

Spokane Co.
United Parcel Serv
Spokane
TOP 4 OF

**LIMITED
SUBSURFACE
INVESTIGATION**

RECEIVED

OCT 15 2010

**DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE**

AT

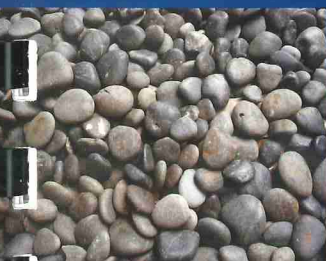
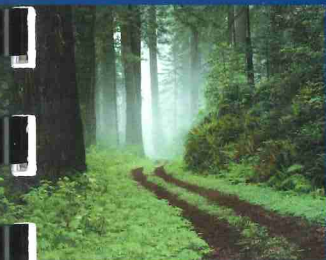
**UPS-SPOKANE
1016 N. BRADLEY ROAD
SPOKANE,
SPOKANE COUNTY,
WASHINGTON**

**FSID#672
UST#3690**

October 7, 2010

PREPARED FOR:

**Ms. Patti Carter
State of Washington
Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205
(509) 329-3400**





October 7, 2010

Ms. Patti Carter
State of Washington
Department of Ecology
4601 N. Monroe Street
Spokane, Washington 99205

UPSS10119.00

RE: Limited Subsurface Investigation at UPS- Spokane, 1016 N. Bradley Road, Spokane, Spokane County, Washington; FSID#672, UST#3690

Dear Ms. Carter:

Sierra Piedmont[®], Inc. (Sierra) has completed a Limited Subsurface Investigation (LSI) at the above-referenced site. A Work Plan outlining the LSI was provided to the Washington Department of Ecology (WDOE) for review and the WDOE approved the Work Plan "as is" via correspondence dated May 26, 2010. The LSI was conducted in response to a review of underground storage tank (UST) records maintained by WDOE of the subject property. During that review, it was determined that open files existed for previous UST removals. The LSI was proposed to evaluate current subsurface soil conditions in relation to a former new oil and a former used oil UST, a former gasoline UST, and a former diesel fuel UST. This report documents the findings of the LSI as compared to the WDOE Model Toxics Control Act (MTCA) guidance.

BACKGROUND

The subject property is owned by BT Property, LLC of Atlanta, Georgia and is located east of the intersection of Desmet Avenue and North Bradley Road in Spokane, Washington. The physical address is 1016 North Bradley Road in Spokane, Spokane County, Washington. Figure 1 is an area map of the site and surroundings. This property parcel (Number 35131.1405) is zoned as commercial and is listed as 19.3753 acres in area. The areas proposed for investigation on the property included:

- outside the northeast corner of the building,
- at the southeast corner of the property near the active gasoline UST and dispensers, and
- along the southwest corner of the property near the diesel UST and dispenser.

Available file information indicates a spill incident occurred and was reported to the WDOE on October 28, 1987. During preparation (gasoline filling) for a tank tightness test, an improperly plugged UST allowed an estimated 300 gallons of unleaded gasoline to be released in the subsurface. The location of the reported release was at the top of the southern end of the gasoline UST. Impacted soil was reportedly "land farmed" on the north side of the subject site. An undisclosed volume of sandy fill material was brought on site to replace the excavated material. No disposal manifest was available for the material. The backfilled area was subsequently covered with finished concrete.

Beginning November 12, 1990, under the direction of Raviv & Patricio and Associates, Inc. (RPAI), Tank Liners Incorporated (TLI) was present on-site to conduct UST removal and replacement. The USTs described for removal included:

- two 10,000-gallon diesel USTs
- one 10,000-gallon unleaded gasoline UST
- one 1,000-gallon used oil UST
- one 1,000-gallon new oil UST

During removal of the diesel USTs (November 13, 1990), a narrow zone of stained soil (no color or thickness) at a depth of approximately 15 to 16 feet was reported by RPAI in the northeast excavation. The stained soil was reportedly excavated until no visible evidence or no odor was present. Approximately 20 cubic yards (yds³) were removed. Excavated soil was stockpiled on the north side of the site and no waste disposal manifests were present in the file material. Soil was sampled at three locations in the excavation and from one soil stockpile as well. Laboratory analysis for total petroleum hydrocarbons (TPH) by Method 8015 indicated TPH presence in soil from non-detect to 2,900 parts per million (ppm) (this sample obtained from just beneath the stained soil location in the tank pit excavation).

