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June 15, 2012

Mr. Jason Shira
Site Manager
Toxics Cleanup Program
Washington Department of Ecology
15 W. Yakima Avenue, Suite 200
Yakima, Washington 98902-3452

UPSS10118.02

Re: ***Fourth Quarterly Groundwater Monitoring Report and Request for No Further Action, April 2012, UPS Union Gap (FSID#: 14724678, UST #: 3704), 501 West Valley Mall Boulevard, Union Gap, Yakima County, Washington***

Dear Mr. Shira:

Enclosed are three copies of the Fourth Quarterly Groundwater Monitoring Report, for the fourth round of quarterly sampling at the UPS facility in Union Gap, Washington. An electronic copy has also been forwarded to your email.

Should you have any questions, please contact me at ***770-874-4050.***

Sincerely,
Sierra Piedmont®, Inc.

Riley Gerrald
Project Engineer

Robert Mangum
Senior Geologist

Scott Pate, P.G. #C-112
President/CEO

Enclosure: Fourth Quarterly Groundwater Monitoring Report and Request for No Further Action

cc: Stacey Byrem, UPS
Paul Harper, UPS

Privately owned and headquartered in Woodstock, Georgia, Sierra Piedmont is a national leader in environmental consulting, site assessments, compliance and remediation.

Our commitment to clients, client relationships, the markets we serve and proven solutions to environmental problems has been our focus since 1996. Businesses from Fortune 100 companies to regional firms in 50 states rely on our advice, guidance and support to solve their environmental problems and limit liability. Our services have recently expanded to include strategic planning and consultation with clients on environmental issues in addition to our core business of environmental site assessments, remediation and compliance work.

FOURTH QUARTERLY GROUNDWATER MONITORING REPORT AND REQUEST FOR NO FURTHER ACTION
April 2012

AT
UPS UNION GAP
501 WEST VALLEY MALL BOULEVARD
UNION GAP,
YAKIMA COUNTY,
WASHINGTON
FACILITY ID #: 14724678
UST SITE ID#: 3704

June 15, 2012

PREPARED FOR:

Mr. Jason Shira
Site Manager
Toxics Cleanup Program
Washington Department of Ecology
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902-3452

sierrapiedmont®

FOURTH QUARTERLY GROUNDWATER MONITORING REPORT AND NO FURTHER ACTION AT UPS UNION GAP 501 WEST VALLEY MALL BLVD UNION GAP, YAKIMA COUNTY, WASHINGTON

June 15, 2012

Sierra Piedmont Project No. UPSS10118.02

"We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess the property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Riley Gerrald
Senior Project Manager

Robert Mangum, Jr.
Senior Geologist

Scott Pate, P.G. #C-112
President/CEO

Document Ownership

This document has been prepared by Sierra Piedmont®, Inc. (Sierra) for its private use in providing professional service to the above-mentioned client. Ideas and standardized design are the property of Sierra and are not to be used in whole or in part, without the written authorization of Sierra.

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1.0 INTRODUCTION AND BACKGROUND

Sierra Piedmont®, Inc. (Sierra) completed a Limited Subsurface Investigation (LSI) and four quarterly groundwater monitoring events at the UPS site in Union Gap, Washington. A Work Plan outlining the LSI was provided to the Washington Department of Ecology (WDOE) for review and the WDOE approved the Work Plan via correspondence dated April 26, 2010.

The LSI was conducted in response to a previous Early Notice Letter issued by the WDOE on October 29, 2007. The purpose of the LSI was to evaluate current subsurface soil and groundwater conditions in relation to a former gasoline underground storage tank (UST) and to properly abandon two groundwater monitoring wells located on-site.

Sierra completed the installation of three new groundwater monitoring wells as approved by the WDOE. The two monitoring wells approved for abandonment could not be located and are presumed abandoned/destroyed in the subsurface.

Laboratory analyses of groundwater from the LSI wells indicated no significant impact by the contaminants of concern; however, WDOE required 1 year of quarterly groundwater monitoring of these wells. Sierra completed the first three of these events with no significant evidence of groundwater impact by the contaminants of concern. This report documents the findings of the fourth and final quarterly groundwater sampling event.

2.0 FIELD METHODS

On Tuesday, April 17, 2012, Sierra personnel were present at the UPS, Union Gap, Washington, facility to commence groundwater purging and sampling activities at the three onsite groundwater monitoring wells (Figures 1 and 2).

Initially, each well cap was removed and the well allowed to equilibrate for no less than 30 minutes. A groundwater level measurement was obtained in each monitoring well using a decontaminated electronic Interface Probe. Prior to and between measurements, the probe was decontaminated using a potable water and Alconox® surfactant scrub and triple-distilled-water rinse. Groundwater levels were recorded on field notes presented in Table 1 and Attachment A. Top of casing elevations are taken from the *Limited Subsurface Investigation* report for this facility.

Table 1 – Groundwater Levels

Well	Depth to Water (feet)	Total Well Depth (feet)	Top of Casing Elevation – Relative (feet)	Top of Casing Elevation Referenced to USGS Map (feet)	Groundwater Elevation (feet)
MW-1	8.63	14.51	99.25	999.25	990.62
MW-2	7.83	13.10	98.61	998.61	990.78
MW-3	8.20	13.32	98.97	998.97	990.77

Groundwater purging was conducted using a non-contact, peristaltic pump (GeoPump®) and new tubing. Groundwater collected during purging was placed in secure, labeled containers and temporarily stored within a designated area of the UPS site pending laboratory analytical results for waste characterization.

A Horiba® U-22 Multi-Parameter Meter was placed into a flow-through cell and attached to the effluent side of the pump tubing. This device was used to measure pH, temperature, conductivity, turbidity, dissolved oxygen, and oxidation reduction potential. Parameter readings were obtained initially and at five or ten-minute intervals thereafter. Groundwater purge data is presented in Tables 2 through 4 and Attachment A.

