mg/l	0.0262	0.0246	105.	53-139	6.02	20	L754257-01	WG776954
Toluene	mg/l	0.0249	0.0236	99.5	61.4-130	5.16	20	L754257-01	WG776954
trans-1,2-Dichloroethene	mg/l	0.0268	0.0255	107.	56.5-129	4.94	20	L754257-01	WG776954
trans-1,3-Dichloropropene	mg/l	0.0260	0.0228	104.	64.1-128	13.1	20	L754257-01	WG776954
Trichloroethene	mg/l	0.0244	0.0235	97.6	44.1-149	3.72	20	L754257-01	WG776954
Trichlorofluoromethane	mg/l	0.0257	0.0228	103.	49.6-145	12.1	21.2	L754257-01	WG776954
Vinyl chloride	mg/l	0.0272	0.0250	109.	47.8-137	8.49	20	L754257-01	WG776954
Xylenes, Total	mg/l	0.0762	0.0718	102.	63.3-131	5.93	20	L754257-01	WG776954
4-Bromofluorobenzene				95.60	71-126				WG776954
Dibromofluoromethane				103.0	78.3-121				WG776954
Toluene-d8				103.0	88.5-111				WG776954

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

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YOUR LAB OF CHOICE

Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG776616: R3025662 R3025682 R3026621 R3027420: L754321-02
WG776782: R3025831: L754321-01 03 05
WG776991: R3026061: L754321-02 04 06
WG777041: R3026130: L754321-04 06
WG777100: R3026146 R3026223: L754321-02 04 06
WG776691: R3026582: L754321-01 03 05
WG776999: R3026863: L754321-01 03 05
WG776881: R3026874: L754321-02 04 06
WG777952: R3026890: L754321-01 03 05
WG777003: R3027211: L754321-01 03 05
WG776954: R3027369: L754321-02

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

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Sisters, OR 97759

Quality Assurance Report
Level II

L754321

March 31, 2015

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

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

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

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

Company Name/Address: Mark Yinger Assoc, 69860 Camp Polk Rd Sisters, OR 97759

Billing Information: Same

Report to: Mark Yinger

Email To: mark@bendbroadband

Project Description:

City/State Collected: The Dalles OR

Phone: 541-549-3030 Fax:

Client Project # 14-1128

Lab Project #

Collected by (print): M. Yinger

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX Hz-11	VOCs 8260	ACRA Metals	Extract Hold PAHs							
5006		SS		3/16/15	12:15	3	X	X	X								-01
5007		GW			12:30	9	X	X	X	X							02
5008		SS			1:00	3	X	X	X								03
5009		GW			1:30	9	X	X	X	X							04
5010		SS			2:00	3	X	X	X								05
5011		GW			2:20	9	X	X	X	X							06
Soil sample highest DX run for PAHs																	
Water "	"	"	"	"	PAHs												

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

627286106200

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	3/17/15	1:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Wally

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 36+1TB

Date: 3-18-15 Time: 0900

Hold #

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Chain of Custody Page 1 of 1

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Mount Juliet, TN 37122
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Phone: 800-767-5859
Fax: 615-758-5859

L# L754321

J064

Acctnum:
Template:
Prelogin:
TSR: 358 Jared Wilkins
PB:
Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-01
	02
	03
	04
	05
	06

Andy Vann

To: Jarred Willis
Cc: Login; Extractions; Due SVOC; Reporting
Subject: RE: L754321-02 - YINGERSOR - add NWTPHDX - sample goes OOH Monday, 3/30

From: Jarred Willis
Sent: Friday, March 27, 2015 1:22 PM
To: Login
Cc: Extractions; Due SVOC; Reporting
Subject: L754321-02 - YINGERSOR - add PAHSIMLVID

Please remove PAHSILVID from extract-hold on L754321-02 from ***YINGERSOR***.
Scan this e-mail with the COC.

Thanks,

Jarred Willis
Technical Service Representative (TSR)
E-mail: jwillis@esclabsciences.com
Phone: 800-767-5859 Ext. 9678
Direct: 615-773-9678
www.esclabsciences.com

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Tax I.D. 62-0814289

Est. 1970

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Monday April 27, 2015

Report Number: L759719
Samples Received: 04/16/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By: Alan Harvill

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-01

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5022

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 15:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	81.9	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	10.	1.3	4.9	mg/kg		NWTPHDX	04/19/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	04/19/15	1
Surrogate Recovery								
o-Terphenyl	75.0			% Rec.		NWTPHDX	04/19/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 17:54 Printed: 04/27/15 17:54

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-02

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5023

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 15:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	92.7	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	U	1.3	4.3	mg/kg		NWTPHDX	04/19/15	1
Residual Range Organics (RRO)	U	3.3	11.	mg/kg		NWTPHDX	04/19/15	1
Surrogate Recovery								
o-Terphenyl	86.1			% Rec.		NWTPHDX	04/19/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 17:54 Printed: 04/27/15 17:54

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-03

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5024

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 15:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	79.8	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	U	1.3	5.0	mg/kg		NWTPHDX	04/19/15	1
Residual Range Organics (RRO)	U	3.3	12.	mg/kg		NWTPHDX	04/19/15	1
Surrogate Recovery								
o-Terphenyl	81.7			% Rec.		NWTPHDX	04/19/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 17:54 Printed: 04/27/15 17:54

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5025

Collected By : M. Yinger
Collection Date : 04/15/15 09:30

ESC Sample # : L759719-04

Site ID :

Project # : 14-1128

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	73.0	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	U	1.3	5.5	mg/kg		NWTPHDX	04/19/15	1
Residual Range Organics (RRO)	U	3.3	14.	mg/kg		NWTPHDX	04/19/15	1
Surrogate Recovery								
o-Terphenyl	82.8			% Rec.		NWTPHDX	04/19/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Acenaphthene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Acenaphthylene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Benzo(a)anthracene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Benzo(a)pyrene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Benzo(b)fluoranthene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Benzo(g,h,i)perylene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Benzo(k)fluoranthene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Chrysene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Dibenz(a,h)anthracene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Fluoranthene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Fluorene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Indeno(1,2,3-cd)pyrene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Naphthalene	U	0.0020	0.027	mg/kg		8270D-SI	04/21/15	1
Phenanthrene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
Pyrene	U	0.00060	0.0082	mg/kg		8270D-SI	04/21/15	1
1-Methylnaphthalene	U	0.0020	0.027	mg/kg		8270D-SI	04/21/15	1
2-Methylnaphthalene	U	0.0020	0.027	mg/kg		8270D-SI	04/21/15	1
2-Chloronaphthalene	U	0.0020	0.027	mg/kg		8270D-SI	04/21/15	1
Surrogate Recovery								
Nitrobenzene-d5	64.7			% Rec.		8270D-SI	04/21/15	1
2-Fluorobiphenyl	65.5			% Rec.		8270D-SI	04/21/15	1
p-Terphenyl-d14	63.0			% Rec.		8270D-SI	04/21/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-05

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5029

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/15/15 11:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	85.3	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	3.3	1.3	4.7	mg/kg	J	NWTPHDX	04/19/15	1
Residual Range Organics (RRO)	28.	3.3	12.	mg/kg		NWTPHDX	04/19/15	1
Surrogate Recovery								
o-Terphenyl	78.8			% Rec.		NWTPHDX	04/19/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-06

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5028

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/15/15 10:45

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	97.8	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	4300	66.	200	mg/kg		NWTPHDX	04/19/15	50
Residual Range Organics (RRO)	39000	660	2000	mg/kg		NWTPHDX	04/20/15	200
Surrogate Recovery								
o-Terphenyl	0.00			% Rec.	J7	NWTPHDX	04/19/15	50

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-07

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5028

Project : 14-1128

Collected By : M. Yinger
Collection Date : 04/15/15 10:45

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	04/19/15 1741	LJN	1
Mercury	BDL	0.010	mg/l	0.20	7470A	04/21/15 0841		1
Arsenic	BDL	0.45	mg/l	5.0	6010B	04/20/15 1539	JDG	1
Barium	BDL	1.4	mg/l	100	6010B	04/20/15 1539	JDG	1
Cadmium	BDL	0.45	mg/l	1.0	6010B	04/20/15 1539	JDG	1
Chromium	BDL	0.45	mg/l	5.0	6010B	04/20/15 1539	JDG	1
Lead	BDL	0.45	mg/l	5.0	6010B	04/20/15 1539	JDG	1
Selenium	BDL	0.45	mg/l	1.0	6010B	04/20/15 1539	JDG	1
Silver	BDL	0.45	mg/l	5.0	6010B	04/20/15 1539	JDG	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)
Limit - Maximum Contaminant Level as established by the US EPA
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 04/27/15 17:54 Printed: 04/27/15 17:54

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-08

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5026

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/15/15 10:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	85.4	0.0333		%		2540 G-2	04/18/15	1
Pesticides								
Aldrin	U	0.0014	0.023	mg/kg		8081	04/20/15	1
Alpha BHC	U	0.0014	0.023	mg/kg		8081	04/20/15	1
Beta BHC	U	0.0016	0.023	mg/kg		8081	04/20/15	1
Delta BHC	U	0.0014	0.023	mg/kg		8081	04/20/15	1
Gamma BHC	U	0.0014	0.023	mg/kg		8081	04/20/15	1
Chlordane	U	0.039	0.23	mg/kg		8081	04/20/15	1
4,4-DDD	U	0.0016	0.023	mg/kg		8081	04/20/15	1
4,4-DDE	U	0.0015	0.023	mg/kg		8081	04/20/15	1
4,4-DDT	U	0.0020	0.023	mg/kg		8081	04/20/15	1
Dieldrin	U	0.0015	0.023	mg/kg		8081	04/20/15	1
Endosulfan I	U	0.0015	0.023	mg/kg		8081	04/20/15	1
Endosulfan II	U	0.0016	0.023	mg/kg		8081	04/20/15	1
Endosulfan sulfate	U	0.0015	0.023	mg/kg		8081	04/20/15	1
Endrin	U	0.0016	0.023	mg/kg		8081	04/20/15	1
Endrin aldehyde	U	0.0013	0.023	mg/kg		8081	04/20/15	1
Endrin ketone	U	0.0016	0.023	mg/kg		8081	04/20/15	1
Hexachlorobenzene	U	0.0012	0.023	mg/kg		8081	04/20/15	1
Heptachlor	U	0.0015	0.023	mg/kg		8081	04/20/15	1
Heptachlor epoxide	U	0.0016	0.023	mg/kg		8081	04/20/15	1
Methoxychlor	U	0.0018	0.023	mg/kg		8081	04/20/15	1
Toxaphene	U	0.036	0.47	mg/kg		8081	04/20/15	1
Pesticide Surrogates								
Decachlorobiphenyl	30.7			% Rec.		8081	04/20/15	1
Tetrachloro-m-xylene	83.1			% Rec.		8081	04/20/15	1
Herbicides								
2,4-D	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
Dalapon	U	0.27	0.94	mg/kg	J4	8151	04/23/15	1
2,4-DB	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
Dicamba	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
Dichloroprop	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
Dinoseb	U	0.023	0.082	mg/kg		8151	04/23/15	1
MCPA	U	2.2	7.6	mg/kg	J4	8151	04/23/15	1
MCPP	U	2.2	7.6	mg/kg	J4	8151	04/23/15	1
2,4,5-T	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
2,4,5-TP (Silvex)	U	0.023	0.082	mg/kg	J4	8151	04/23/15	1
Surrogate Recovery								
2,4-Dichlorophenyl Acetic Acid	61.3			% Rec.		8151	04/23/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759719-09