One gasoline UST was removed on November 14, 1990. Removal included the UST, piping with dispenser, and a concrete pad with a catchment basin (connected to an on-site dry well). During excavation, petroleum odor and soil staining were noted by RPAI on the west side of the UST and adjacent to dry well piping with the catchment basin. Piping to the dry well was uncovered and the physical condition of the piping indicated a potential for piping leakage into subsurface soil. In addition, RPAI reported a "sweet solvent-like odor" at the north end of the UST excavation base. The material was sampled for laboratory analyses and reported to the WDOE. Findings of the soil analyses indicated that the material was not gasoline, but "contained unidentified branched alkanes" and "heavy petroleum hydrocarbons similar in character to a diesel fuel". Excavation of the impacted material was halted and a series of soil borings were installed and sampled to define the lateral extent of impact. These soil borings extended to depths of 30 to 35 feet below ground surface (bgs) with a focused depth of concern at 21 to 25 feet bgs (just below the "sweet solvent-like odor"). Physical observations and soil headspace readings of organic vapors were inconclusive in identifying impacted soil at depth. Soil sample results yielded the presence of TPH at concentrations below the WDOE guidance standard. Small, surface spills were hypothesized by RPAI as the source of impact and approximately 60 yds³ were excavated and stored on the north portion of the subject site.

On November 15, 1990; one 1,000-gallon new oil and one 1,000-gallon used oil UST were removed from the northeast corner of the site building. Staining of subsurface soil was noted at both USTs, near the fill port of the new oil UST and near the outlet side of the used oil UST. Soil excavation extended down to 6 to 8 feet below grade and soil samples were obtained and laboratory analyzed. Laboratory analyses indicated TPH present in these soil samples at 1,900 ppm to 3,300 ppm. An estimated 15 yds³ of soil was stockpiled with other excavated soil on the north side of the subject site. The excavation was backfilled with "clean fill material" under RPAI direction.

Sierra (on behalf of UPS) submitted an application for entry of this property into the voluntary cleanup program (VCP) with the WDOE. WDOE responded on April 16, 2010 approving the application.

Sierra then submitted a LSI Work Plan to evaluate current subsurface conditions to WDOE for review and approval. The scope of work included the installation of three soil borings at each former UST location with soil sampling and laboratory analyses for petroleum constituents.

On May 26, 2010, WDOE approved the LSI Work Plan "as is" authorizing Sierra to proceed with fieldwork and sampling activities.

FIELD ACTIVITIES

Sierra's representative, Mr. Robert Mangum, mobilized to the subject site on July 28, 2010. Pacific Northwest Probe & Drilling of Milton, Washington (PNPD) arrived on-site with a direct push technology (DPT) probe rig to provide soil probing services. Sierra conducted a site walk-over inspection, safety briefing, and an overview of site activities with PNPD personnel prior to initiating probing and sampling activities. A Health and Safety Plan (HASP) for site sampling activities was prepared in advance by Sierra. Prior to the commencement of fieldwork, Sierra reviewed the HASP with PNPD personnel and secured signatures acknowledging full understanding of the HASP and its requirements.

The Inland Empire Utility Coordinating Council public utility locator was notified prior to initiating subsurface work and subsurface utilities were marked with paint. In addition, Sierra visually noted locations of subsurface and aboveground utilities prior to advancing each boring and adjusted locations as necessary to avoid utility disturbance.

Sierra advanced two soil borings (out of three borings that were proposed) down to refusal. Boring advancement was difficult due to the presence of large gravel to cobble-sized rock and the occurrence of "running gravel" within each borehole during sample rod extraction. There was limited physical evidence (i.e. asphalt cuts, concrete cuts, etc.) on the ground surface to indicate the exact location of the former USTs. However, the soil borings were advanced in close proximity to the estimated location of the former used oil and new USTs as described in available file materials. Refer to Figure 2 for boring locations and Attachment A for photographs of boring locations. Soil borings were advanced to a maximum depth of 25 feet bgs. The borings were designated SB-01 and SB-02. The following table indicates the depth, location, and purpose of each boring:

Boring	Depth	Purpose and location of boring
SB-01	20 ft	Assess subsurface conditions adjacent to and beneath the former used oil/new oil UST pit
SB-02	25 ft	Assess subsurface conditions adjacent to and beneath the former used oil/new oil UST pit

In addition, three soil borings were proposed at each of the former diesel UST's and at the former gasoline UST locations. After reviewing site conditions and noting the **active USTs** at each location (as well as the difficulty in advancing soil borings using DPT methods), soil borings were not attempted at these areas.