Table 2 – Groundwater Purging Parameters
Monitoring Well MW-1

Time	pH	Temperature (Celsius)	Conductivity (mS/cm)	Oxidation-Reduction Potential (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
9:55	4.91	16.62	0.00	NM	10.09	127
10:05	4.90	15.99	0.00	272	10.86	122
10:10	6.46	16.30	0.385	227	5.60	4.1
10:15	6.41	16.05	0.364	222	5.04	3.9
10:20	6.35	15.82	0.359	220	4.98	4.1
10:30	6.31	15.45	0.356	218	5.09	5.6
10:40	6.31	15.42	0.358	220	5.01	5.7
10:50	6.31	15.41	0.357	219	5.04	5.0
11:00	6.32	15.42	0.357	221	5.02	5.0

(mS/cm) = milliSiemens per centimeter
NTU = nephelometric turbidity units
NM = not measured
mv = millivolts
mg/l = milligrams per liter

Table 3 – Groundwater Purging Parameters
Monitoring Well MW-2

Time	pH	Temperature (Celsius)	Conductivity (mS/cm)	Oxidation-Reduction Potential (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
11:30	6.54	16.20	0.350	209	6.68	11.6
11:40	6.43	15.58	0.350	211	6.54	7.0
11:45	6.37	15.11	0.352	213	6.58	5.6
11:55	6.34	14.72	0.356	215	6.60	4.4
12:05	6.37	14.46	0.358	215	6.63	4.5
12:15	6.37	14.22	0.359	215	6.73	4.4
12:25	6.39	14.20	0.361	215	6.80	4.0
12:35	6.39	14.21	0.360	215	6.78	4.0

(mS/cm) = milliSiemens per centimeter
NTU = nephelometric turbidity units
mv = millivolts
mg/l = milligrams per liter

Table 4 – Groundwater Purging Parameters
Monitoring Well MW-3

Time	pH	Temperature (Celsius)	Conductivity (mS/cm)	Oxidation-Reduction Potential (mv)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
13:25	6.73	17.00	0.335	198	5.67	9.9
13:35	6.56	15.50	0.349	196	5.89	4.4
13:45	6.48	14.70	0.355	197	6.08	3.1
13:55	6.47	14.30	0.357	197	6.11	3.0
14:05	6.45	14.00	0.359	199	6.21	2.9
14:15	6.45	13.74	0.361	198	6.25	2.8
14:25	6.42	13.51	0.363	201	6.32	3.9
14:35	6.37	13.50	0.366	202	6.34	2.3
14:45	6.38	13.52	0.365	202	6.33	2.5

(mS/cm) = milliSiemens per centimeter
NTU = nephelometric turbidity units
mv = millivolts
mg/l = milligrams per liter

Stabilization of parameters such as pH, conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity were used to determine when formation water is accessed during purging. The stabilization criterion is based on three successive readings of the water quality field parameters, except for temperature, which is recorded, but not used as a stabilization parameter. The following are the criteria which were used:

Table 5 – Stabilization Parameters

Parameter	Stabilization Criteria
pH	+/- 0.1 pH Units
Conductivity	+/- 3% mS/cm
Oxidation-Reduction Potential	+/- 10 millivolts
Turbidity	+/- 10% NTUs (when turbidity is greater than 10 NTUs)
Dissolved Oxygen	+/-10% mg/L

Groundwater samples from each well were collected immediately after purging for laboratory analyses for the presence of the following:

- Volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), 1,2-dichloroethane (EDC), and naphthalene, by EPA-approved Method 8260C
- 1,2-dibromoethane (EDB) by EPA approved Method 504.1
- total petroleum hydrocarbons (TPH) gasoline range organics (GRO), by Method Northwest (NW) NWTPH-Gx
- TPH diesel range organics (DRO), by Method NWTPH-Dx
- Total lead, by EPA-approved Method 200.8

A blind duplicate sample (MW-11) was collected from MW-2, to be analyzed for the same parameters for quality assurance purposes.

Chain-of-custody protocol was followed in sample collection, handling, transport, and receipt by the laboratory, Columbia Analytical Services, 1317 South 13th Avenue, Kelso, Washington. All groundwater samples were hand delivered to Columbia. All reporting forms, including the Certificate of Analysis and Chain-of-Custody form are presented in Attachment B.

3.0 ANALYTICAL RESULTS

The analytical results for groundwater samples collected during the April 2012 sampling event are presented in Table 6 and Attachment B.

Quality assurance/quality control (QA/QC) groundwater samples were obtained. One blind duplicate sample, MW-11, as well as matrix spike/matrix spike duplicates (MS/MSC) and a trip blank were laboratory analyzed. Additionally, the laboratory reported matrix interference in all NWTPH-Dx samples, which elevated the method reporting limit (MRL). However, the NWTPH-Dx reporting limits were below the Method A Groundwater Quality Standard.

Laboratory analytical results for the first through fourth quarterly sampling events are presented in Table 7.

Table 6 – Summary of Fourth Quarterly Analytical Results for Groundwater Samples

Analytical Parameter	Analytical Method	Method A Groundwater Quality Standard (µg/L)	Method Reporting Limit (MRL) (µg/L)	MW-1 (µg/L)	MW-11 (Blind Duplicate of MW-2) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)
Diesel Range Organics (DRO)	NWTPH-Dx	500	280	ND	ND	ND	ND
Gasoline Range Organics (GRO)	NWTPH-Gx	1,000+	250	ND	ND	ND	ND
Benzene	EPA Method 8260C	5	0.5	ND	ND	ND	ND
Toluene	EPA Method 8260C	1,000	0.5	ND	ND	ND	ND
Ethylbenzene	EPA Method 8260C	700	0.5	ND	ND	ND	ND
M,p-Xylenes	EPA Method 8260C	1,000*	0.5	ND	ND	ND	ND
o-Xylenes	EPA Method 8260C	1,000*	0.5	ND	ND	ND	ND

Analytical Parameter	Analytical Method	Method A Groundwater Quality Standard (µg/L)	Method Reporting Limit (MRL) (µg/L)	MW-1 (µg/L)	MW-11 (Blind Duplicate of MW-2) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)
Methyl tert-Butyl Ether (MTBE)	EPA Method 8260C	20	0.5	ND	ND	ND	ND
1,2-Dichloroethane (EDC)	EPA Method 8260C	5	0.5	ND	ND	ND	ND
1,2-Dibromomethane (EDB)	EPA Method 504.1	0.01(1)	0.0096	ND	ND	ND	ND
Naphthalene	EPA Method 8260C	160(2)	2.0	ND	ND	ND	ND
Lead	EPA Method 200.8	15(3)	0.02	ND	ND	ND	0.06

Notes:

* = The standard is for total xylenes
µg/L = micrograms per liter
ND = non-detect
+ = Cleanup level with no benzene detected in groundwater
(1) = Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit
(2) = This is the value for total naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene
(3) = Cleanup level based on applicable State and Federal regulations (40 CFR §141.80)

4.0 CONCLUSIONS

Findings for the April 2012 groundwater monitoring event are as follows:

- NWTPH-DRO and NWTPH-GRO were not detected above the laboratory reporting limits in any sample.
- VOCs were not detected above the laboratory reporting limits in any sample.
- Total lead was detected well below the method groundwater quality standard, in MW-3.