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5027

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/15/15 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	89.9	0.0333		%		2540 G-2	04/18/15	1
Pesticides								
Aldrin	U	0.0014	0.022	mg/kg		8081	04/20/15	1
Alpha BHC	U	0.0014	0.022	mg/kg		8081	04/20/15	1
Beta BHC	U	0.0016	0.022	mg/kg		8081	04/20/15	1
Delta BHC	U	0.0014	0.022	mg/kg		8081	04/20/15	1
Gamma BHC	U	0.0014	0.022	mg/kg		8081	04/20/15	1
Chlordane	U	0.039	0.22	mg/kg		8081	04/20/15	1
4,4-DDD	U	0.0016	0.022	mg/kg		8081	04/20/15	1
4,4-DDE	U	0.0015	0.022	mg/kg		8081	04/20/15	1
4,4-DDT	U	0.0020	0.022	mg/kg		8081	04/20/15	1
Dieldrin	U	0.0015	0.022	mg/kg		8081	04/20/15	1
Endosulfan I	U	0.0015	0.022	mg/kg		8081	04/20/15	1
Endosulfan II	U	0.0016	0.022	mg/kg		8081	04/20/15	1
Endosulfan sulfate	U	0.0015	0.022	mg/kg		8081	04/20/15	1
Endrin	U	0.0016	0.022	mg/kg		8081	04/20/15	1
Endrin aldehyde	U	0.0013	0.022	mg/kg		8081	04/20/15	1
Endrin ketone	U	0.0016	0.022	mg/kg		8081	04/20/15	1
Hexachlorobenzene	U	0.0012	0.022	mg/kg		8081	04/20/15	1
Heptachlor	U	0.0015	0.022	mg/kg		8081	04/20/15	1
Heptachlor epoxide	U	0.0016	0.022	mg/kg		8081	04/20/15	1
Methoxychlor	U	0.0018	0.022	mg/kg		8081	04/20/15	1
Toxaphene	U	0.036	0.44	mg/kg		8081	04/20/15	1
Pesticide Surrogates								
Decachlorobiphenyl	58.0			% Rec.		8081	04/20/15	1
Tetrachloro-m-xylene	85.0			% Rec.		8081	04/20/15	1
Herbicides								
2,4-D	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
Dalapon	U	0.27	0.89	mg/kg	J4	8151	04/23/15	1
2,4-DB	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
Dicamba	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
Dichloroprop	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
Dinoseb	U	0.023	0.078	mg/kg		8151	04/23/15	1
MCPA	U	2.2	7.2	mg/kg	J4	8151	04/23/15	1
MCPP	U	2.2	7.2	mg/kg	J4	8151	04/23/15	1
2,4,5-T	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
2,4,5-TP (Silvex)	U	0.023	0.078	mg/kg	J4	8151	04/23/15	1
Surrogate Recovery								
2,4-Dichlorophenyl Acetic Acid	49.8			% Rec.		8151	04/23/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L759719-05	WG783078	SAMP	Diesel Range Organics (DRO)	R3031719	J
L759719-06	WG783078	SAMP	o-Terphenyl	R3031719	J7
L759719-08	WG783260	SAMP	2,4-D	R3033304	J4
	WG783260	SAMP	Dalapon	R3033304	J4
	WG783260	SAMP	2,4-DB	R3033304	J4
	WG783260	SAMP	Dicamba	R3033304	J4
	WG783260	SAMP	Dichloroprop	R3033304	J4
	WG783260	SAMP	MCPA	R3033304	J4
	WG783260	SAMP	MCPP	R3033304	J4
	WG783260	SAMP	2,4,5-T	R3033304	J4
	WG783260	SAMP	2,4,5-TP (Silvex)	R3033304	J4
L759719-09	WG783260	SAMP	2,4-D	R3033304	J4
	WG783260	SAMP	Dalapon	R3033304	J4
	WG783260	SAMP	2,4-DB	R3033304	J4
	WG783260	SAMP	Dicamba	R3033304	J4
	WG783260	SAMP	Dichloroprop	R3033304	J4
	WG783260	SAMP	MCPA	R3033304	J4
	WG783260	SAMP	MCPP	R3033304	J4
	WG783260	SAMP	2,4,5-T	R3033304	J4
	WG783260	SAMP	2,4,5-TP (Silvex)	R3033304	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J4	The associated batch QC was outside the established quality control range for accuracy.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L759719

April 27, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Total Solids	< .1	%			WG782948	04/18/15 09:37
Diesel Range Organics (DRO)	< 4	mg/kg			WG783078	04/19/15 07:26
Residual Range Organics (RRO)	< 10	mg/kg			WG783078	04/19/15 07:26
o-Terphenyl		% Rec.	77.70	50-150	WG783078	04/19/15 07:26
Arsenic	< .45	mg/l			WG783347	04/20/15 14:59
Barium	< 1.35	mg/l			WG783347	04/20/15 14:59
Cadmium	< .45	mg/l			WG783347	04/20/15 14:59
Chromium	< .45	mg/l			WG783347	04/20/15 14:59
Lead	< .45	mg/l			WG783347	04/20/15 14:59
Selenium	< .45	mg/l			WG783347	04/20/15 14:59
Silver	< .45	mg/l			WG783347	04/20/15 14:59
Mercury	< .01	mg/l			WG783345	04/21/15 08:10
1-Methylnaphthalene	< .02	mg/kg			WG782911	04/21/15 02:21
2-Chloronaphthalene	< .02	mg/kg			WG782911	04/21/15 02:21
2-Methylnaphthalene	< .02	mg/kg			WG782911	04/21/15 02:21
Acenaphthene	< .006	mg/kg			WG782911	04/21/15 02:21
Acenaphthylene	< .006	mg/kg			WG782911	04/21/15 02:21
Anthracene	< .006	mg/kg			WG782911	04/21/15 02:21
Benzo(a)anthracene	< .006	mg/kg			WG782911	04/21/15 02:21
Benzo(a)pyrene	< .006	mg/kg			WG782911	04/21/15 02:21
Benzo(b)fluoranthene	< .006	mg/kg			WG782911	04/21/15 02:21
Benzo(g,h,i)perylene	< .006	mg/kg			WG782911	04/21/15 02:21
Benzo(k)fluoranthene	< .006	mg/kg			WG782911	04/21/15 02:21
Chrysene	< .006	mg/kg			WG782911	04/21/15 02:21
Dibenz(a,h)anthracene	< .006	mg/kg			WG782911	04/21/15 02:21
Fluoranthene	< .006	mg/kg			WG782911	04/21/15 02:21
Fluorene	< .006	mg/kg			WG782911	04/21/15 02:21
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG782911	04/21/15 02:21
Naphthalene	< .02	mg/kg			WG782911	04/21/15 02:21
Phenanthrene	< .006	mg/kg			WG782911	04/21/15 02:21
Pyrene	< .006	mg/kg			WG782911	04/21/15 02:21
2-Fluorobiphenyl		% Rec.	70.60	40.6-122	WG782911	04/21/15 02:21
Nitrobenzene-d5		% Rec.	68.40	22.1-146	WG782911	04/21/15 02:21
p-Terphenyl-d14		% Rec.	73.10	32.2-131	WG782911	04/21/15 02:21
4,4-DDD	< .02	mg/kg			WG782636	04/20/15 16:36
4,4-DDE	< .02	mg/kg			WG782636	04/20/15 16:36
4,4-DDT	< .02	mg/kg			WG782636	04/20/15 16:36
Aldrin	< .02	mg/kg			WG782636	04/20/15 16:36
Alpha BHC	< .02	mg/kg			WG782636	04/20/15 16:36
Beta BHC	< .02	mg/kg			WG782636	04/20/15 16:36
Chlordane	< .2	mg/kg			WG782636	04/20/15 16:36
Delta BHC	< .02	mg/kg			WG782636	04/20/15 16:36
Dieldrin	< .02	mg/kg			WG782636	04/20/15 16:36
Endosulfan I	< .02	mg/kg			WG782636	04/20/15 16:36
Endosulfan II	< .02	mg/kg			WG782636	04/20/15 16:36
Endosulfan sulfate	< .02	mg/kg			WG782636	04/20/15 16:36
Endrin	< .02	mg/kg			WG782636	04/20/15 16:36
Endrin aldehyde	< .02	mg/kg			WG782636	04/20/15 16:36
Endrin ketone	< .02	mg/kg			WG782636	04/20/15 16:36

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L759719

April 27, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Gamma BHC	< .02	mg/kg			WG782636	04/20/15 16:36
Heptachlor	< .02	mg/kg			WG782636	04/20/15 16:36
Heptachlor epoxide	< .02	mg/kg			WG782636	04/20/15 16:36
Hexachlorobenzene	< .02	mg/kg			WG782636	04/20/15 16:36
Methoxychlor	< .02	mg/kg			WG782636	04/20/15 16:36
Toxaphene	< .4	mg/kg			WG782636	04/20/15 16:36
Decachlorobiphenyl		% Rec.	84.60	10-143	WG782636	04/20/15 16:36
Tetrachloro-m-xylene		% Rec.	90.70	29.2-144	WG782636	04/20/15 16:36
2,4,5-T	< .07	mg/kg			WG783260	04/23/15 17:35
2,4,5-TP (Silvex)	< .07	mg/kg			WG783260	04/23/15 17:35
2,4-D	< .07	mg/kg			WG783260	04/23/15 17:35
2,4-DB	< .07	mg/kg			WG783260	04/23/15 17:35
Dalapon	< .8	mg/kg			WG783260	04/23/15 17:35
Dicamba	< .07	mg/kg			WG783260	04/23/15 17:35
Dichloroprop	< .07	mg/kg			WG783260	04/23/15 17:35
Dinoseb	< .07	mg/kg			WG783260	04/23/15 17:35
MCPA	< 6.5	mg/kg			WG783260	04/23/15 17:35
MCPP	< 6.5	mg/kg			WG783260	04/23/15 17:35
2,4-Dichlorophenyl Acetic Acid		% Rec.	67.30	23.5-129	WG783260	04/23/15 17:35

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	81.6	81.9	0.342	5	L759719-01	WG782948

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Total Solids	%	50	50.0	99.9	85-115	WG782948
Diesel Range Organics (DRO)	mg/kg	30	22.5	75.0	50-150	WG783078
Residual Range Organics (RRO)	mg/kg	30	21.4	71.4	50-150	WG783078
o-Terphenyl				62.90	50-150	WG783078
Arsenic	mg/l	9	10.1	112.	80-120	WG783347
Barium	mg/l	9	10.2	113.	80-120	WG783347
Cadmium	mg/l	9	10.0	112.	80-120	WG783347
Chromium	mg/l	9	10.3	115.	80-120	WG783347
Lead	mg/l	9	10.1	112.	80-120	WG783347
Selenium	mg/l	9	10.4	116.	80-120	WG783347
Silver	mg/l	9	9.84	109.	80-120	WG783347
Mercury	mg/l	.03	0.0323	108.	80-120	WG783345
1-Methylnaphthalene	mg/kg	.08	0.0567	70.8	50.6-122	WG782911
2-Chloronaphthalene	mg/kg	.08	0.0539	67.4	53.9-121	WG782911
2-Methylnaphthalene	mg/kg	.08	0.0548	68.5	50.4-120	WG782911
Acenaphthene	mg/kg	.08	0.0532	66.5	52.4-120	WG782911
Acenaphthylene	mg/kg	.08	0.0545	68.1	49.6-120	WG782911
Anthracene	mg/kg	.08	0.0596	74.5	50.3-130	WG782911
Benzo(a)anthracene	mg/kg	.08	0.0567	70.9	46.7-125	WG782911
Benzo(a)pyrene	mg/kg	.08	0.0464	58.0	42.3-119	WG782911
Benzo(b)fluoranthene	mg/kg	.08	0.0534	66.8	43.6-124	WG782911

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Quality Assurance Report
Level II