Sampling Procedure

Soil samples were collected continuously during probing at 5 ft intervals in each boring. Soil samples were placed directly into laboratory-supplied sample containers and placed in an ice-filled cooler. A portion of each sample was allowed to volatilize inside new, sealed polyethylene bags to measure total organic vapors (TOV). The ambient background TOV reading recorded during this field event was 0.0 parts per million (ppm) using a Photovac 2020Combo Pro[®] organic vapor analyzer (OVA). TOV readings for individual soil sample intervals were recorded on soil boring logs in the field. Reusable sampling equipment was decontaminated with potable water and Alconox[™] soap before and between each use in borings.

Typical soils encountered within each boring were described and classified using the Unified Soil Classification System. The soils observed from the on-site borings appeared to be light brown to dark brown to medium gray, large sand to silty gravel to cobbles classified as GM. Sample recovery ranged from 26% to 52%. Soils were logged down to boring termination. Refer to Attachment II for the boring logs.

Sample Selection & Transport

A soil sample was selected from each boring and submitted for laboratory analyses based on TOV readings as well as visual and olfactory examination. The soil samples were submitted to the laboratory for analysis of the following contaminants of concern (COC):

- Benzene
- Toluene
- Ethylbenzene
- Total xylenes
- n-Hexane
- 1,2-Dibromomethane
- 1,2-Dichloroethane
- Methyl tertiary butyl ether
- Total lead
- Naphthalenes
- Carcinogenic Polynuclear Aromatic Hydrocarbons (PAHs)
- Polychlorinated biphenyls (PCBs)
- NWTPH-Gx
- NWTPH-Dx

The following table indicates depth, TOV reading, and type of laboratory analysis completed for each sample:

Soil Boring	Sample Depth (ft)	TOV Reading (ppm)	Laboratory Analysis
SB-01	7-8	2,000	BTEX, Hexane, EDB, EDC, MtBE, Lead, Naphthalenes, PAHs, PCBs, and NWTPH-Gx and Dx
SB-02	7-8	27	BTEX, Hexane, EDB, EDC, MtBE, Lead, Naphthalenes, PAHs, PCBs, and NWTPH-Gx and Dx

Ground water was not encountered during the construction of the soil borings. Photographs of the field activities are provided in Attachment I and copies of the boring logs are presented in Attachment II.

Soil cuttings were containerized on-site in a steel, 20-gallon steel drum. Upon completion of filling the drum; the contents of the drums, date filled, well location, and other pertinent information was labeled on the drum's exterior using white, permanent paint sticks. The drum was then staged on concrete paving pending laboratory analyses for disposal characterization. Manifests will be provided under separate cover.

Analytical Results

Laboratory analytical results indicated the presence of lead in soil above the laboratory reporting limit in SB-01 and SB-02, but both were below the MTCA Method A guidance value [250 milligrams per kilogram (mg/kg)] for unrestricted land uses. No petroleum compounds were detected above the laboratory reporting limits. Refer to Table 1 for soil analytical results, respectively, and Appendix III for laboratory data sheets and the Chain-of-Custody.

FINDINGS AND CONCLUSIONS

Laboratory analytical results for all of the soil samples collected from soil borings adjacent to the former used oil and new oil USTs indicate a detection of lead in soil above the reporting limit but below the MTCA Method A guidance value. No petroleum compounds were detected above the laboratory reporting limits.

The former diesel and gasoline UST areas were reviewed in the field. Since there are active USTs at each former location, they are regulated under the WDOE Leaking Underground Storage Tank (LUST) Program and not the VCP. Therefore, investigations of the former USTs at these locations would be completed at the time the current USTs are removed/abandoned in the future under the LUST guidelines and are not included under the VCP for regulation/closure. Sierra recommends that active UST management and compliance with WDOE UST/LUST guidance be met and that no subsurface assessment be completed except as required at the time of closure.

Based on the findings of these samples, Sierra finds only a slight presence of lead and no evidence of petroleum impact in the subsurface from the former used oil and new oil USTs. Sierra, on behalf of UPS, requests that WDOE review this report and issue a No Further Action (NFA) or equivalent status for the former used oil and new oil USTs, closing the matter.

Ms. Carter, Sierra appreciates your review of this matter. Should you have any questions, please contact the undersigned at (770) 792-5999 or Ms. Julie Straub of UPS at (404) 828-8991.

Sincerely,
Sierra Piedmont®, Inc.