5.0 RECOMMENDATIONS

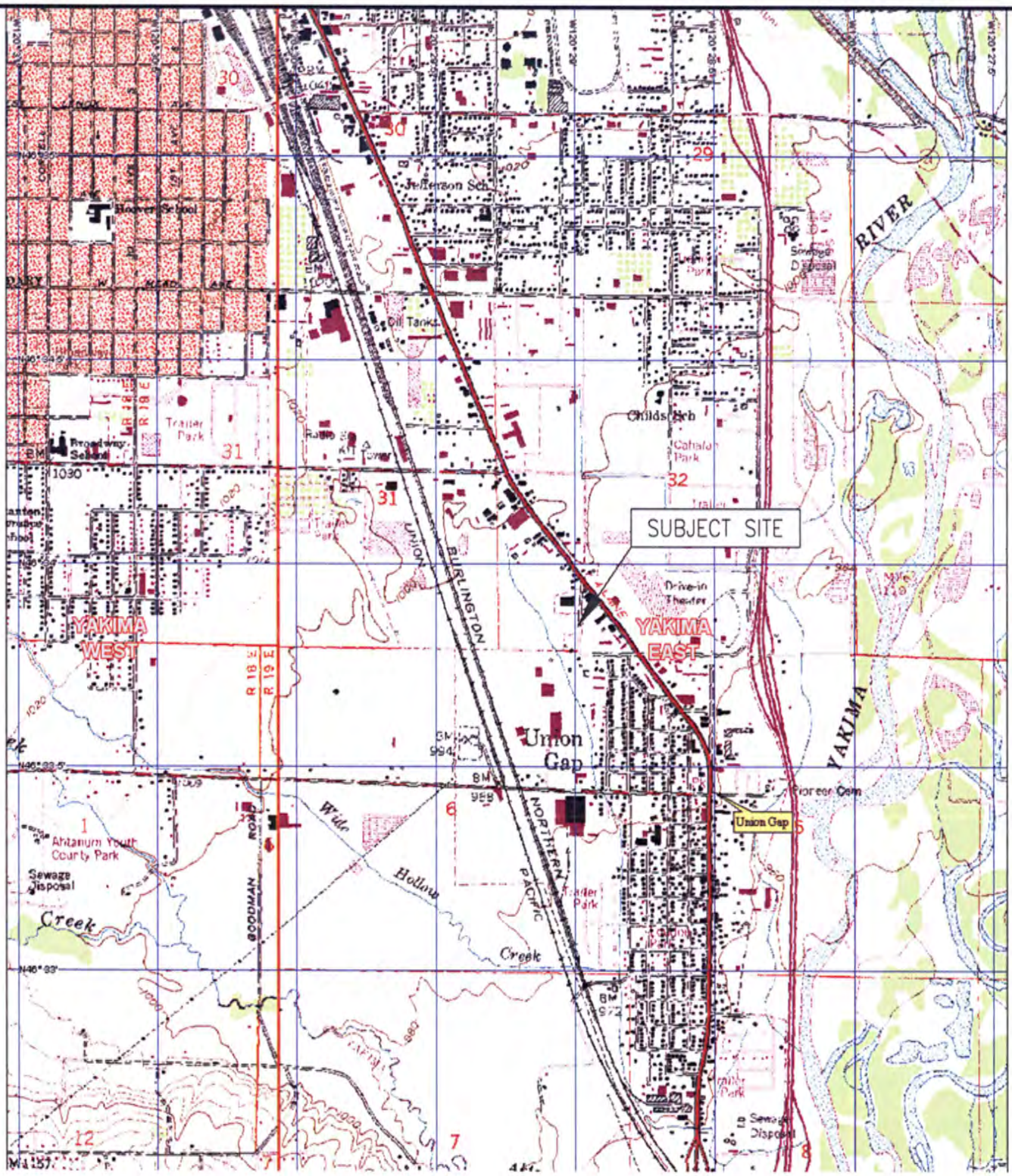
Sierra has completed four quarterly groundwater monitoring events at the UPS facility in Union Gap, Washington. These monitoring events focused on groundwater assessment and monitoring related to former UST's at the site. The UST's were reported removed in the mid 1990's and no longer are a potential source of impact to human health and the environment. Groundwater analytical results indicate no significant presence of contaminants in the subsurface of the site. These laboratory results were assessed quarterly for one year as required by the WDOE.

Given that:

- The potential contaminant source (former UST's) were removed 15-17 years ago
- The groundwater and soil beneath the subject site have been assessed as required by the WDOE
- The laboratory analyses show no evidence of contaminant impact above the WDOE groundwater quality standards

Sierra, on behalf of UPS, respectfully requests issuance of a No Further Action (NFA) required status for this site and that the existing groundwater monitoring wells be abandoned by a licensed well driller as required by WDOE.