L759719

April 27, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Benzo(g,h,i)perylene	mg/kg	.08	0.0586	73.2	45.1-132	WG782911
Benzo(k)fluoranthene	mg/kg	.08	0.0544	68.0	46.1-131	WG782911
Chrysene	mg/kg	.08	0.0582	72.7	49.5-131	WG782911
Dibenz(a,h)anthracene	mg/kg	.08	0.0597	74.6	44.8-133	WG782911
Fluoranthene	mg/kg	.08	0.0588	73.4	49.3-128	WG782911
Fluorene	mg/kg	.08	0.0544	68.0	50.6-121	WG782911
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0594	74.2	46.1-135	WG782911
Naphthalene	mg/kg	.08	0.0525	65.7	49.6-115	WG782911
Phenanthrene	mg/kg	.08	0.0548	68.5	48.8-121	WG782911
Pyrene	mg/kg	.08	0.0612	76.5	44.7-130	WG782911
2-Fluorobiphenyl				66.80	40.6-122	WG782911
Nitrobenzene-d5				65.10	22.1-146	WG782911
p-Terphenyl-d14				71.00	32.2-131	WG782911
4,4-DDD	mg/kg	.0667	0.0536	80.4	65.6-122	WG782636
4,4-DDE	mg/kg	.0667	0.0547	82.0	61.9-132	WG782636
4,4-DDT	mg/kg	.0667	0.0555	83.2	57.6-125	WG782636
Aldrin	mg/kg	.0667	0.0562	84.2	65.8-124	WG782636
Alpha BHC	mg/kg	.0667	0.0560	84.0	65.7-126	WG782636
Beta BHC	mg/kg	.0667	0.0532	79.8	57.6-137	WG782636
Delta BHC	mg/kg	.0667	0.0543	81.4	65.7-124	WG782636
Dieldrin	mg/kg	.0667	0.0554	83.1	64.1-122	WG782636
Endosulfan I	mg/kg	.0667	0.0540	80.9	62-121	WG782636
Endosulfan II	mg/kg	.0667	0.0530	79.5	64.2-117	WG782636
Endosulfan sulfate	mg/kg	.0667	0.0525	78.8	58.3-128	WG782636
Endrin	mg/kg	.0667	0.0549	82.3	53.6-127	WG782636
Endrin aldehyde	mg/kg	.0667	0.0399	59.9	37.4-130	WG782636
Endrin ketone	mg/kg	.0667	0.0514	77.0	63-121	WG782636
Gamma BHC	mg/kg	.0667	0.0560	84.0	64.5-121	WG782636
Heptachlor	mg/kg	.0667	0.0576	86.4	66.4-118	WG782636
Heptachlor epoxide	mg/kg	.0667	0.0543	81.4	60.6-132	WG782636
Hexachlorobenzene	mg/kg	.0667	0.0502	75.2	57.6-131	WG782636
Methoxychlor	mg/kg	.0667	0.0528	79.2	54.8-131	WG782636
Decachlorobiphenyl				73.60	10-143	WG782636
Tetrachloro-m-xylene				77.40	29.2-144	WG782636
2,4,5-T	mg/kg	.1667	0.0543	32.6*	44.9-111	WG783260
2,4,5-TP (Silvex)	mg/kg	.1667	0.0560	33.6*	48.4-110	WG783260
2,4-D	mg/kg	.1667	0.0405	24.3*	40-112	WG783260
2,4-DB	mg/kg	.1667	0.0507	30.4*	33.8-126	WG783260
Dalapon	mg/kg	.1667	0.0485	29.1*	36.7-119	WG783260
Dicamba	mg/kg	.1667	0.0626	37.6*	50.2-125	WG783260
Dichloroprop	mg/kg	.1667	0.0473	28.4*	39.9-99	WG783260
Dinoseb	mg/kg	.1667	0.0601	36.0	15.6-109	WG783260
MCPA	mg/kg	16.666	5.14	30.8*	34.7-110	WG783260
MCPP	mg/kg	16.666	5.84	35.0*	41-121	WG783260
2,4-Dichlorophenyl Acetic Acid				33.50	23.5-129	WG783260

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Diesel Range Organics (DRO)	mg/kg	27.1	22.5	90.0	50-150	18.4	20	WG783078
Residual Range Organics (RRO)	mg/kg	25.6	21.4	85.0	50-150	17.8	20	WG783078
o-Terphenyl				70.10	50-150			WG783078
Arsenic	mg/l	10.3	10.1	114.	80-120	2.00	20	WG783347

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Level II

L759719

April 27, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
Barium	mg/l	10.2	10.2	113.	80-120	0.0	20	WG783347
Cadmium	mg/l	10.1	10.0	112.	80-120	0.0	20	WG783347
Chromium	mg/l	10.4	10.3	115.	80-120	0.0	20	WG783347
Lead	mg/l	10.1	10.1	113.	80-120	1.00	20	WG783347
Selenium	mg/l	10.5	10.4	117.	80-120	1.00	20	WG783347
Silver	mg/l	9.89	9.84	110.	80-120	0.0	20	WG783347
Mercury	mg/l	0.0305	0.0323	102.	80-120	6.00	20	WG783345
1-Methylnaphthalene	mg/kg	0.0571	0.0567	71.0	50.6-122	0.820	20	WG782911
2-Chloronaphthalene	mg/kg	0.0539	0.0539	67.0	53.9-121	0.0500	20	WG782911
2-Methylnaphthalene	mg/kg	0.0549	0.0548	68.0	50.4-120	0.0500	20	WG782911
Acenaphthene	mg/kg	0.0532	0.0532	66.0	52.4-120	0.110	20	WG782911
Acenaphthylene	mg/kg	0.0543	0.0545	68.0	49.6-120	0.470	20	WG782911
Anthracene	mg/kg	0.0615	0.0596	77.0	50.3-130	3.26	20	WG782911
Benzo(a)anthracene	mg/kg	0.0557	0.0567	70.0	46.7-125	1.68	20	WG782911
Benzo(a)pyrene	mg/kg	0.0471	0.0464	59.0	42.3-119	1.49	20	WG782911
Benzo(b)fluoranthene	mg/kg	0.0526	0.0534	66.0	43.6-124	1.49	20	WG782911
Benzo(g,h,i)perylene	mg/kg	0.0576	0.0586	72.0	45.1-132	1.74	20	WG782911
Benzo(k)fluoranthene	mg/kg	0.0547	0.0544	68.0	46.1-131	0.590	20	WG782911
Chrysene	mg/kg	0.0585	0.0582	73.0	49.5-131	0.510	20	WG782911
Dibenz(a,h)anthracene	mg/kg	0.0589	0.0597	74.0	44.8-133	1.33	20	WG782911
Fluoranthene	mg/kg	0.0602	0.0588	75.0	49.3-128	2.45	20	WG782911
Fluorene	mg/kg	0.0539	0.0544	67.0	50.6-121	0.990	20	WG782911
Indeno(1,2,3-cd)pyrene	mg/kg	0.0587	0.0594	73.0	46.1-135	1.20	20	WG782911
Naphthalene	mg/kg	0.0527	0.0525	66.0	49.6-115	0.270	20	WG782911
Phenanthrene	mg/kg	0.0551	0.0548	69.0	48.8-121	0.640	20	WG782911
Pyrene	mg/kg	0.0602	0.0612	75.0	44.7-130	1.63	20	WG782911
2-Fluorobiphenyl				69.60	40.6-122			WG782911
Nitrobenzene-d5				68.30	22.1-146			WG782911
p-Terphenyl-d14				73.10	32.2-131			WG782911
4,4-DDD	mg/kg	0.0539	0.0536	81.0	65.6-122	0.570	20	WG782636
4,4-DDE	mg/kg	0.0548	0.0547	82.0	61.9-132	0.130	20	WG782636
4,4-DDT	mg/kg	0.0557	0.0555	84.0	57.6-125	0.410	20	WG782636
Aldrin	mg/kg	0.0561	0.0562	84.0	65.8-124	0.180	20	WG782636
Alpha BHC	mg/kg	0.0557	0.0560	83.0	65.7-126	0.640	20	WG782636
Beta BHC	mg/kg	0.0530	0.0532	79.0	57.6-137	0.470	20	WG782636
Delta BHC	mg/kg	0.0541	0.0543	81.0	65.7-124	0.430	20	WG782636
Dieldrin	mg/kg	0.0557	0.0554	83.0	64.1-122	0.380	20	WG782636
Endosulfan I	mg/kg	0.0520	0.0540	78.0	62-121	3.73	20	WG782636
Endosulfan II	mg/kg	0.0531	0.0530	80.0	64.2-117	0.130	20	WG782636
Endosulfan sulfate	mg/kg	0.0525	0.0525	79.0	58.3-128	0.0300	20	WG782636
Endrin	mg/kg	0.0533	0.0549	80.0	53.6-127	2.99	20	WG782636
Endrin aldehyde	mg/kg	0.0420	0.0399	63.0	37.4-130	5.08	20	WG782636
Endrin ketone	mg/kg	0.0515	0.0514	77.0	63-121	0.360	20	WG782636
Gamma BHC	mg/kg	0.0558	0.0560	84.0	64.5-121	0.480	20	WG782636
Heptachlor	mg/kg	0.0564	0.0576	84.0	66.4-118	2.18	20	WG782636
Heptachlor epoxide	mg/kg	0.0543	0.0543	81.0	60.6-132	0.0100	20	WG782636
Hexachlorobenzene	mg/kg	0.0500	0.0502	75.0	57.6-131	0.290	20	WG782636
Methoxychlor	mg/kg	0.0518	0.0528	78.0	54.8-131	2.07	20	WG782636
Decachlorobiphenyl				70.30	10-143			WG782636
Tetrachloro-m-xylene				74.40	29.2-144			WG782636
2,4,5-T	mg/kg	0.0631	0.0543	38*	44.9-111	15.0	21.5	WG783260

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Quality Assurance Report
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April 27, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
2,4,5-TP (Silvex)	mg/kg	0.0655	0.0560	39*	48.4-110	15.6	25.9	WG783260
2,4-D	mg/kg	0.0500	0.0405	30*	40-112	21.0	24.8	WG783260
2,4-DB	mg/kg	0.0631	0.0507	38.0	33.8-126	21.8	27.8	WG783260
Dalapon	mg/kg	0.0601	0.0485	36*	36.7-119	21.4	28	WG783260
Dicamba	mg/kg	0.0717	0.0626	43*	50.2-125	13.6	20	WG783260
Dichloroprop	mg/kg	0.0545	0.0473	33*	39.9-99	14.2	20.1	WG783260
Dinoseb	mg/kg	0.0692	0.0601	42.0	15.6-109	14.2	40	WG783260
MCPA	mg/kg	6.36	5.14	38.0	34.7-110	21.3	31.7	WG783260
MCPP	mg/kg	7.19	5.84	43.0	41-121	20.7	24.9	WG783260
2,4-Dichlorophenyl Acetic Acid				40.00	23.5-129			WG783260