Daniel E. Agramonte, PE
Program Manager

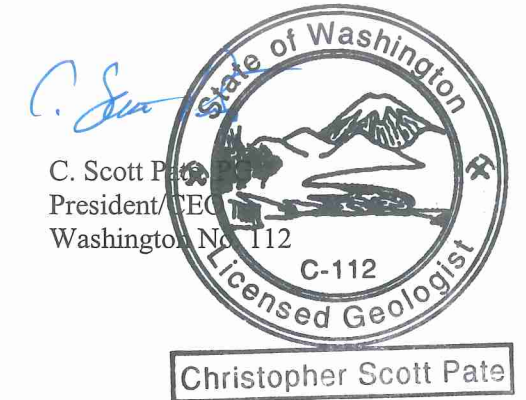
KOR 
Robert L. Mangum, Jr.
Project Operations Manager

Cc: Julie Straub, UPS
Stacey Byrem, UPS

Figure:
Figure 1 – Area Map
Figure 2 – Site Map and Soil Boring Locations

Table:
Table 1 – Summary of Soil Analytical Results

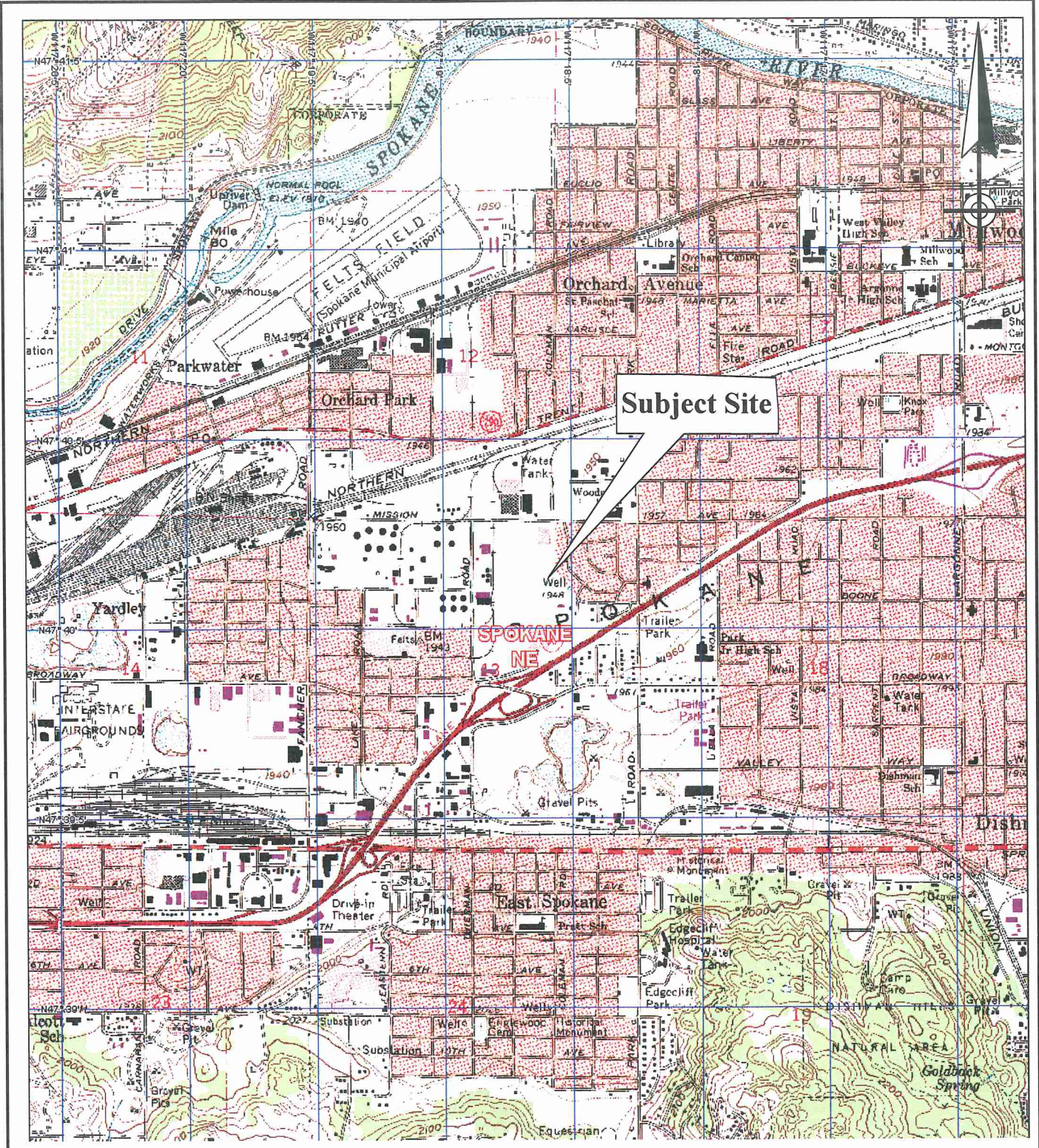
Attachments:
Attachment I – Photographs
Attachment II – Boring Logs
Attachment III – Laboratory Data Sheets and Chain-of-Custody



Document Ownership

This document has been prepared by Sierra Piedmont (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.