FIGURES



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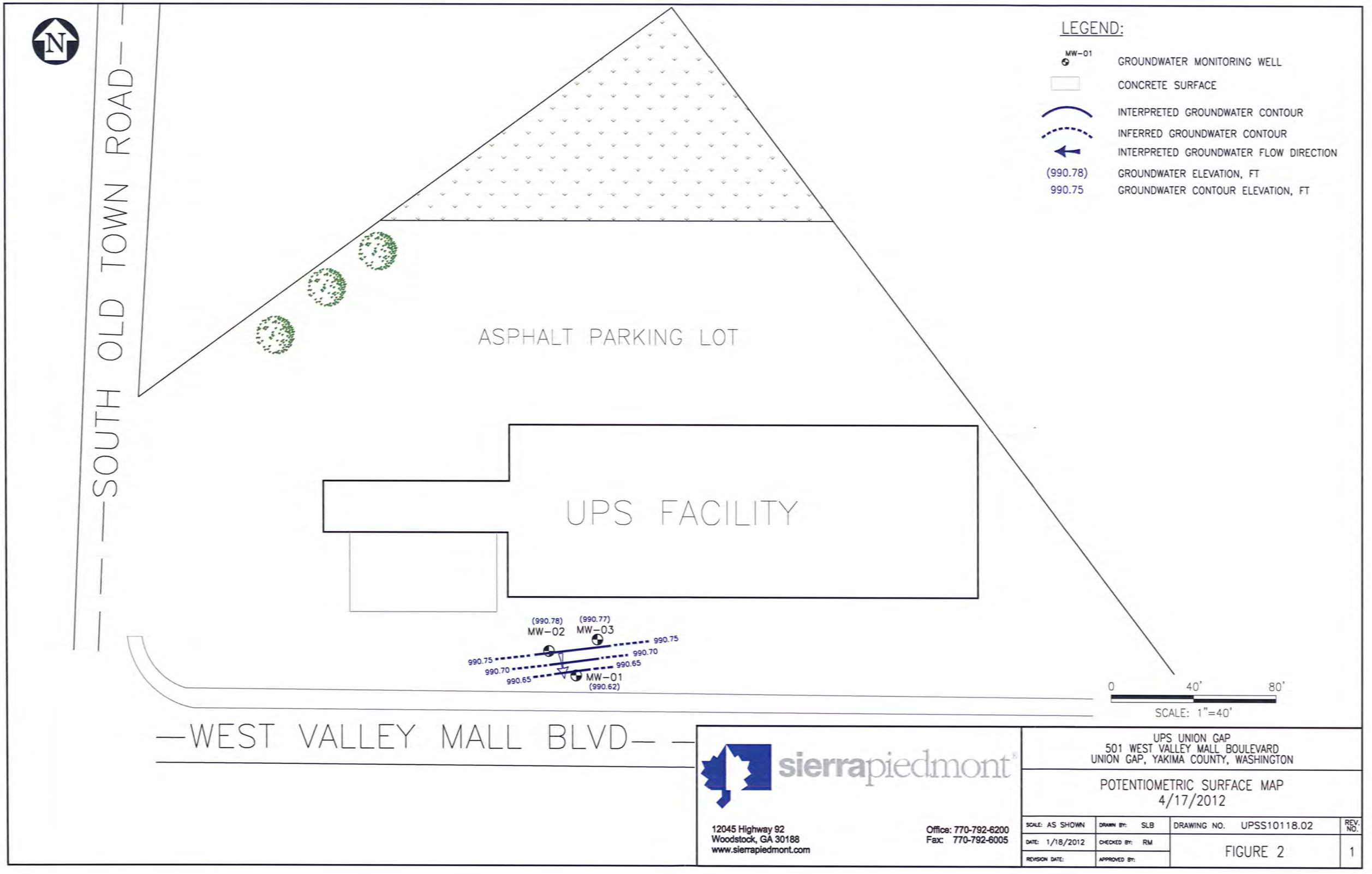
UPS UNION GAP
501 WEST VALLEY MALL BOULEVARD
UNION GAP, YAKIMA COUNTY, WASHINGTON 98903

AREA MAP
YAKIMA EAST (WA) – ORIG. DATE 1985

SCALE: NTS	DRAWN BY: JRG	DRAWING NO. UPSS10118.02	REV. NO.
DATE: 6/01/2012	CHECKED BY: RLM	FIGURE 1	0
REVISION DATE:	APPROVED BY: SLB		



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UPS UNION GAP
501 WEST VALLEY MALL BOULEVARD
UNION GAP, YAKIMA COUNTY, WASHINGTON

POTENTIOMETRIC SURFACE MAP
4/17/2012

SCALE: AS SHOWN	DRAWN BY: SLB	DRAWING NO. UPSS10118.02	REV. NO.
DATE: 1/18/2012	CHECKED BY: RM	FIGURE 2	1
REVISION DATE:	APPROVED BY:		

TABLE

Table 7 - Summary of Analytical Results for Groundwater Samples Collected During Four Quarterly Events

Analytical Parameter	Analytical Method	Method A Groundwater Quality Standard (µg/L)	MW-1 (µg/L)	MW-11 (blind duplicate of MW-1) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)	MW-1 (µg/L)	MW-11 (blind duplicate of MW-2) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)	MW-1 (µg/L)	MW-11 (blind duplicate of MW-1) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)	MW-1 (µg/L)	MW-11 (blind duplicate of MW-2) (µg/L)	MW-2 (µg/L)	MW-3 (µg/L)
			June-11				September-11				December-11				April-12			
Diesel Range Organics (DRO)	NWTPH-Dx	500	<780	<780	<780	<780	<520	<520	<520	<520	<240	<240	<240	<240	<270	<270	<270	<280
Gasoline Range Organics (GRO)	NWTPH-Gx	1000[+]	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
Benzene	EPA Method 8260C	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	EPA Method 8260C	1,000	<0.50	<0.50	<0.50	<0.50	0.11[(4)]	0.11[(4)]	0.12[(4)]	0.13[(4)]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	EPA Method 8260C	700	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
M p-Xylenes	EPA Method 8260C	1000*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
0-Xylenes	EPA Method 8260C	1000*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	EPA Method 8260C	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane (EDC)	EPA Method 8260C	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromomethane (EDB)	EPA Method 504.1	0.01[(1)]	<2.0	<2.0	<2.0	<2.0	<0.0095	<0.0095	<0.0095	<0.0095	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0095	<0.0096	<0.0096
Naphthalene	EPA Method 8260C	160[(2)]	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.0	<2.0	<2.0	<2.0
Lead	EPA Method 200.8	15[(3)]	<50	<50	<50	<50	<10	<10	<10	<10	0.18	0.08	<0.02	0.03	<0.02	<0.02	<0.02	0.06

Notes:

* = The standard is for total xylenes

µg/L = micrograms per liter

ND = non-detect

[+] = Cleanup level with no benzene detected in groundwater

(1) = Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit

(2) = This is the value for total naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene

(3) = Cleanup level based on applicable State and Federal regulations (40 CFR § 141.80)

(4) = The result is an estimated value which was recorded under the MRL

ATTACHMENT A

APPENDIX C
EXAMPLE (Minimum Requirements)
WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Project No. UPS510118.02

Location (Site/Facility Name) UPS Union Gap, WA
Well Number MW01 Date 4-17-2012
Field Personnel R. Mangum
Sampling Organization Sierra Piedmont
Identify MP Black Mark, North Side, Top of Casing

Depth to 4.52' / 14.52' of screen (below MP) top bottom
Pump Intake at (ft. below MP) ≈ 9.50' BTOC
Purging Device; (pump type) Peristaltic
Total Volume Purged ≈ 3 gallons