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Arsenic	mg/l	10.2	0.0305	9	110.	75-125	L759832-01	WG783347
Barium	mg/l	10.3	0.0924	9	110.	75-125	L759832-01	WG783347
Cadmium	mg/l	10.1	-0.00376	9	110.	75-125	L759832-01	WG783347
Chromium	mg/l	10.5	0.00621	9	120.	75-125	L759832-01	WG783347
Lead	mg/l	10.0	-0.0190	9	110.	75-125	L759832-01	WG783347
Selenium	mg/l	10.4	0.00338	9	120.	75-125	L759832-01	WG783347
Silver	mg/l	9.96	0.0149	9	110.	75-125	L759832-01	WG783347
Mercury	mg/l	0.0300	-0.000570	.03	100.	75-125	L760279-06	WG783345
Mercury	mg/l	0.0292	-0.000641	.03	97.0	75-125	L759832-01	WG783345
1-Methylnaphthalene	mg/kg	0.0525	0.0	.08	66.0	28.4-137	L759897-03	WG782911
2-Chloronaphthalene	mg/kg	0.0505	0.0	.08	63.0	38.6-126	L759897-03	WG782911
2-Methylnaphthalene	mg/kg	0.0509	0.0	.08	64.0	26.6-137	L759897-03	WG782911
Acenaphthene	mg/kg	0.0486	0.0	.08	61.0	31.9-130	L759897-03	WG782911
Acenaphthylene	mg/kg	0.0506	0.0	.08	63.0	33.7-129	L759897-03	WG782911
Anthracene	mg/kg	0.0543	0.0	.08	68.0	26.5-141	L759897-03	WG782911
Benzo(a)anthracene	mg/kg	0.0477	0.0	.08	60.0	18.3-136	L759897-03	WG782911
Benzo(a)pyrene	mg/kg	0.0449	0.0	.08	56.0	16.9-135	L759897-03	WG782911
Benzo(b)fluoranthene	mg/kg	0.0414	0.0	.08	52.0	10-134	L759897-03	WG782911
Benzo(g,h,i)perylene	mg/kg	0.0476	0.0	.08	60.0	14.1-140	L759897-03	WG782911
Benzo(k)fluoranthene	mg/kg	0.0462	0.0	.08	58.0	18.2-138	L759897-03	WG782911
Chrysene	mg/kg	0.0480	0.0	.08	60.0	17.1-145	L759897-03	WG782911
Dibenz(a,h)anthracene	mg/kg	0.0498	0.0	.08	62.0	18.5-138	L759897-03	WG782911
Fluoranthene	mg/kg	0.0504	0.0	.08	63.0	15.4-144	L759897-03	WG782911
Fluorene	mg/kg	0.0487	0.0	.08	61.0	23.5-136	L759897-03	WG782911
Indeno(1,2,3-cd)pyrene	mg/kg	0.0481	0.0	.08	60.0	14.5-142	L759897-03	WG782911
Naphthalene	mg/kg	0.0480	0.0	.08	60.0	29.2-128	L759897-03	WG782911
Phenanthrene	mg/kg	0.0478	0.0	.08	60.0	20.1-134	L759897-03	WG782911
Pyrene	mg/kg	0.0501	0.0	.08	63.0	11-148	L759897-03	WG782911
2-Fluorobiphenyl					64.20	40.6-122		WG782911
Nitrobenzene-d5					68.20	22.1-146		WG782911
p-Terphenyl-d14					59.30	32.2-131		WG782911
4,4-DDD	mg/kg	0.0633	0.0	.0667	95.0	33-145	L759654-01	WG782636
4,4-DDE	mg/kg	0.189	0.109	.0667	120.	26.3-151	L759654-01	WG782636
4,4-DDT	mg/kg	0.0735	0.00700	.0667	100.	11.8-145	L759654-01	WG782636
Aldrin	mg/kg	0.0657	0.0	.0667	98.0	20.2-150	L759654-01	WG782636
Alpha BHC	mg/kg	0.0665	0.0	.0667	100.	35.3-155	L759654-01	WG782636
Beta BHC	mg/kg	0.0634	0.0	.0667	95.0	30.4-160	L759654-01	WG782636
Delta BHC	mg/kg	0.0644	0.0	.0667	97.0	27.8-160	L759654-01	WG782636
Dieldrin	mg/kg	0.0660	0.0	.0667	99.0	24.8-149	L759654-01	WG782636

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

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Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L759719

April 27, 2015

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Endosulfan I	mg/kg	0.0643	0.0	.0667	96.0	20.7-152	L759654-01	WG782636
Endosulfan II	mg/kg	0.0629	0.0	.0667	94.0	22.1-150	L759654-01	WG782636
Endosulfan sulfate	mg/kg	0.0610	0.0	.0667	91.0	24.6-151	L759654-01	WG782636
Endrin	mg/kg	0.0642	0.0	.0667	96.0	27.3-149	L759654-01	WG782636
Endrin aldehyde	mg/kg	0.0629	0.0	.0667	94.0	11-157	L759654-01	WG782636
Endrin ketone	mg/kg	0.0607	0.0	.0667	91.0	28.5-148	L759654-01	WG782636
Gamma BHC	mg/kg	0.0667	0.0	.0667	100.	32.6-149	L759654-01	WG782636
Heptachlor	mg/kg	0.0665	0.0	.0667	100.	26.7-144	L759654-01	WG782636
Heptachlor epoxide	mg/kg	0.0641	0.0	.0667	96.0	25.2-155	L759654-01	WG782636
Hexachlorobenzene	mg/kg	0.0588	0.0	.0667	88.0	19-156	L759654-01	WG782636
Methoxychlor	mg/kg	0.0630	0.0	.0667	94.0	10-165	L759654-01	WG782636
Decachlorobiphenyl					77.30	10-143		WG782636
Tetrachloro-m-xylene					89.80	29.2-144		WG782636

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Arsenic	mg/l	10.4	10.2	115.	75-125	2.00	20	L759832-01	WG783347
Barium	mg/l	10.4	10.3	114.	75-125	0.0	20	L759832-01	WG783347
Cadmium	mg/l	10.2	10.1	113.	75-125	0.0	20	L759832-01	WG783347
Chromium	mg/l	10.4	10.5	115.	75-125	1.00	20	L759832-01	WG783347
Lead	mg/l	10.3	10.0	114.	75-125	2.00	20	L759832-01	WG783347
Selenium	mg/l	10.7	10.4	119.	75-125	3.00	20	L759832-01	WG783347
Silver	mg/l	9.99	9.96	111.	75-125	0.0	20	L759832-01	WG783347
Mercury	mg/l	0.0294	0.0300	100.	75-125	2.00	20	L760279-06	WG783345
Mercury	mg/l	0.0292	0.0292	99.6	75-125	0.0	20	L759832-01	WG783345
1-Methylnaphthalene	mg/kg	0.0624	0.0525	78.0	28.4-137	17.2	20	L759897-03	WG782911
2-Chloronaphthalene	mg/kg	0.0576	0.0505	72.0	38.6-126	13.1	20	L759897-03	WG782911
2-Methylnaphthalene	mg/kg	0.0609	0.0509	76.1	26.6-137	17.9	20	L759897-03	WG782911
Acenaphthene	mg/kg	0.0559	0.0486	69.9	31.9-130	14.0	20	L759897-03	WG782911
Acenaphthylene	mg/kg	0.0543	0.0506	67.8	33.7-129	7.10	20	L759897-03	WG782911
Anthracene	mg/kg	0.0629	0.0543	78.6	26.5-141	14.7	21.2	L759897-03	WG782911
Benzo(a)anthracene	mg/kg	0.0559	0.0477	69.8	18.3-136	15.7	24.6	L759897-03	WG782911
Benzo(a)pyrene	mg/kg	0.0541	0.0449	67.6	16.9-135	18.6	25.2	L759897-03	WG782911
Benzo(b)fluoranthene	mg/kg	0.0480	0.0414	60.0	10-134	14.8	30.9	L759897-03	WG782911
Benzo(g,h,i)perylene	mg/kg	0.0581	0.0476	72.6	14.1-140	19.8	25.5	L759897-03	WG782911
Benzo(k)fluoranthene	mg/kg	0.0553	0.0462	69.1	18.2-138	17.9	25.6	L759897-03	WG782911
Chrysene	mg/kg	0.0579	0.0480	72.4	17.1-145	18.8	24.2	L759897-03	WG782911
Dibenz(a,h)anthracene	mg/kg	0.0605	0.0498	75.6	18.5-138	19.5	24.3	L759897-03	WG782911
Fluoranthene	mg/kg	0.0590	0.0504	73.8	15.4-144	15.8	27.1	L759897-03	WG782911
Fluorene	mg/kg	0.0511	0.0487	63.8	23.5-136	4.77	20	L759897-03	WG782911
Indeno(1,2,3-cd)pyrene	mg/kg	0.0590	0.0481	73.8	14.5-142	20.3	25.8	L759897-03	WG782911
Naphthalene	mg/kg	0.0562	0.0480	70.2	29.2-128	15.6	20	L759897-03	WG782911
Phenanthrene	mg/kg	0.0547	0.0478	68.4	20.1-134	13.4	23.6	L759897-03	WG782911
Pyrene	mg/kg	0.0594	0.0501	74.3	11-148	17.1	26.1	L759897-03	WG782911
2-Fluorobiphenyl				71.90	40.6-122				WG782911
Nitrobenzene-d5				72.40	22.1-146				WG782911
p-Terphenyl-d14				70.40	32.2-131				WG782911
4,4-DDD	mg/kg	0.0573	0.0633	85.8	33-145	10.1	20	L759654-01	WG782636
4,4-DDE	mg/kg	0.152	0.189	64.2	26.3-151	22.0*	20	L759654-01	WG782636
4,4-DDT	mg/kg	0.0670	0.0735	89.9	11.8-145	9.29	23.8	L759654-01	WG782636
Aldrin	mg/kg	0.0589	0.0657	88.3	20.2-150	10.9	20	L759654-01	WG782636
Alpha BHC	mg/kg	0.0593	0.0665	88.9	35.3-155	11.5	20	L759654-01	WG782636

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Quality Assurance Report
Level II

L759719

April 27, 2015

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Beta BHC	mg/kg	0.0568	0.0634	85.2	30.4-160	11.0	20	L759654-01	WG782636
Delta BHC	mg/kg	0.0581	0.0644	87.1	27.8-160	10.3	20	L759654-01	WG782636
Dieldrin	mg/kg	0.0597	0.0660	89.4	24.8-149	10.1	20	L759654-01	WG782636
Endosulfan I	mg/kg	0.0557	0.0643	83.5	20.7-152	14.4	20	L759654-01	WG782636
Endosulfan II	mg/kg	0.0571	0.0629	85.6	22.1-150	9.59	20	L759654-01	WG782636
Endosulfan sulfate	mg/kg	0.0560	0.0610	83.9	24.6-151	8.57	21.5	L759654-01	WG782636
Endrin	mg/kg	0.0560	0.0642	84.0	27.3-149	13.7	21.2	L759654-01	WG782636
Endrin aldehyde	mg/kg	0.0569	0.0629	85.4	11-157	9.98	20	L759654-01	WG782636
Endrin ketone	mg/kg	0.0556	0.0607	83.4	28.5-148	8.69	20	L759654-01	WG782636
Gamma BHC	mg/kg	0.0599	0.0667	89.8	32.6-149	10.7	20	L759654-01	WG782636
Heptachlor	mg/kg	0.0612	0.0665	91.8	26.7-144	8.28	20	L759654-01	WG782636
Heptachlor epoxide	mg/kg	0.0577	0.0641	86.5	25.2-155	10.5	20	L759654-01	WG782636
Hexachlorobenzene	mg/kg	0.0529	0.0588	79.3	19-156	10.7	20	L759654-01	WG782636
Methoxychlor	mg/kg	0.0577	0.0630	86.4	10-165	8.88	25.4	L759654-01	WG782636
Decachlorobiphenyl				72.80	10-143				WG782636
Tetrachloro-m-xylene				81.80	29.2-144				WG782636

Serial Dilution

Batch number /Run number / Sample number cross reference

WG782948: R3031554: L759719-01 02 03 04 05 06 08 09
WG783078: R3031719 R3031791: L759719-01 02 03 04 05 06
WG783134: R3031778: L759719-07
WG782636: R3031801 R3032182 R3032214 R3032886: L759719-08 09
WG783347: R3031878: L759719-07
WG783345: R3031945: L759719-07
WG782911: R3031955: L759719-04
WG783260: R3033304: L759719-08 09

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

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69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L759719