FIGURES



12045 Highway 92
Woodstock, GA 30188
www.sierrapiedmont.com

Office: 770-792-6200
Fax: 770-792-6005

UPS SPOKANE
1016 NORTH BRADLEY ROAD
SPOKANE, SPOKANE COUNTY, WASHINGTON 99212

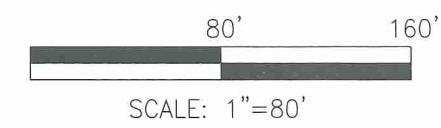
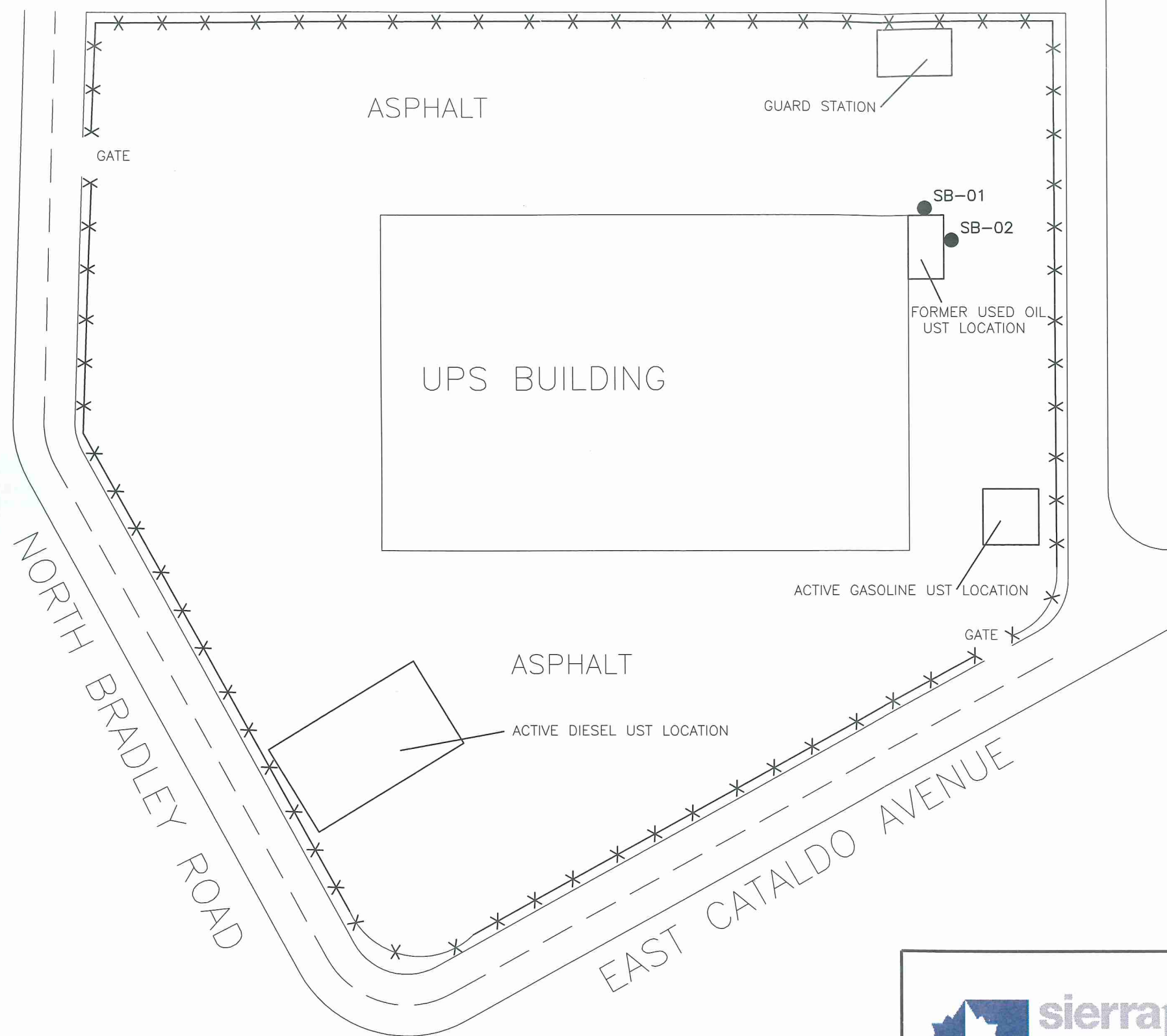
AREA MAP
SPOKANE EAST (WA) - ORIG. DATE 1986