Calculated Purge Volume is: 3g

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] ~~µS/cm~~ m S/cm	pH	ORP[3] mv	DO mg/L	Turb-idity NTU	Comments
0955	8.63'	~~3~~ 1/2 hz	140 ml/min	0	16.62	0.00	4.91	NM	10.09	127	Probe cover was not removed during this reading
1005	8.63'	1/3	156 ~~128~~ hz ml/min	1/2 gallon	15.99	0.00	4.90	272	10.86	122	" "
1010	8.64'	1/3	248 ~~120~~ hz ml/min	3/4 gallon	16.30	0.385	6.46	227	5.60	4.1	Probe cover removed, valid readings
1015	8.62'	1/3	280 ml/min	≈ 1 gallon	16.05	0.364	6.41	222	5.04	3.9	Lowered tubing intake to match drawdown
1020	8.63	1/4	140 mL/min	≈ 1.5 gallons	15.82	0.359	6.35	220	4.98	4.1	Lowest practical pumping rate that overcomes head
1030	8.63	1/4	200 mL/min	≈ 2 gallons	15.45	0.356	6.31	218	5.09	5.6	
1040	8.63	1/4	200 mL/min	≈ 2.5 gallons	15.42	0.358	6.31	220	5.01	5.7	
1050	8.63	1/4	200 mL/min	≈ 2.75 gallons	15.41	0.357	6.31	219	5.04	5.0	
1100	8.63	1/4	200 mL/min	≈ 3.0 gallons	15.42	0.357	6.32	221	5.02	5.0	Obtained Samples
Stabilization Criteria					3%	3%	±0.1	± 10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

APPENDIX C
EXAMPLE (Minimum Requirements)
WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Project No. UPSS10118.02

Location (Site/Facility Name) UPS Union Gap, WA
Well Number MW02 Date 4-17-2012
Field Personnel R. Mangum
Sampling Organization Sierra Piedmont
Identify MP Black Mark, North Side, Top of Casing

Depth to 3.10 / 13.10 of screen (below MP) top bottom
Pump Intake at (ft. below MP) ≅8' BTOC
Purging Device; (pump type) Peristaltic
Total Volume Purged ≅3 gallons

Calculated Purge Volume is: 2.7g

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm m S/cm	pH	ORP[3] mv	DO mg/L	Turb-idity NTU	Comments
1130	7.83'	1/3	280mL/min	0	16.20	0.350	6.54	209	6.68	11.6	
1140	7.82'	1/4	180mL/min	1/4 gallon	15.58	0.350	6.43	211	6.54	7.0	
1145	7.83'	1/4	188mL/min	1/2 gallon	15.11	0.352	6.37	213	6.58	5.6	
1155	7.83'	1/4	192mL/min	≅1 gallon	14.72	0.356	6.34	215	6.60	4.4	
1205	7.85'	1/4	180mL/min	≅1.5 gallons	14.46	0.358	6.37	215	6.63	4.5	
1215	7.83'	1/4	180mL/min	≅2 gallons	14.22	0.359	6.37	215	6.73	4.4	
1225	7.83'	1/4	180mL/min	≅2.5 gallons	14.20	0.361	6.39	215	6.80	4.0	
1235	7.83'	1/4	190mL/min	≅3 gallons	14.21	0.360	6.39	215	6.78	4.0	Obtained Samples
											MW11 is a blind duplicate of MW02
Stabilization Criteria					3%	3%	±0.1	± 10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

APPENDIX C
EXAMPLE (Minimum Requirements)
WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Project No. UPS510118.02

Location (Site/Facility Name) UPS Union Gap, WA
Well Number MW-03 Date 4-17-2012
Field Personnel R. Mangum
Sampling Organization Sierra Piedmont
Identify MP Black mark, north side, top of casing

Depth to 3.34' / 13.34' of screen (below MP) top bottom
Pump Intake at (ft. below MP) ≅ 8.50' BTOC
Purging Device; (pump type) Peristaltic
Total Volume Purged ≅ 4 gallons

Calculated Purge Volume 75: 2.61g

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Turb-idity NTU	Comments
1325	8.20'	1/4	196mL/min	0	17.00	0.335	6.73	198	5.67	9.9	
1335	8.20'	1/4	180mL/min	≅ 1/2 gallon	15.50	0.349	6.56	196	5.89	4.4	
1345	8.20'	1/4	180mL/min	≅ 1 gallon	14.70	0.355	6.48	197	6.08	3.1	
1355	8.20'	1/4	180mL/min	≅ 1.5 gallons	14.30	0.357	6.47	197	6.11	3.0	
1405	8.20'	1/4	200mL/min	≅ 2 gallons	14.00	0.359	6.45	199	6.21	2.9	
1415	8.20'	1/4	170mL/min	≅ 2.5 gallons	13.74	0.361	6.45	198	6.25	2.8	
1425	8.20'	1/4	170mL/min	≅ 3 gallons	13.51	0.363	6.42	201	6.32	3.9	
1435	8.20'	1/4	170mL/min	≅ 3.5 gallons	13.50	0.366	6.37	202	6.34	2.3	
1445	8.20	1/4	170mL/min	≅ 4 gallons	13.52	0.365	6.38	202	6.33	2.5	Obtained Samples
Stabilization Criteria					3%	3%	±0.1	± 10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

ATTACHMENT B

Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

May 07, 2012 Analytical Report for Service Request No: K1203608

Steve Brock
Sierra Piedmont
12045 Highway 92
Woodstock, GA 30188

RE: UPS Union Gap, WA/UPSS 10118.02

Dear Steve:

Enclosed are the results of the samples submitted to our laboratory on April 18, 2012. For your reference, these analyses have been assigned our service request number K1203608.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3363. You may also contact me via Email at Lisa.Domenighini@alsglobal.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lisa Domenighini
Project Chemist

LD/jw

Now part of the ALS Group

100% Recycled Paper

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc. - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Louisiana DHH	Not available	LA110003
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
New Mexico ED	http://www.nmenv.state.nm.us/dwb/Index.htm	-
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.caslab.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Sierra Piedmont	**Service Request No.:**	K1203608
Project:	UPS Union Gap, WA/UPSS 10118.02	**Date Received:**	04/18/12
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Four water samples and a trip blank sample were received for analysis at Columbia Analytical Services on 04/18/12. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

No anomalies associated with the analysis of these samples were observed.

Diesel Range Organics and Residual Range Organics by NWTPH-Dx

No anomalies associated with the analysis of these samples were observed.