April 27, 2015

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

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

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

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

Mark Yinger Associates - OR

69860 Camp Polk Road
Sisters, OR 97759

Billing Information:
Accounts Payable
69860 Camp Polk Road
Sisters, OR 97759

Report to: **Mark Yinger**

Email To: **marky@bendbroadband.com**

Project Description: **10ts Street Properties - Wasco County**

City/State Collected:

Phone: **541-549-3030**
Fax:

Client Project # **14-1128**

Lab Project # **YINGERSOR-141128**

Collected by (print): M. Yinger

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
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Phone: 800-767-5859
Fax: 615-758-5859

L# L759719

Table A244

Acctnum: YINGERSOR
Template: T101306
Prelogin: P504241
TSR: 358 - Jarred Willis
PB: 3-23 KW

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX 4ozClr-NoPres	RCRA8 Metals / V8260 4ozClr-NoPres	SV8081 / SV8151 4ozClr-NoPres	SV8270PAHSIMD 4ozClr-NoPres	TCLP Metals (RCRA8) 8ozClr-NoPres	Rem./Contaminant	Sample # (lab only)
5022		SS		4/14/15	3:00	1	X						-01
5023		SS		"	3:15	1	X						02
5024		SS		"	3:30	1	X						03
5025		SS		4/15/15	9:30	1	X			X			04
~~5029~~ 5029		SS		"	11:15	1	X						05
5026		SS		4/15/15	10:45	1	X						06
5028		TCLP		4/15/15	10:45	1					X		07
		SS				3	X	X		X			
5026		SS		4/15/15	10:00	1			X				08
5027		SS		4/15/15	10:30	1			X				09

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other _____

pH _____ Temp _____

Flow _____ Other _____

Remarks: 6361 6182 1810

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	4/15/15	12:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 10

Date: 4/16/15 Time: 0940

Condition: F (lab use only) (OK)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

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Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Monday April 27, 2015

Report Number: L759754
Samples Received: 04/16/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By: Leslie Newton

Leslie Newton , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-01

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5016

Collected By : M. Yinger
Collection Date : 04/14/15 11:45

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	91.0	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.55	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	99.8			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	U	1.3	4.4	mg/kg	J3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	10.	3.3	11.	mg/kg	JJ3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	86.0			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-02

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5017

Collected By : M. Yinger
Collection Date : 04/14/15 12:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	94.7	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.53	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	99.9			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	U	1.3	4.2	mg/kg		NWTPHDX	04/23/15	1
Residual Range Organics (RRO)	4.8	3.3	10.	mg/kg	J	NWTPHDX	04/23/15	1
Surrogate Recovery								
o-Terphenyl	66.3			% Rec.		NWTPHDX	04/23/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-03

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5018

Collected By : M. Yinger
Collection Date : 04/14/15 12:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.0	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.54	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	99.9			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	130	13.	43.	mg/kg	J3	NWTPHDX	04/18/15	10
Residual Range Organics (RRO)	1700	33.	110	mg/kg	J3	NWTPHDX	04/18/15	10
Surrogate Recovery								
o-Terphenyl	73.8			% Rec.		NWTPHDX	04/18/15	10

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-04

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5019

Collected By : M. Yinger
Collection Date : 04/14/15 13:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	90.4	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.55	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	100.			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	1.6	1.3	4.4	mg/kg	JJ3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	5.9	3.3	11.	mg/kg	JJ3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	73.3			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-05

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5020

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 13:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	82.4	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.61	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	100.			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	6.4	1.3	4.8	mg/kg	J3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	4.8	3.3	12.	mg/kg	JJ3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	76.4			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-06

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5021

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 13:45

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	86.8	0.0333		%		2540 G-2	04/18/15	1
Gasoline Range Organics-NWTPH	U	0.17	0.58	mg/kg		NWTPHGX	04/22/15	5
Surrogate Recovery								
a,a,a-Trifluorotoluene(FID)	100.			% Rec.		NWTPHGX	04/22/15	1
Diesel Range Organics (DRO)	5.3	1.3	4.6	mg/kg		NWTPHDX	04/23/15	1
Residual Range Organics (RRO)	6.9	3.3	12.	mg/kg	J	NWTPHDX	04/23/15	1
Surrogate Recovery								
o-Terphenyl	54.4			% Rec.		NWTPHDX	04/23/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-07

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5012

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	89.2	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	28.	1.3	4.5	mg/kg	J3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	200	3.3	11.	mg/kg	J3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	70.3			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-08

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5013

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 11:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	83.8	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	5.6	1.3	4.8	mg/kg		NWTPHDX	04/23/15	1
Residual Range Organics (RRO)	18.	3.3	12.	mg/kg		NWTPHDX	04/23/15	1
Surrogate Recovery								
o-Terphenyl	54.1			% Rec.		NWTPHDX	04/23/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
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April 27,2015

ESC Sample # : L759754-09

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5014

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 11:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.6	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	U	1.3	4.3	mg/kg	J3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	15.	3.3	11.	mg/kg	J3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	75.2			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

April 27,2015

ESC Sample # : L759754-10

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Site ID :

Sample ID : 5015

Project # : 14-1128

Collected By : M. Yinger
Collection Date : 04/14/15 11:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.2	0.0333		%		2540 G-2	04/18/15	1
Diesel Range Organics (DRO)	U	1.3	4.3	mg/kg	J3	NWTPHDX	04/17/15	1
Residual Range Organics (RRO)	6.2	3.3	11.	mg/kg	JJ3	NWTPHDX	04/17/15	1
Surrogate Recovery								
o-Terphenyl	74.0			% Rec.		NWTPHDX	04/17/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

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Reported: 04/27/15 13:35 Printed: 04/27/15 13:36

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L759754-01	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	JJ3
L759754-02	WG783652	SAMP	Residual Range Organics (RRO)	R3032597	J
L759754-03	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	J3
L759754-04	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	JJ3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	JJ3
L759754-05	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	JJ3
L759754-06	WG783652	SAMP	Residual Range Organics (RRO)	R3032597	J
L759754-07	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	J3
L759754-09	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	J3
L759754-10	WG782703	SAMP	Diesel Range Organics (DRO)	R3031602	J3
	WG782703	SAMP	Residual Range Organics (RRO)	R3031602	JJ3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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69860 Camp Polk Road

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Quality Assurance Report
Level II

L759754

April 27, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Total Solids	< .1	%			WG782948	04/18/15 09:37
Total Solids	< .1	%			WG782947	04/18/15 09:41
Diesel Range Organics (DRO)	< 4	mg/kg			WG782703	04/17/15 19:16
Residual Range Organics (RRO)	< 10	mg/kg			WG782703	04/17/15 19:16
o-Terphenyl		% Rec.	86.60	50-150	WG782703	04/17/15 19:16
Gasoline Range Organics-NWTPH	< .1	mg/kg			WG782834	04/22/15 03:42
a,a,a-Trifluorotoluene(FID)		% Rec.	102.0	59-128	WG782834	04/22/15 03:42
Diesel Range Organics (DRO)	< 4	mg/kg			WG783652	04/23/15 10:02
Residual Range Organics (RRO)	< 10	mg/kg			WG783652	04/23/15 10:02
o-Terphenyl		% Rec.	75.30	50-150	WG783652	04/23/15 10:02

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	81.6	81.9	0.342	5	L759719-01	WG782948
Total Solids	%	76.4	76.5	0.114	5	L759717-11	WG782947

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Total Solids	%	50	50.0	99.9	85-115	WG782948
Total Solids	%	50	50.0	100.	85-115	WG782947
Diesel Range Organics (DRO)	mg/kg	30	22.0	73.4	50-150	WG782703
Residual Range Organics (RRO)	mg/kg	30	20.3	67.8	50-150	WG782703
o-Terphenyl				55.90	50-150	WG782703
Gasoline Range Organics-NWTPH	mg/kg	5.5	5.52	100.	62.2-127	WG782834
a,a,a-Trifluorotoluene(FID)				97.70	59-128	WG782834
Diesel Range Organics (DRO)	mg/kg	30	24.1	80.2	50-150	WG783652
Residual Range Organics (RRO)	mg/kg	30	22.6	75.3	50-150	WG783652
o-Terphenyl				67.40	50-150	WG783652

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Diesel Range Organics (DRO)	mg/kg	29.4	22.0	98.0	50-150	28.5*	20	WG782703
Residual Range Organics (RRO)	mg/kg	27.6	20.3	92.0	50-150	30.4*	20	WG782703
o-Terphenyl				67.40	50-150			WG782703
Gasoline Range Organics-NWTPH	mg/kg	5.59	5.52	102.	62.2-127	1.31	20	WG782834
a,a,a-Trifluorotoluene(FID)				98.00	59-128			WG782834

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

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Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L759754

April 27, 2015

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Diesel Range Organics (DRO)	mg/kg	23.2	24.1	77.0	50-150	3.44	20	WG783652
Residual Range Organics (RRO)	mg/kg	21.9	22.6	73.0	50-150	2.86	20	WG783652
o-Terphenyl				65.40	50-150			WG783652

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Diesel Range Organics (DRO)	mg/kg	25.8	0.0950	30	86.0	50-150	L759867-06	WG782703
Residual Range Organics (RRO)	mg/kg	24.7	0.0	30	82.0	50-150	L759867-06	WG782703
o-Terphenyl					55.20	50-150		WG782703
Gasoline Range Organics-NWTPH	mg/kg	18.5	0.0	5.5	67.0	20.5-134	L759437-01	WG782834
a,a,a-Trifluorotoluene(FID)					96.20	59-128		WG782834
Diesel Range Organics (DRO)	mg/kg	25.1	0.897	30	81.0	50-150	L759754-02	WG783652
Residual Range Organics (RRO)	mg/kg	30.0	4.50	30	85.0	50-150	L759754-02	WG783652
o-Terphenyl					62.90	50-150		WG783652

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Diesel Range Organics (DRO)	mg/kg	28.5	25.8	94.6	50-150	9.68	20	L759867-06	WG782703
Residual Range Organics (RRO)	mg/kg	27.3	24.7	91.1	50-150	10.2	20	L759867-06	WG782703
o-Terphenyl				52.50	50-150				WG782703
Gasoline Range Organics-NWTPH	mg/kg	19.8	18.5	72.1	20.5-134	7.12	23.8	L759437-01	WG782834
a,a,a-Trifluorotoluene(FID)				96.20	59-128				WG782834
Diesel Range Organics (DRO)	mg/kg	25.7	25.1	82.6	50-150	2.30	20	L759754-02	WG783652
Residual Range Organics (RRO)	mg/kg	32.9	30.0	94.6	50-150	9.35	20	L759754-02	WG783652
o-Terphenyl				66.70	50-150				WG783652

Batch number /Run number / Sample number cross reference

WG782948: R3031554: L759754-10
WG782947: R3031555: L759754-01 02 03 04 05 06 07 08 09
WG782703: R3031602 R3031717: L759754-01 03 04 05 07 09 10
WG782834: R3032352: L759754-01 02 03 04 05 06
WG783652: R3032597: L759754-02 06 08

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

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Quality Assurance Report
Level II

L759754

April 27, 2015

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

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

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

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

Mark Yinger Associates - OR

69860 Camp Polk Road
Sisters, OR 97759

Billing Information:

Accounts Payable
69860 Camp Polk Road
Sisters, OR 97759

Report to: **Mark Yinger**

Email To: **marky@bendbroadband.com**

Project Description: **10ts Street Properties - Wasco County**

City/State Collected:

Phone: **541-549-3030**
Fax:

Client Project # **14-1128**

Lab Project # **YINGERSOR-141128**

Collected by (print): M. Yinger

Site/Facility ID #

P.O. #

Collected by (signature): M. Yinger

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX 4ozClr-NoPres	NWTPHGX 4ozClr-NoPres	Rem./Contaminant	Sample # (lab only)
~~5012~~ 5016		SS		4/14/15	11:45	2	X	X		-01
5017		SS			12:00	2	X	X		02
5018		SS			12:15	2	X	X		03
5019		SS			1:00	2	X	X		04
5020		SS			1:30	2	X	X		05
5021		SS			1:45	2	X	X		06
5012		SS			10:30	1	X			07
5013		SS			11:00	1	X			08
5014		SS			11:15	1	X			09
5015		SS			11:30	1	X			10

Analysis / Container / Preservative

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: See Follow-up instructions attached.

pH _____ Temp _____

Flow _____ Other _____

Chain of Custody Page 1 of 1

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L # L759754

T# G140

Acctnum: YINGERSOR
Template: T101285
Prelogin: P504237
TSR: 358 - Jarred Willis
PB: 3-23 KW
Shipped Via: FedEx Ground

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
M. Yinger	4/15/15	12:00	636101821987
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.7 °C Bottles Received: 14

Date: 04-16-15 Time: 0900

Hold #

Condition: (lab use only) ANS

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

L759754

Notes for follow-up analysis

1) Highest Gx of 5019, 5020, 5021 run for RBDM-VOCs
2) Highest Dx of 5019, 5020, 5021 run for PAHs
3) Highest Gx of 5016, 5017, 5018 run for RBDM-VOCs
4) Highest Dx of 5016, 5017, 5018 run for PAHs
5) Highest Dx of 5012, 5013, 5014 5015 run for PAHs

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Tax I.D. 62-0814289

Est. 1970

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Monday May 04, 2015

Report Number: L761895
Samples Received: 04/16/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By: Jarred Willis

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

May 04,2015

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5018

Collected By : M. Yinger
Collection Date : 04/14/15 12:15

ESC Sample # : L761895-01

Site ID :

Project # : 14-1128

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.0	0.0333		%		2540 G-2	04/18/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Acenaphthene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Acenaphthylene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Benzo(a)anthracene	0.0076	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(a)pyrene	0.0072	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(b)fluoranthene	0.012	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(g,h,i)perylene	0.015	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(k)fluoranthene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Chrysene	0.0036	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Dibenz(a,h)anthracene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Fluoranthene	0.0080	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Fluorene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Indeno(1,2,3-cd)pyrene	0.0078	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Naphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
Phenanthrene	0.0042	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Pyrene	0.011	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
1-Methylnaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
2-Methylnaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
2-Chloronaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
Surrogate Recovery								
Nitrobenzene-d5	73.6			% Rec.		8270D-SI	04/30/15	5
2-Fluorobiphenyl	69.5			% Rec.		8270D-SI	04/30/15	5
p-Terphenyl-d14	65.2			% Rec.		8270D-SI	04/30/15	5

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 05/04/15 11:58 Printed: 05/04/15 11:59

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

May 04,2015

ESC Sample # : L761895-02

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5015

Collected By : M. Yinger
Collection Date : 04/14/15 11:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.2	0.0333		%		2540 G-2	04/18/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.00073	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Acenaphthene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Acenaphthylene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Benzo(a)anthracene	0.0052	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(a)pyrene	0.0062	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(b)fluoranthene	0.0073	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Benzo(g,h,i)perylene	0.0050	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(k)fluoranthene	0.0031	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Chrysene	0.0055	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Dibenz(a,h)anthracene	0.0013	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Fluoranthene	0.0075	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Fluorene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Indeno(1,2,3-cd)pyrene	0.0044	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Naphthalene	0.0026	0.0020	0.021	mg/kg	JQ	8270D-SI	05/01/15	1
Phenanthrene	0.0018	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Pyrene	0.0094	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
1-Methylnaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
2-Methylnaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
2-Chloronaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
Surrogate Recovery								
Nitrobenzene-d5	85.1			% Rec.		8270D-SI	05/01/15	1
2-Fluorobiphenyl	84.6			% Rec.		8270D-SI	05/01/15	1
p-Terphenyl-d14	83.4			% Rec.		8270D-SI	05/01/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 05/04/15 11:58 Printed: 05/04/15 11:59

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L761895-01	WG785765	SAMP	Anthracene	R3034341	Q
	WG785765	SAMP	Acenaphthene	R3034341	Q
	WG785765	SAMP	Acenaphthylene	R3034341	Q
	WG785765	SAMP	Benzo(a)anthracene	R3034341	JQ
	WG785765	SAMP	Benzo(a)pyrene	R3034341	JQ
	WG785765	SAMP	Benzo(b)fluoranthene	R3034341	JQ
	WG785765	SAMP	Benzo(g,h,i)perylene	R3034341	JQ
	WG785765	SAMP	Benzo(k)fluoranthene	R3034341	Q
	WG785765	SAMP	Chrysene	R3034341	JQ
	WG785765	SAMP	Dibenz(a,h)anthracene	R3034341	Q
	WG785765	SAMP	Fluoranthene	R3034341	JQ
	WG785765	SAMP	Fluorene	R3034341	Q
	WG785765	SAMP	Indeno(1,2,3-cd)pyrene	R3034341	JQ
	WG785765	SAMP	Naphthalene	R3034341	Q
	WG785765	SAMP	Phenanthrene	R3034341	JQ
	WG785765	SAMP	Pyrene	R3034341	JQ
	WG785765	SAMP	1-Methylnaphthalene	R3034341	Q
	WG785765	SAMP	2-Methylnaphthalene	R3034341	Q
	WG785765	SAMP	2-Chloronaphthalene	R3034341	Q
L761895-02	WG785765	SAMP	Anthracene	R3034398	JQ
	WG785765	SAMP	Acenaphthene	R3034398	Q
	WG785765	SAMP	Acenaphthylene	R3034398	Q
	WG785765	SAMP	Benzo(a)anthracene	R3034398	JQ
	WG785765	SAMP	Benzo(a)pyrene	R3034398	JQ
	WG785765	SAMP	Benzo(b)fluoranthene	R3034398	Q
	WG785765	SAMP	Benzo(g,h,i)perylene	R3034398	JQ
	WG785765	SAMP	Benzo(k)fluoranthene	R3034398	JQ
	WG785765	SAMP	Chrysene	R3034398	JQ
	WG785765	SAMP	Dibenz(a,h)anthracene	R3034398	JQ
	WG785765	SAMP	Fluoranthene	R3034398	Q
	WG785765	SAMP	Fluorene	R3034398	Q
	WG785765	SAMP	Indeno(1,2,3-cd)pyrene	R3034398	JQ
	WG785765	SAMP	Naphthalene	R3034398	JQ
	WG785765	SAMP	Phenanthrene	R3034398	JQ
	WG785765	SAMP	Pyrene	R3034398	Q
	WG785765	SAMP	1-Methylnaphthalene	R3034398	Q
	WG785765	SAMP	2-Methylnaphthalene	R3034398	Q
	WG785765	SAMP	2-Chloronaphthalene	R3034398	Q

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Quality Assurance Report
Level II

L761895

May 04, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Total Solids	< .1	%			WG782948	04/18/15 09:37
Total Solids	< .1	%			WG782947	04/18/15 09:41
1-Methylnaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
2-Chloronaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
2-Methylnaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
Acenaphthene	< .006	mg/kg			WG785765	04/30/15 13:28
Acenaphthylene	< .006	mg/kg			WG785765	04/30/15 13:28
Anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(a)anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(a)pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(b)fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(g,h,i)perylene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(k)fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Chrysene	< .006	mg/kg			WG785765	04/30/15 13:28
Dibenz(a,h)anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Fluorene	< .006	mg/kg			WG785765	04/30/15 13:28
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
Naphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
Phenanthrene	< .006	mg/kg			WG785765	04/30/15 13:28
Pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
2-Fluorobiphenyl		% Rec.	85.50	40.6-122	WG785765	04/30/15 13:28
Nitrobenzene-d5		% Rec.	77.80	22.1-146	WG785765	04/30/15 13:28
p-Terphenyl-d14		% Rec.	95.20	32.2-131	WG785765	04/30/15 13:28

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	81.6	81.9	0.342	5	L759719-01	WG782948
Total Solids	%	76.4	76.5	0.114	5	L759717-11	WG782947

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Total Solids	%	50	50.0	99.9	85-115	WG782948
Total Solids	%	50	50.0	100.	85-115	WG782947
1-Methylnaphthalene	mg/kg	.08	0.0761	95.1	50.6-122	WG785765
2-Chloronaphthalene	mg/kg	.08	0.0703	87.9	53.9-121	WG785765
2-Methylnaphthalene	mg/kg	.08	0.0747	93.3	50.4-120	WG785765
Acenaphthene	mg/kg	.08	0.0699	87.4	52.4-120	WG785765
Acenaphthylene	mg/kg	.08	0.0670	83.7	49.6-120	WG785765
Anthracene	mg/kg	.08	0.0690	86.2	50.3-130	WG785765
Benzo(a)anthracene	mg/kg	.08	0.0757	94.6	46.7-125	WG785765
Benzo(a)pyrene	mg/kg	.08	0.0696	87.0	42.3-119	WG785765
Benzo(b)fluoranthene	mg/kg	.08	0.0842	105.	43.6-124	WG785765
Benzo(g,h,i)perylene	mg/kg	.08	0.0782	97.7	45.1-132	WG785765
Benzo(k)fluoranthene	mg/kg	.08	0.0781	97.6	46.1-131	WG785765
Chrysene	mg/kg	.08	0.0692	86.5	49.5-131	WG785765
Dibenz(a,h)anthracene	mg/kg	.08	0.0863	108.	44.8-133	WG785765

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

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Sisters, OR 97759

Quality Assurance Report
Level II

L761895

May 04, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Fluoranthene	mg/kg	.08	0.0697	87.2	49.3-128	WG785765
Fluorene	mg/kg	.08	0.0704	88.0	50.6-121	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0838	105.	46.1-135	WG785765
Naphthalene	mg/kg	.08	0.0693	86.6	49.6-115	WG785765
Phenanthrene	mg/kg	.08	0.0747	93.4	48.8-121	WG785765
Pyrene	mg/kg	.08	0.0773	96.7	44.7-130	WG785765
2-Fluorobiphenyl				87.50	40.6-122	WG785765
Nitrobenzene-d5				82.20	22.1-146	WG785765
p-Terphenyl-d14				84.50	32.2-131	WG785765

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1-Methylnaphthalene	mg/kg	0.0811	0.0761	101.	50.6-122	6.33	20	WG785765
2-Chloronaphthalene	mg/kg	0.0752	0.0703	94.0	53.9-121	6.72	20	WG785765
2-Methylnaphthalene	mg/kg	0.0804	0.0747	100.	50.4-120	7.44	20	WG785765
Acenaphthene	mg/kg	0.0756	0.0699	94.0	52.4-120	7.85	20	WG785765
Acenaphthylene	mg/kg	0.0724	0.0670	90.0	49.6-120	7.75	20	WG785765
Anthracene	mg/kg	0.0743	0.0690	93.0	50.3-130	7.39	20	WG785765
Benzo(a)anthracene	mg/kg	0.0845	0.0757	106.	46.7-125	11.0	20	WG785765
Benzo(a)pyrene	mg/kg	0.0748	0.0696	94.0	42.3-119	7.16	20	WG785765
Benzo(b)fluoranthene	mg/kg	0.0910	0.0842	114.	43.6-124	7.68	20	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0830	0.0782	104.	45.1-132	5.95	20	WG785765
Benzo(k)fluoranthene	mg/kg	0.0845	0.0781	106.	46.1-131	7.89	20	WG785765
Chrysene	mg/kg	0.0758	0.0692	95.0	49.5-131	9.08	20	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0945	0.0863	118.	44.8-133	9.05	20	WG785765
Fluoranthene	mg/kg	0.0754	0.0697	94.0	49.3-128	7.74	20	WG785765
Fluorene	mg/kg	0.0763	0.0704	95.0	50.6-121	7.98	20	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0911	0.0838	114.	46.1-135	8.31	20	WG785765
Naphthalene	mg/kg	0.0740	0.0693	92.0	49.6-115	6.59	20	WG785765
Phenanthrene	mg/kg	0.0807	0.0747	101.	48.8-121	7.66	20	WG785765
Pyrene	mg/kg	0.0901	0.0773	112.	44.7-130	15.2	20	WG785765
2-Fluorobiphenyl				93.30	40.6-122			WG785765
Nitrobenzene-d5				87.00	22.1-146			WG785765
p-Terphenyl-d14				96.10	32.2-131			WG785765