SCALE: NTS	DRAWN BY: SAP	DRAWING NO. UPSS10119.00	REV. NO.
DATE: 09/24/2010	CHECKED BY: DEA	FIGURE NUMBER	
REVISION DATE:	APPROVED BY: DEA	FIGURE 1	X



LEGEND:

- SB-01 SOIL BORING LOCATION
- x—x—x— FENCE LINE



12045 Highway 92
Woodstock, GA 30188
e-mail: sierrastaff@sierrapiedmont.com

Office: 770-792-6200
Fax: 770-792-6005

UPS SPOKANE
1016 NORTH BRADLEY ROAD
SPOKANE, SPOKANE COUNTY, WASHINGTON
SITE MAP & SOIL BORING LOCATIONS

SCALE: 1"=80'	DRAWN BY: BLM	DRAWING NO. UPSS10119.00
DATE: 08/04/2010	CHECKED BY:	FIGURE NUMBER
REVISION DATE:	APPROVED BY:	FIGURE 2

TABLE

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
METAL
 (all results in mg/kg)

UPS SPOKANE
1016 NORTH BRADLEY ROAD
SPOKANE, SPOKANE COUNTY, WASHINGTON

Boring ID	Depth (ft)	Date Sampled	Lead
SB-01	15	07/28/10	6.81
SB-02	20	07/28/10	5.32
Method A Soil Cleanup Levels for Unrestricted Land Uses			250

Notes:
 (mg/kg) = milligrams per kilogram
 ft = feet

ATTACHMENT I



Photograph No 1: View of boring location (chalk circle) SB-01 adjacent to former used oil/new oil USTs (beneath parked truck).



Photograph No. 2: View of sampling rig set-up on SB-01 locations. Former used oil/new oil UST pit was to the left, under the parked truck.



Photograph No. 3: View of boring location (chalk circle) SB-02 in the left center of the photograph.



Photograph No. 4: View of the abandoned SB-01 (back left) and SB-02 (right center) of the photograph.



Photograph No. 5: View of the active gasoline UST/dispenser area with a proposed boring location (chalk circle) in the right center of the photograph.



Photograph No. 6: View of the active diesel UST/dispenser area with a proposed boring location (chalk circle) in the center of the photograph.

ATTACHMENT II

SIERRA PIEDMONT, INC.

SOIL BORING LOG

Boring/ MW Number: SB01		Project Number: UPSS10119.00		Client: United Parcel Service, Inc. - Spokane	
City/State: Spokane, WA		Borehole Start Date: 07/28/10	Borehole Start Time: 0903	<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
		End Date: 07/28/10	End Time: 1130	<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
Driller: Carlos & Eric		Geologist: Robert Mangum		Environmental Scientist/Technician: NA	
Drilling Company: Pacific Northwest Probe & Drilling		Surface Thickness (feet): Asphalt 0.35	Borehole Diameter (feet): 0.5	Borehole Depth (feet): Approximately 20 bgs	
Drilling Method(s): DPT	Apparent Borehole DTW (in feet from soil moisture content): NA	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac 2020 Combo Pro <input type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: (describe if other or multiple items are checked):					
<input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input checked="" type="checkbox"/> Other (describe)					
Background PID: 0.0 ppm Abandon using 3/8" bentonite chips, capped with concrete					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (feet) / %	SPT Blows (per six inches)	PID Reading	Odor	Time	Depth (feet)	Sample Description (soil type, approximate density, grading, grain size, staining, and other remarks)	USCS Symbol	Moisture Content	Soil & Groundwater Samples (sample number & depth interval)
HA	0-4	NA	NA	2.80	None	0903	1 2 3 4	Asphalt- Hand clearing using posthole digger & spud bar Encountering granite cobbles 4-6" diameter, dark brown to medium gray, silty gravel, (1/8" to 2" diameter)	GM	Dry	
DPT	5-10	2.35	NA	11.10	None	0942	5 6 7 8 9	Encountering granite cobbles 4-6" diameter, dark brown to medium gray, silty gravel, (1/8" to 2" diameter)	GM	Dry	
DPT	10-15	2.15	NA	7.50	None	1000	10 11 12	Light brown to medium gray, large sand to 2" gravel and conglomerate (rounded)	GM	Dry	Soil: SB-01, @ 15'

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; DC = Drill Cuttings
Moisture Content Codes: D = Dry; M = Moist; W = Wet

SIERRA PIEDMONT, INC.