Gasoline Range Organics by NWTPH-Gx

No anomalies associated with the analysis of these samples were observed.

EDB by EPA Method 504

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

No anomalies associated with the analysis of these samples were observed.

Approved by Lina A Domenighini **Date** 5/7/12

Chain of Custody

Columbia Analytical Services

30556 CHAIN OF CUSTODY

SR# K1203608

COC Set____ of____

Page 1 OF 1 COC# _____

1317 South 13th Ave, Kelso, WA 98626 | 360.577.7222 | 800.695.7222 | 360.636.1068 (fax)

Project Name	UPS UnionGap, WA
Project Number	UPS5 10118.02
Project Manager	Steve Brock
Company Name	Sierra Piedmont
Company Address	12045 Highway 92
City/State/Zip	Woodstock, GA 30188
E-Mail Address	sbrock@sierrapiedmont.com
Phone #	770-792-6200
FAX #	
Sampler Signature	Robert Mayo

	Sample ID	Date	Time	Lab ID	Matrix	Number of Containers	7D: 8270D / PAH SIM	14D: 504.1 / EDB DBCP	14D: 8260B / VOC_FP	14D: NWTPH-Dx / NW_TPH	14D: NWTPH-Gx / NW_GAS	180D: 200.8 / Metals T			Remarks
1	MW-01	4/17/12	1100		GW	9	9	✓	✓	✓	✓	✓				1
2	MW-11	4/17/12	1200		GW	9	✓	✓	✓	✓	✓	✓				2
3	MW-02	4/17/12	1300		GW	9	✓	✓	✓	✓	✓	✓				3
4	MW-03	4/17/12	1445		GW	13	✓	✓	✓	✓	✓	✓				4 Extra Volumefor MS/MSD
5	Trip Blank 01					2										5
6	Temp Blank					1										6
7																7
8																8
9																9
10																10
11																11

Report Requirements

- [x] I. Routine Report: Method Blank, Surrogate, as required
- [x] II. Report Dup., MS, MSD as required
- [ ] III. Data Validation Report (includes all raw data)
- [ ] IV. CLP Deliverable Report
- [ ] V. EDD

Invoice Information

P.O.# _____

Bill To: _____

Turnaround Requirements

- [ ] 24 hr. [ ] 48 hr.
- [ ] 5 Day
- [x] Standard (10-15 working days)
- [ ] Provide Fax Results

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments: See attached page for the required method detection limits specified by WDOE.

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: Robert Mayo	Signature: [illegible]	Signature:	Signature:
Date/Time: 4-18-12/0720	Date/Time: 4/18/12 7:20AM	Date/Time:	Date/Time:
Printed Name:	Printed Name: Brad Tobin	Printed Name:	Printed Name:
Firm:	Firm: ALS	Firm:	Firm:

We would like for you to provide a list of Test Methods accredited by the Washington Department of Ecology (DOE) to analyze the constituents at the detection limits set forth below. Your list should include the corresponding detection limit for that method, and the price per sample.

Constituents to Analyze	Detection Limit
Benzene	5 µg/L
Toluene	1,000 µg/L
Ethylbenzene	700 µg/L
Xylenes	1,000 µg/L
Methyl tert-butyl ether (MTBE)	20 µg/L
Ethylene Dibromide/1,2-dibromomethane (EDB)	0.01 µg/L
1,2-dichloroethane (EDC)	5 µg/L
Naphthalenes (Included in 8260B)	160 µg/L
1-methylnaphthalene	
2-methylnaphthalene	
naphthalene	
Lead	15 µg/L
NWTPH-Gx	800 µg/L
NWTPH-Dx (Diesel Range Organics)	500 µg/L
(Heavy Oils)	500 µg/L

For reporting purposes, we will need the analytical data results submitted to us via hard copy and in a spreadsheet format compatible with Washington DOE electronic information management (EIM) requirements.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Lisa

Client / Project: Sierra Piedmont Service Request *K12* 2/e08

Received: 4/18/12 Opened: 4/18/12 By: KST Unloaded: 4/18/12 By: KST

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID (NA)	Tracking Number	NA	Filed
1.3	2.4	265				

7. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
15. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: *Client marked 8270 on COC - but client submit bottles. See ~~COC~~ KST E-mail from Lisa D. expressing NO 8270 analysis will be performed*

Page _____ *of* _____

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client : Sierra Piedmont, Inc.
Project Name : UPS Union Gap, WA
Project No. : UPSS 10118.02

Service Request : K1203608

Sample Name :	Lab Code :
MW-01	K1203608-001
MW-11	K1203608-002
MW-02	K1203608-003
MW-03	K1203608-004
MW-03	K1203608-004D
MW-03	K1203608-004S
Laboratory Control Sample	K1203608-LCS
Method Blank	K1203608-MB

Comments:

Approved By: 3C Date: 5/4/12

Client :	Sierra Piedmont, Inc.	**Service Request :**	K1203608
Project Name :	UPS Union Gap, WA	**Date Collected :**	04/17/12
Project No. :	UPSS 10118.02	**Date Received :**	04/18/12
Matrix :	Water	**Date Extracted :**	04/19/12

Total Metals
Units: ug/L (ppb)

Analyte:	Lead
Analysis Method:	200.8
Method Reporting Limit:	0.02
Date Analyzed:	04/20/12

Sample Name	Lab Code	
MW-01	K1203608-001	ND
MW-11	K1203608-002	ND
MW-02	K1203608-003	ND
MW-03	K1203608-004	0.06
Method Blank	K1203608-MB	ND

Comments:

Client :	Sierra Piedmont, Inc.	**Service Request :**	K1203608
Project Name :	UPS Union Gap, WA	**Date Collected :**	04/17/12
Project No. :	UPSS 10118.02	**Date Received :**	04/18/12
Matrix :	Water	**Date Extracted :**	04/19/12
		Date Analyzed :	04/20/12

Duplicate Summary
Total Metals

Sample Name :	MW-03	**Units :**	ug/L (ppb)
Lab Code :	K1203608-004D	**Basis :**	NA

Analyte	Analysis	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Lead	200.8	0.02	0.06	0.07	0.07	15	

Comments:

Client :	Sierra Piedmont, Inc.	**Service Request :**	K1203608
Project Name :	UPS Union Gap, WA	**Date Collected :**	04/17/12
Project No. :	UPSS 10118.02	**Date Received :**	04/18/12
Matrix :	Water	**Date Extracted :**	04/19/12
		Date Analyzed :	04/20/12