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1-Methylnaphthalene	mg/kg	0.0638	0.0	.016	80.0	28.4-137	L761895-01	WG785765
2-Chloronaphthalene	mg/kg	0.0583	0.0	.016	73.0	38.6-126	L761895-01	WG785765
2-Methylnaphthalene	mg/kg	0.0632	0.00428	.016	74.0	26.6-137	L761895-01	WG785765
Acenaphthene	mg/kg	0.0584	0.0	.016	73.0	31.9-130	L761895-01	WG785765
Acenaphthylene	mg/kg	0.0586	0.0	.016	73.0	33.7-129	L761895-01	WG785765
Anthracene	mg/kg	0.0598	0.0	.016	75.0	26.5-141	L761895-01	WG785765
Benzo(a)anthracene	mg/kg	0.0735	0.00707	.016	83.0	18.3-136	L761895-01	WG785765
Benzo(a)pyrene	mg/kg	0.0708	0.00673	.016	80.0	16.9-135	L761895-01	WG785765
Benzo(b)fluoranthene	mg/kg	0.0817	0.0114	.016	88.0	10-134	L761895-01	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0626	0.0144	.016	60.0	14.1-140	L761895-01	WG785765
Benzo(k)fluoranthene	mg/kg	0.0621	0.0	.016	78.0	18.2-138	L761895-01	WG785765
Chrysene	mg/kg	0.0658	0.00346	.016	78.0	17.1-145	L761895-01	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0503	0.0	.016	63.0	18.5-138	L761895-01	WG785765
Fluoranthene	mg/kg	0.0812	0.00736	.016	92.0	15.4-144	L761895-01	WG785765
Fluorene	mg/kg	0.0556	0.0	.016	69.0	23.5-136	L761895-01	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0573	0.00732	.016	62.0	14.5-142	L761895-01	WG785765
Naphthalene	mg/kg	0.0608	0.0	.016	76.0	29.2-128	L761895-01	WG785765
Phenanthrene	mg/kg	0.0613	0.00387	.016	72.0	20.1-134	L761895-01	WG785765
Pyrene	mg/kg	0.0935	0.00992	.016	100.	11-148	L761895-01	WG785765
2-Fluorobiphenyl					72.70	40.6-122		WG785765

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

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Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L761895

May 04, 2015

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrobenzene-d5					81.90	22.1-146			
p-Terphenyl-d14					67.20	32.2-131			

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1-Methylnaphthalene	mg/kg	0.0625	0.0638	78.1	28.4-137	2.06	20	L761895-01	WG785765
2-Chloronaphthalene	mg/kg	0.0551	0.0583	68.9	38.6-126	5.75	20	L761895-01	WG785765
2-Methylnaphthalene	mg/kg	0.0623	0.0632	72.6	26.6-137	1.34	20	L761895-01	WG785765
Acenaphthene	mg/kg	0.0566	0.0584	70.8	31.9-130	3.11	20	L761895-01	WG785765
Acenaphthylene	mg/kg	0.0558	0.0586	69.7	33.7-129	4.96	20	L761895-01	WG785765
Anthracene	mg/kg	0.0575	0.0598	71.9	26.5-141	3.87	21.2	L761895-01	WG785765
Benzo(a)anthracene	mg/kg	0.0670	0.0735	75.0	18.3-136	9.13	24.6	L761895-01	WG785765
Benzo(a)pyrene	mg/kg	0.0700	0.0708	79.0	16.9-135	1.25	25.2	L761895-01	WG785765
Benzo(b)fluoranthene	mg/kg	0.0693	0.0817	72.4	10-134	16.5	30.9	L761895-01	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0674	0.0626	66.3	14.1-140	7.36	25.5	L761895-01	WG785765
Benzo(k)fluoranthene	mg/kg	0.0619	0.0621	77.4	18.2-138	0.350	25.6	L761895-01	WG785765
Chrysene	mg/kg	0.0609	0.0658	71.8	17.1-145	7.86	24.2	L761895-01	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0518	0.0503	64.8	18.5-138	3.04	24.3	L761895-01	WG785765
Fluoranthene	mg/kg	0.0817	0.0812	92.9	15.4-144	0.630	27.1	L761895-01	WG785765
Fluorene	mg/kg	0.0544	0.0556	68.0	23.5-136	2.09	20	L761895-01	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0604	0.0573	66.3	14.5-142	5.32	25.8	L761895-01	WG785765
Naphthalene	mg/kg	0.0595	0.0608	74.3	29.2-128	2.22	20	L761895-01	WG785765
Phenanthrene	mg/kg	0.0631	0.0613	74.0	20.1-134	2.91	23.6	L761895-01	WG785765
Pyrene	mg/kg	0.0966	0.0935	108.	11-148	3.27	26.1	L761895-01	WG785765
2-Fluorobiphenyl				69.20	40.6-122				WG785765
Nitrobenzene-d5				79.30	22.1-146				WG785765
p-Terphenyl-d14				60.40	32.2-131				WG785765

Batch number /Run number / Sample number cross reference

WG782948: R3031554: L761895-02
WG782947: R3031555: L761895-01
WG785765: R3034136 R3034341 R3034398: L761895-01 02

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

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Quality Assurance Report
Level II

L761895

May 04, 2015

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

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

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

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

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Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Monday May 04, 2015

Report Number: L761895
Samples Received: 04/16/15
Client Project: 14-1128

Description: 10ts Street Properties - Wasco County

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

Entire Report Reviewed By: Jarred Willis

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

May 04,2015

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5018

Collected By : M. Yinger
Collection Date : 04/14/15 12:15

ESC Sample # : L761895-01

Site ID :

Project # : 14-1128

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.0	0.0333		%		2540 G-2	04/18/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Acenaphthene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Acenaphthylene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Benzo(a)anthracene	0.0076	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(a)pyrene	0.0072	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(b)fluoranthene	0.012	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(g,h,i)perylene	0.015	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Benzo(k)fluoranthene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Chrysene	0.0036	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Dibenz(a,h)anthracene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Fluoranthene	0.0080	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Fluorene	U	0.0030	0.032	mg/kg	Q	8270D-SI	04/30/15	5
Indeno(1,2,3-cd)pyrene	0.0078	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Naphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
Phenanthrene	0.0042	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
Pyrene	0.011	0.0030	0.032	mg/kg	JQ	8270D-SI	04/30/15	5
1-Methylnaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
2-Methylnaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
2-Chloronaphthalene	U	0.010	0.11	mg/kg	Q	8270D-SI	04/30/15	5
Surrogate Recovery								
Nitrobenzene-d5	73.6			% Rec.		8270D-SI	04/30/15	5
2-Fluorobiphenyl	69.5			% Rec.		8270D-SI	04/30/15	5
p-Terphenyl-d14	65.2			% Rec.		8270D-SI	04/30/15	5

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 05/04/15 11:58 Printed: 05/04/15 11:59

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REPORT OF ANALYSIS

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

May 04,2015

ESC Sample # : L761895-02

Site ID :

Project # : 14-1128

Date Received : April 16, 2015
Description : 10ts Street Properties - Wasco County

Sample ID : 5015

Collected By : M. Yinger
Collection Date : 04/14/15 11:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.2	0.0333		%		2540 G-2	04/18/15	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.00073	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Acenaphthene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Acenaphthylene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Benzo(a)anthracene	0.0052	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(a)pyrene	0.0062	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(b)fluoranthene	0.0073	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Benzo(g,h,i)perylene	0.0050	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Benzo(k)fluoranthene	0.0031	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Chrysene	0.0055	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Dibenz(a,h)anthracene	0.0013	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Fluoranthene	0.0075	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Fluorene	U	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
Indeno(1,2,3-cd)pyrene	0.0044	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Naphthalene	0.0026	0.0020	0.021	mg/kg	JQ	8270D-SI	05/01/15	1
Phenanthrene	0.0018	0.00060	0.0064	mg/kg	JQ	8270D-SI	05/01/15	1
Pyrene	0.0094	0.00060	0.0064	mg/kg	Q	8270D-SI	05/01/15	1
1-Methylnaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
2-Methylnaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
2-Chloronaphthalene	U	0.0020	0.021	mg/kg	Q	8270D-SI	05/01/15	1
Surrogate Recovery								
Nitrobenzene-d5	85.1			% Rec.		8270D-SI	05/01/15	1
2-Fluorobiphenyl	84.6			% Rec.		8270D-SI	05/01/15	1
p-Terphenyl-d14	83.4			% Rec.		8270D-SI	05/01/15	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = TRRP SDL
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
Note:

The reported analytical results relate only to the sample submitted
Reported: 05/04/15 11:58 Printed: 05/04/15 11:59

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L761895-01	WG785765	SAMP	Anthracene	R3034341	Q
	WG785765	SAMP	Acenaphthene	R3034341	Q
	WG785765	SAMP	Acenaphthylene	R3034341	Q
	WG785765	SAMP	Benzo(a)anthracene	R3034341	JQ
	WG785765	SAMP	Benzo(a)pyrene	R3034341	JQ
	WG785765	SAMP	Benzo(b)fluoranthene	R3034341	JQ
	WG785765	SAMP	Benzo(g,h,i)perylene	R3034341	JQ
	WG785765	SAMP	Benzo(k)fluoranthene	R3034341	Q
	WG785765	SAMP	Chrysene	R3034341	JQ
	WG785765	SAMP	Dibenz(a,h)anthracene	R3034341	Q
	WG785765	SAMP	Fluoranthene	R3034341	JQ
	WG785765	SAMP	Fluorene	R3034341	Q
	WG785765	SAMP	Indeno(1,2,3-cd)pyrene	R3034341	JQ
	WG785765	SAMP	Naphthalene	R3034341	Q
	WG785765	SAMP	Phenanthrene	R3034341	JQ
	WG785765	SAMP	Pyrene	R3034341	JQ
	WG785765	SAMP	1-Methylnaphthalene	R3034341	Q
	WG785765	SAMP	2-Methylnaphthalene	R3034341	Q
	WG785765	SAMP	2-Chloronaphthalene	R3034341	Q
L761895-02	WG785765	SAMP	Anthracene	R3034398	JQ
	WG785765	SAMP	Acenaphthene	R3034398	Q
	WG785765	SAMP	Acenaphthylene	R3034398	Q
	WG785765	SAMP	Benzo(a)anthracene	R3034398	JQ
	WG785765	SAMP	Benzo(a)pyrene	R3034398	JQ
	WG785765	SAMP	Benzo(b)fluoranthene	R3034398	Q
	WG785765	SAMP	Benzo(g,h,i)perylene	R3034398	JQ
	WG785765	SAMP	Benzo(k)fluoranthene	R3034398	JQ
	WG785765	SAMP	Chrysene	R3034398	JQ
	WG785765	SAMP	Dibenz(a,h)anthracene	R3034398	JQ
	WG785765	SAMP	Fluoranthene	R3034398	Q
	WG785765	SAMP	Fluorene	R3034398	Q
	WG785765	SAMP	Indeno(1,2,3-cd)pyrene	R3034398	JQ
	WG785765	SAMP	Naphthalene	R3034398	JQ
	WG785765	SAMP	Phenanthrene	R3034398	JQ
	WG785765	SAMP	Pyrene	R3034398	Q
	WG785765	SAMP	1-Methylnaphthalene	R3034398	Q
	WG785765	SAMP	2-Methylnaphthalene	R3034398	Q
	WG785765	SAMP	2-Chloronaphthalene	R3034398	Q