SOIL BORING LOG

Parcel Service, Inc. - Spokane		
0903	<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
1130	<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
Scientist/Technician: NA		
Borehole Depth (feet): Approximately 20 bgs		
Gas Analyzer (hand check type): Combo Pro <input type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
<input type="checkbox"/> Other		
(describe) concrete chips, capped with concrete		
USCS Symbol	Moisture Content	Soil & Groundwater Samples (sample number & depth interval)
GM	Dry	
GM	Dry	
GM	Dry	Soil: SB-01, @ 15'

Boring/MW Number: SB01		City/State: Spokane, WA		Project Number: UPSS10119.00		Start Date: 07/28/10		End Date: 07/28/10			
Sample Type	Sample Depth Interval (feet)	Sample Recovery (feet)	SPT Blows (per six inches)	PID Reading	Odor	Time	Depth (feet)	Sample Description (soil type, approximate density, grading, grain size, staining, and other remarks)	USCS Symbol	Moisture Content	Soil & Groundwater Samples (sample number & depth interval)
DPT	15-20	2.60	NA	18.50	None	1015	13 14 15 16 17 18 19	Light brown to medium gray, large sand to 2" gravel and conglomerate (rounded)	GM	Dry	
DPT	20-25	2.0	NA	1.00	None	1040	20 21 22 23 24 25 26 27 28 29 30	Light brown to medium gray, large sand to 2" gravel and conglomerate (rounded) Difficulty retrieving the rod. Collapsing gravels terminating @ 20' due to heaving/collapsing gravels	GM	Dry	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; DC = Drill Cuttings
Moisture Content Codes: D = Dry; M = Moist; W = Wet

SIERRA PIEDMONT, INC.

SOIL BORING LOG

Boring/ MW Number: SB02		Project Number: UPSS10119.00		Client: United Parcel Service, Inc. - Spokane	
City/State: Spokane, WA		Borehole Start Date: 07/28/10	Borehole Start Time: 1200	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
		End Date: 07/28/10	End Time: 1425	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
Driller: Carlos & Eric		Geologist: Robert Mangum		Environmental Scientist/Technician: NA	
Drilling Company: Pacific Northwest Probe & Drilling		Surface Thickness (feet): Asphalt 0.35	Borehole Diameter (feet): 0.8	Borehole Depth (feet): Approximately 25 bgs	
Drilling Method(s): DPT	Apparent Borehole DTW (in feet from soil moisture content): NA	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac 2020 Combo Pro <input type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other (describe if other or multiple items are checked):					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input checked="" type="checkbox"/> Other (describe)					
Background PID: 0.0 ppm Abandon with hydrated bentonite, capped with concrete					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (feet) / %	SPT Blows (per six inches)	PID Reading	Odor	Time	Depth (feet)	Sample Description (soil type, approximate density, grading, grain size, staining, and other remarks)	USCS Symbol	Moisture Content	Soil & Groundwater Samples (sample number & depth interval)
HA	0-5	1.50	NA	0.0	None	1200	1	Asphalt- Hand clearing Granite cobbles & chert gravel, dry	GM	Dry	
							2				
							3				
							4				
DPT	5-10	2.58	NA	2.4	None	1233	5	Dark brown to medium gray, silty gravel (1/2" to 2" diameter), and rock fragments, dry	GM	Dry	
							6				
							7				
							8				
							9				
DPT	10-15	1.75	NA	0.0	None	1242	10	Light brown to medium gray, large sand to 2" gravel, well rounded with conglomerate	GM	Dry	
							11				
							12				

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet

SIERRA PIEDMONT, INC.

SOIL BORING LOG

Boring/MW Number:		City/State:		Project Number:		Start Date: 07/28/10					
SB02		Spokane, WA		UPSS10119.00		End Date: 07/28/10					
Sample Type	Sample Depth Interval (feet)	Sample Recovery (feet)	SPT Blows (per six inches)	PID Reading	Odor	Time	Depth (feet)	Sample Description (soil type, approximate density, grading, grain size, staining, and other remarks)	USCS Symbol	Moisture Content	Soil & Groundwater Samples (sample number & depth interval)
DPT	15-20	1.30	NA	31.8	None	1305	13 14 15 16 17 18 19	Light brown to medium gray, large sand to 2" gravel, well rounded with conglomerate	GM	Dry	
DPT	20-25	1.75	NA	64.0	None	1425	20 21 22 23 24 25 26 27 28 29 30	Unable to recover sample. Attempted to advance through glacial till, no success. Terminated at 25', unable to recover the sample due glacial till/gravel collapse in borehole.	GM	Dry	Soil: SB-02, @ 20'

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet

ATTACHMENT III

August 17, 2010 8:18:06AM

Client: Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn: Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Nbr: Spokane
P/O Nbr:
Date Received: 07/30/10

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SB-01 (15')	NTG2827-01	07/28/10 10:15
SB-02 (20')	NTG2827-02	07/28/10 14:25

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

Additional Laboratory Comments:

****Revised Report 8/17/10****

Changed Project number. This replaces the final report generated on 8/10/10 at 1148.