Matrix Spike Summary
Total Metals

Sample Name :	MW-03	**Units :**	ug/L (ppb)
Lab Code :	K1203608-004S	**Basis :**	NA

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Lead	0.02	50.0	0.06	50.5	101	70-130	

Comments:

Client :	Sierra Piedmont, Inc.	**Service Request :**	K1203608
Project Name :	UPS Union Gap, WA	**Date Collected :**	NA
Project No. :	UPSS 10118.02	**Date Received :**	NA
Matrix :	Water	**Date Extracted :**	04/19/12
		Date Analyzed :	04/20/12

Laboratory Control Sample Summary
Total Metals

Sample Name :	Laboratory Control Sample	**Units :**	ug/L (ppb)
Lab Code :	K1203608-LCS	**Basis :**	NA

Analyte	Analysis Method	True Value	Result	Percent	CAS Percent Recovery Acceptance Limits	Result Notes
Lead	200.8	50.0	50.1	100	85-115	

Comments:

Diesel and Residual Range Organics

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Diesel and Residual Range Organics

Sample Name: MW-01
Lab Code: K1203608-001

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	
Residual Range Organics (RRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	100	50-150	04/21/12	Acceptable
n-Triacontane	101	50-150	04/21/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Diesel and Residual Range Organics

Sample Name: MW-11
Lab Code: K1203608-002

Units: ug/L
Basis: NA

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	
Residual Range Organics (RRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	95	50-150	04/21/12	Acceptable
n-Triacontane	101	50-150	04/21/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Diesel and Residual Range Organics

Sample Name: MW-02
Lab Code: K1203608-003

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	
Residual Range Organics (RRO)	ND	U	270	1	04/20/12	04/21/12	KWG1204064	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	92	50-150	04/21/12	Acceptable
n-Triacontane	98	50-150	04/21/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Diesel and Residual Range Organics

Sample Name: MW-03
Lab Code: K1203608-004

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	280	1	04/20/12	04/21/12	KWG1204064	
Residual Range Organics (RRO)	ND	U	280	1	04/20/12	04/21/12	KWG1204064	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	90	50-150	04/21/12	Acceptable
n-Triacontane	93	50-150	04/21/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: NA
Date Received: NA

Diesel and Residual Range Organics

Sample Name: Method Blank
Lab Code: KWG1204064-4

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	250	1	04/20/12	04/21/12	KWG1204064	
Residual Range Organics (RRO)	ND	U	250	1	04/20/12	04/21/12	KWG1204064	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	83	50-150	04/21/12	Acceptable
n-Triacontane	90	50-150	04/21/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2
MW-01	K1203608-001	100	101
MW-11	K1203608-002	95	101
MW-02	K1203608-003	92	98
MW-03	K1203608-004	90	93
Batch QC	K1203627-001	87	86
Batch QC	K1203627-004	99	90
Batch QCDUP	KWG1204064-1	90	88
Batch QCDUP	KWG1204064-2	122	92
Method Blank	KWG1204064-4	83	90
Lab Control Sample	KWG1204064-3	90	92
Duplicate Lab Control Sample	KWG1204064-5	107	77

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/20/2012
Date Analyzed: 04/21/2012

Duplicate Sample Summary
Diesel and Residual Range Organics

Sample Name: Batch QC
Lab Code: K1203627-001

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1204064

Analyte Name	MRL	Sample Result	Batch QCDUP KWG1204064-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Diesel Range Organics (DRO)	260	6800	7600	7200	11	30
Residual Range Organics (RRO)	260	720	890	800	20	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/20/2012
Date Analyzed: 04/21/2012

Duplicate Sample Summary
Diesel and Residual Range Organics

Sample Name: Batch QC
Lab Code: K1203627-004

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1204064

Analyte Name	MRL	Sample Result	Batch QCDUP KWG1204064-2 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Diesel Range Organics (DRO)	250	21000	21000	21000	0	30
Residual Range Organics (RRO)	250	2400	2500	2400	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/20/2012
Date Analyzed: 04/21/2012

Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1204064

Analyte Name	Lab Control Sample KWG1204064-3 Lab Control Spike Result	Expected	%Rec	%Rec Limits
Diesel Range Organics (DRO)	1480	1600	93	46-140
Residual Range Organics (RRO)	681	800	85	45-159

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Gasoline Range Organics

Client:	Sierra Piedmont, Inc.	**Service Request:**	K1203608
Project:	UPS Union Gap, WA/UPSS 10118.02	**Date Collected:**	04/17/2012
Sample Matrix:	Water	**Date Received:**	04/18/2012

Gasoline Range Organics

Sample Name:	MW-01	**Units:**	ug/L
Lab Code:	K1203608-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/27/12	04/27/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/27/12	Acceptable

Comments:

Client:	Sierra Piedmont, Inc.	**Service Request:**	K1203608
Project:	UPS Union Gap, WA/UPSS 10118.02	**Date Collected:**	04/17/2012
Sample Matrix:	Water	**Date Received:**	04/18/2012

Gasoline Range Organics

Sample Name:	MW-11	**Units:**	ug/L
Lab Code:	K1203608-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/27/12	04/27/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/27/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Gasoline Range Organics

Sample Name: MW-02
Lab Code: K1203608-003

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/27/12	04/27/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/27/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Gasoline Range Organics

Sample Name: MW-03
Lab Code: K1203608-004

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/27/12	04/27/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/27/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Gasoline Range Organics

Sample Name: Trip Blank 01
Lab Code: K1203608-005

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/26/12	04/26/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/26/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: NA
Date Received: NA

Gasoline Range Organics

Sample Name: Method Blank
Lab Code: KWG1204341-3

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	04/27/12	04/27/12	KWG1204341	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	92	50-150	04/27/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
MW-01	K1203608-001	92
MW-11	K1203608-002	92
MW-02	K1203608-003	92
MW-03	K1203608-004	92
Trip Blank 01	K1203608-005	92
MW-03DUP	KWG1204341-1	91
Method Blank	KWG1204341-3	92
Lab Control Sample	KWG1204341-2	92

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/27/2012
Date Analyzed: 04/27/2012

Duplicate Sample Summary
Gasoline Range Organics

Sample Name: MW-03
Lab Code: K1203608-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Level: Low
Extraction Lot: KWG1204341

Analyte Name	MRL	Sample Result	MW-03DUP KWG1204341-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Gasoline Range Organics-NWTPH	250	ND	ND	ND	-	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/27/2012
Date Analyzed: 04/27/2012