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

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

Definitions

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

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

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Quality Assurance Report
Level II

L761895

May 04, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Total Solids	< .1	%			WG782948	04/18/15 09:37
Total Solids	< .1	%			WG782947	04/18/15 09:41
1-Methylnaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
2-Chloronaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
2-Methylnaphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
Acenaphthene	< .006	mg/kg			WG785765	04/30/15 13:28
Acenaphthylene	< .006	mg/kg			WG785765	04/30/15 13:28
Anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(a)anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(a)pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(b)fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(g,h,i)perylene	< .006	mg/kg			WG785765	04/30/15 13:28
Benzo(k)fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Chrysene	< .006	mg/kg			WG785765	04/30/15 13:28
Dibenz(a,h)anthracene	< .006	mg/kg			WG785765	04/30/15 13:28
Fluoranthene	< .006	mg/kg			WG785765	04/30/15 13:28
Fluorene	< .006	mg/kg			WG785765	04/30/15 13:28
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
Naphthalene	< .02	mg/kg			WG785765	04/30/15 13:28
Phenanthrene	< .006	mg/kg			WG785765	04/30/15 13:28
Pyrene	< .006	mg/kg			WG785765	04/30/15 13:28
2-Fluorobiphenyl		% Rec.	85.50	40.6-122	WG785765	04/30/15 13:28
Nitrobenzene-d5		% Rec.	77.80	22.1-146	WG785765	04/30/15 13:28
p-Terphenyl-d14		% Rec.	95.20	32.2-131	WG785765	04/30/15 13:28

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	%	81.6	81.9	0.342	5	L759719-01	WG782948
Total Solids	%	76.4	76.5	0.114	5	L759717-11	WG782947

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Total Solids	%	50	50.0	99.9	85-115	WG782948
Total Solids	%	50	50.0	100.	85-115	WG782947
1-Methylnaphthalene	mg/kg	.08	0.0761	95.1	50.6-122	WG785765
2-Chloronaphthalene	mg/kg	.08	0.0703	87.9	53.9-121	WG785765
2-Methylnaphthalene	mg/kg	.08	0.0747	93.3	50.4-120	WG785765
Acenaphthene	mg/kg	.08	0.0699	87.4	52.4-120	WG785765
Acenaphthylene	mg/kg	.08	0.0670	83.7	49.6-120	WG785765
Anthracene	mg/kg	.08	0.0690	86.2	50.3-130	WG785765
Benzo(a)anthracene	mg/kg	.08	0.0757	94.6	46.7-125	WG785765
Benzo(a)pyrene	mg/kg	.08	0.0696	87.0	42.3-119	WG785765
Benzo(b)fluoranthene	mg/kg	.08	0.0842	105.	43.6-124	WG785765
Benzo(g,h,i)perylene	mg/kg	.08	0.0782	97.7	45.1-132	WG785765
Benzo(k)fluoranthene	mg/kg	.08	0.0781	97.6	46.1-131	WG785765
Chrysene	mg/kg	.08	0.0692	86.5	49.5-131	WG785765
Dibenz(a,h)anthracene	mg/kg	.08	0.0863	108.	44.8-133	WG785765

* Performance of this Analyte is outside of established criteria.
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Quality Assurance Report
Level II

L761895

May 04, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Fluoranthene	mg/kg	.08	0.0697	87.2	49.3-128	WG785765
Fluorene	mg/kg	.08	0.0704	88.0	50.6-121	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0838	105.	46.1-135	WG785765
Naphthalene	mg/kg	.08	0.0693	86.6	49.6-115	WG785765
Phenanthrene	mg/kg	.08	0.0747	93.4	48.8-121	WG785765
Pyrene	mg/kg	.08	0.0773	96.7	44.7-130	WG785765
2-Fluorobiphenyl				87.50	40.6-122	WG785765
Nitrobenzene-d5				82.20	22.1-146	WG785765
p-Terphenyl-d14				84.50	32.2-131	WG785765

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1-Methylnaphthalene	mg/kg	0.0811	0.0761	101.	50.6-122	6.33	20	WG785765
2-Chloronaphthalene	mg/kg	0.0752	0.0703	94.0	53.9-121	6.72	20	WG785765
2-Methylnaphthalene	mg/kg	0.0804	0.0747	100.	50.4-120	7.44	20	WG785765
Acenaphthene	mg/kg	0.0756	0.0699	94.0	52.4-120	7.85	20	WG785765
Acenaphthylene	mg/kg	0.0724	0.0670	90.0	49.6-120	7.75	20	WG785765
Anthracene	mg/kg	0.0743	0.0690	93.0	50.3-130	7.39	20	WG785765
Benzo(a)anthracene	mg/kg	0.0845	0.0757	106.	46.7-125	11.0	20	WG785765
Benzo(a)pyrene	mg/kg	0.0748	0.0696	94.0	42.3-119	7.16	20	WG785765
Benzo(b)fluoranthene	mg/kg	0.0910	0.0842	114.	43.6-124	7.68	20	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0830	0.0782	104.	45.1-132	5.95	20	WG785765
Benzo(k)fluoranthene	mg/kg	0.0845	0.0781	106.	46.1-131	7.89	20	WG785765
Chrysene	mg/kg	0.0758	0.0692	95.0	49.5-131	9.08	20	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0945	0.0863	118.	44.8-133	9.05	20	WG785765
Fluoranthene	mg/kg	0.0754	0.0697	94.0	49.3-128	7.74	20	WG785765
Fluorene	mg/kg	0.0763	0.0704	95.0	50.6-121	7.98	20	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0911	0.0838	114.	46.1-135	8.31	20	WG785765
Naphthalene	mg/kg	0.0740	0.0693	92.0	49.6-115	6.59	20	WG785765
Phenanthrene	mg/kg	0.0807	0.0747	101.	48.8-121	7.66	20	WG785765
Pyrene	mg/kg	0.0901	0.0773	112.	44.7-130	15.2	20	WG785765
2-Fluorobiphenyl				93.30	40.6-122			WG785765
Nitrobenzene-d5				87.00	22.1-146			WG785765
p-Terphenyl-d14				96.10	32.2-131			WG785765

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1-Methylnaphthalene	mg/kg	0.0638	0.0	.016	80.0	28.4-137	L761895-01	WG785765
2-Chloronaphthalene	mg/kg	0.0583	0.0	.016	73.0	38.6-126	L761895-01	WG785765
2-Methylnaphthalene	mg/kg	0.0632	0.00428	.016	74.0	26.6-137	L761895-01	WG785765
Acenaphthene	mg/kg	0.0584	0.0	.016	73.0	31.9-130	L761895-01	WG785765
Acenaphthylene	mg/kg	0.0586	0.0	.016	73.0	33.7-129	L761895-01	WG785765
Anthracene	mg/kg	0.0598	0.0	.016	75.0	26.5-141	L761895-01	WG785765
Benzo(a)anthracene	mg/kg	0.0735	0.00707	.016	83.0	18.3-136	L761895-01	WG785765
Benzo(a)pyrene	mg/kg	0.0708	0.00673	.016	80.0	16.9-135	L761895-01	WG785765
Benzo(b)fluoranthene	mg/kg	0.0817	0.0114	.016	88.0	10-134	L761895-01	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0626	0.0144	.016	60.0	14.1-140	L761895-01	WG785765
Benzo(k)fluoranthene	mg/kg	0.0621	0.0	.016	78.0	18.2-138	L761895-01	WG785765
Chrysene	mg/kg	0.0658	0.00346	.016	78.0	17.1-145	L761895-01	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0503	0.0	.016	63.0	18.5-138	L761895-01	WG785765
Fluoranthene	mg/kg	0.0812	0.00736	.016	92.0	15.4-144	L761895-01	WG785765
Fluorene	mg/kg	0.0556	0.0	.016	69.0	23.5-136	L761895-01	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0573	0.00732	.016	62.0	14.5-142	L761895-01	WG785765
Naphthalene	mg/kg	0.0608	0.0	.016	76.0	29.2-128	L761895-01	WG785765
Phenanthrene	mg/kg	0.0613	0.00387	.016	72.0	20.1-134	L761895-01	WG785765
Pyrene	mg/kg	0.0935	0.00992	.016	100.	11-148	L761895-01	WG785765
2-Fluorobiphenyl					72.70	40.6-122		WG785765

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Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrobenzene-d5					81.90	22.1-146			
p-Terphenyl-d14					67.20	32.2-131			

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1-Methylnaphthalene	mg/kg	0.0625	0.0638	78.1	28.4-137	2.06	20	L761895-01	WG785765
2-Chloronaphthalene	mg/kg	0.0551	0.0583	68.9	38.6-126	5.75	20	L761895-01	WG785765
2-Methylnaphthalene	mg/kg	0.0623	0.0632	72.6	26.6-137	1.34	20	L761895-01	WG785765
Acenaphthene	mg/kg	0.0566	0.0584	70.8	31.9-130	3.11	20	L761895-01	WG785765
Acenaphthylene	mg/kg	0.0558	0.0586	69.7	33.7-129	4.96	20	L761895-01	WG785765
Anthracene	mg/kg	0.0575	0.0598	71.9	26.5-141	3.87	21.2	L761895-01	WG785765
Benzo(a)anthracene	mg/kg	0.0670	0.0735	75.0	18.3-136	9.13	24.6	L761895-01	WG785765
Benzo(a)pyrene	mg/kg	0.0700	0.0708	79.0	16.9-135	1.25	25.2	L761895-01	WG785765
Benzo(b)fluoranthene	mg/kg	0.0693	0.0817	72.4	10-134	16.5	30.9	L761895-01	WG785765
Benzo(g,h,i)perylene	mg/kg	0.0674	0.0626	66.3	14.1-140	7.36	25.5	L761895-01	WG785765
Benzo(k)fluoranthene	mg/kg	0.0619	0.0621	77.4	18.2-138	0.350	25.6	L761895-01	WG785765
Chrysene	mg/kg	0.0609	0.0658	71.8	17.1-145	7.86	24.2	L761895-01	WG785765
Dibenz(a,h)anthracene	mg/kg	0.0518	0.0503	64.8	18.5-138	3.04	24.3	L761895-01	WG785765
Fluoranthene	mg/kg	0.0817	0.0812	92.9	15.4-144	0.630	27.1	L761895-01	WG785765
Fluorene	mg/kg	0.0544	0.0556	68.0	23.5-136	2.09	20	L761895-01	WG785765
Indeno(1,2,3-cd)pyrene	mg/kg	0.0604	0.0573	66.3	14.5-142	5.32	25.8	L761895-01	WG785765
Naphthalene	mg/kg	0.0595	0.0608	74.3	29.2-128	2.22	20	L761895-01	WG785765
Phenanthrene	mg/kg	0.0631	0.0613	74.0	20.1-134	2.91	23.6	L761895-01	WG785765
Pyrene	mg/kg	0.0966	0.0935	108.	11-148	3.27	26.1	L761895-01	WG785765
2-Fluorobiphenyl				69.20	40.6-122				WG785765
Nitrobenzene-d5				79.30	22.1-146				WG785765
p-Terphenyl-d14				60.40	32.2-131				WG785765

Batch number /Run number / Sample number cross reference

WG782948: R3031554: L761895-02
WG782947: R3031555: L761895-01
WG785765: R3034136 R3034341 R3034398: L761895-01 02

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

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

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

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