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1204341

	Lab Control Sample KWG1204341-2 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Gasoline Range Organics-NWTPH	512	500	102	80-119

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

EPA Method 504.1

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

EPA Method 504.1

Sample Name: MW-01
Lab Code: K1203608-001

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	1	04/19/12	04/20/12	KWG1204009	

Comments:

Client:	Sierra Piedmont, Inc.	**Service Request:**	K1203608
Project:	UPS Union Gap, WA/UPSS 10118.02	**Date Collected:**	04/17/2012
Sample Matrix:	Water	**Date Received:**	04/18/2012

EPA Method 504.1

Sample Name:	MW-11	**Units:**	ug/L
Lab Code:	K1203608-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0095	1	04/19/12	04/20/12	KWG1204009	

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

EPA Method 504.1

Sample Name: MW-02
Lab Code: K1203608-003

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	1	04/19/12	04/20/12	KWG1204009	

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

EPA Method 504.1

Sample Name: MW-03
Lab Code: K1203608-004

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	1	04/19/12	04/20/12	KWG1204009	

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Drinking water

Service Request: K1203608
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1204009-3

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.010	1	04/19/12	04/20/12	KWG1204009	

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Drinking water

Service Request: K1203608
Date Extracted: 04/19/2012
Date Analyzed: 04/20/2012

Matrix Spike Summary
EPA Method 504.1

Sample Name: Batch QC
Lab Code: K1203449-001

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1204009

Batch QCMS
KWG1204009-2
Matrix Spike

Analyte Name	Sample Result	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	ND	0.229	0.244	94	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/19/2012
Date Analyzed: 04/20/2012

Matrix Spike Summary
EPA Method 504.1

Sample Name: MW-03
Lab Code: K1203608-004

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1204009

Analyte Name	Sample Result	MW-03MS KWG1204009-4 Matrix Spike Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	ND	0.198	0.240	83	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Drinking water

Service Request: K1203608
Date Extracted: 04/19/2012
Date Analyzed: 04/20/2012

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1204009

Analyte Name	Lab Control Sample KWG1204009-1 Lab Control Spike Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.252	0.250	101	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Volatile Organic Compounds

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Volatile Organic Compounds

Sample Name: MW-01
Lab Code: K1203608-001

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	73-122	04/25/12	Acceptable
Toluene-d8	102	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	96	68-117	04/25/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Volatile Organic Compounds

Sample Name: MW-11
Lab Code: K1203608-002

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	73-122	04/25/12	Acceptable
Toluene-d8	102	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	93	68-117	04/25/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Volatile Organic Compounds

Sample Name: MW-02
Lab Code: K1203608-003

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	04/25/12	Acceptable
Toluene-d8	102	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	95	68-117	04/25/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: 04/17/2012
Date Received: 04/18/2012

Volatile Organic Compounds

Sample Name: MW-03
Lab Code: K1203608-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	73-122	04/25/12	Acceptable
Toluene-d8	103	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	94	68-117	04/25/12	Acceptable

Comments:

Client:	Sierra Piedmont, Inc.	**Service Request:**	K1203608
Project:	UPS Union Gap, WA/UPSS 10118.02	**Date Collected:**	04/17/2012
Sample Matrix:	Water	**Date Received:**	04/18/2012

Volatile Organic Compounds

Sample Name:	Trip Blank 01	**Units:**	ug/L
Lab Code:	K1203608-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	73-122	04/25/12	Acceptable
Toluene-d8	102	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	94	68-117	04/25/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1204219-4

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Methyl tert-Butyl Ether	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Benzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Toluene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Ethylbenzene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
m,p-Xylenes	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
o-Xylene	ND	U	0.50	1	04/25/12	04/25/12	KWG1204219	
Naphthalene	ND	U	2.0	1	04/25/12	04/25/12	KWG1204219	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	04/25/12	Acceptable
Toluene-d8	103	65-144	04/25/12	Acceptable
4-Bromofluorobenzene	98	68-117	04/25/12	Acceptable

Comments:

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MW-01	K1203608-001	102	102	96
MW-11	K1203608-002	100	102	93
MW-02	K1203608-003	101	102	95
MW-03	K1203608-004	100	103	94
Trip Blank 01	K1203608-005	99	102	94
Method Blank	KWG1204219-4	101	103	98
MW-03MS	KWG1204219-1	101	103	98
MW-03DMS	KWG1204219-2	101	102	98
Lab Control Sample	KWG1204219-3	99	104	96

Surrogate Recovery Control Limits (%)

Sur1 =	Dibromofluoromethane	73-122
Sur2 =	Toluene-d8	65-144
Sur3 =	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/25/2012
Date Analyzed: 04/25/2012

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: MW-03
Lab Code: K1203608-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low
Extraction Lot: KWG1204219

Analyte Name	Sample Result	MW-03MS KWG1204219-1 Matrix Spike			MW-03DMS KWG1204219-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Methyl tert-Butyl Ether	ND	10.5	10.0	105	10.5	10.0	105	54-126	0	30
Benzene	ND	11.1	10.0	111	10.5	10.0	105	63-144	6	30
1,2-Dichloroethane (EDC)	ND	11.9	10.0	119	11.7	10.0	117	56-141	1	30
Toluene	ND	10.9	10.0	109	10.5	10.0	105	71-136	4	30
Ethylbenzene	ND	10.2	10.0	102	9.47	10.0	95	66-136	7	30
m,p-Xylenes	ND	20.6	20.0	103	19.6	20.0	98	67-135	5	30
o-Xylene	ND	10.6	10.0	106	10.0	10.0	100	67-127	6	30
Naphthalene	ND	10.4	10.0	104	10.4	10.0	104	52-147	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Sierra Piedmont, Inc.
Project: UPS Union Gap, WA/UPSS 10118.02
Sample Matrix: Water

Service Request: K1203608
Date Extracted: 04/25/2012
Date Analyzed: 04/25/2012

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1204219

	Lab Control Sample KWG1204219-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Methyl tert-Butyl Ether	9.49	10.0	95	54-126
Benzene	9.90	10.0	99	69-124
1,2-Dichloroethane (EDC)	10.9	10.0	109	56-142
Toluene	9.81	10.0	98	69-124
Ethylbenzene	9.24	10.0	92	67-121
m,p-Xylenes	18.9	20.0	94	69-121
o-Xylene	9.67	10.0	97	71-119
Naphthalene	9.44	10.0	94	64-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.