****Revised Report 8/10/10****

Changed Project number. This replaces the final report generated on 8/10/10 at 1125.

Washington Certification Number: C1712

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

All solids results are reported in wet weight unless specifically stated.

Estimated uncertainty is available upon request.

This report has been electronically signed.

Report Approved By:



Cathy Gartner

Project Management

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NTG2827-01 (SB-01 (15') - Soil) Sampled: 07/28/10 10:15								
General Chemistry Parameters								
% Dry Solids	93.6		%	0.500	1	08/03/10 08:23	SW-846	10H0111
Total Metals by EPA Method 6010B								
Lead	6.81		mg/kg dry	1.07	1	08/03/10 00:18	SW846 6010B	10G5401
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1221	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1232	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1242	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1248	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1254	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
PCB-1260	ND		mg/kg dry	0.0348	1	08/03/10 22:30	SW846 8082	10H0127
Surr: Tetrachloro-meta-xylene (19-147%)	50 %					08/03/10 22:30	SW846 8082	10H0127
Surr: Decachlorobiphenyl (20-150%)	54 %					08/03/10 22:30	SW846 8082	10H0127
Volatile Organic Compounds by EPA Method 8260B								
Benzene	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
Hexane	ND		mg/kg dry	0.0104	1	08/07/10 18:30	SW846 8260B	10G5348
Ethylbenzene	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
Methyl tert-Butyl Ether	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
Toluene	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
1,2-Dichloroethane	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
Xylenes, total	ND		mg/kg dry	0.00519	1	08/07/10 18:30	SW846 8260B	10G5348
1,2-Dibromoethane (EDB)	ND		mg/kg dry	0.00207	1	08/07/10 18:30	SW846 8260B	10G5348
Surr: 1,2-Dichloroethane-d4 (67-138%)	107 %					08/07/10 18:30	SW846 8260B	10G5348
Surr: Dibromofluoromethane (75-125%)	101 %					08/07/10 18:30	SW846 8260B	10G5348
Surr: Toluene-d8 (76-129%)	99 %					08/07/10 18:30	SW846 8260B	10G5348
Surr: 4-Bromofluorobenzene (67-147%)	99 %					08/07/10 18:30	SW846 8260B	10G5348
Polyaromatic Hydrocarbons by EPA 8270C SIM								
1-Methylnaphthalene	ND		mg/kg dry	0.00349	1	08/06/10 03:56	SW846 8270CSIM	10G5350
2-Methylnaphthalene	ND		mg/kg dry	0.00349	1	08/06/10 03:56	SW846 8270CSIM	10G5350
Naphthalene	ND		mg/kg dry	0.00349	1	08/06/10 03:56	SW846 8270CSIM	10G5350
Surr: Nitrobenzene-d5 (17-120%)	104 %					08/06/10 03:56	SW846 8270CSIM	10G5350
Surr: 2-Fluorobiphenyl (14-120%)	63 %					08/06/10 03:56	SW846 8270CSIM	10G5350
Surr: Terphenyl-d14 (18-120%)	68 %					08/06/10 03:56	SW846 8270CSIM	10G5350
Purgeable Petroleum Hydrocarbons								
GRO (C4-C12) NW	ND		mg/kg dry	4.92	50	08/02/10 21:26	NWTPH-Gx	10G5392
Surr: a,a,a-Trifluorotoluene (50-150%)	78 %					08/02/10 21:26	NWTPH-Gx	10G5392
Extractable Petroleum Hydrocarbons with Silica Gel Treatment								
Diesel	ND		mg/kg dry	4.18	1	08/04/10 04:04	NWTPH-Dx	10H0043
Motor Oil	ND		mg/kg dry	4.18	1	08/04/10 04:04	NWTPH-Dx	10H0043
Surr: o-Terphenyl (50-150%)	90 %					08/04/10 04:04	NWTPH-Dx	10H0043

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NTG2827-02 (SB-02 (20') - Soil) Sampled: 07/28/10 14:25								
General Chemistry Parameters								
% Dry Solids	92.2		%	0.500	1	08/03/10 08:23	SW-846	10H0111
Total Metals by EPA Method 6010B								
Lead	5.32		mg/kg dry	1.05	1	08/03/10 00:21	SW846 6010B	10G5401
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1221	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1232	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1242	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1248	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1254	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
PCB-1260	ND		mg/kg dry	0.0359	1	08/03/10 22:52	SW846 8082	10H0127
Surr: Tetrachloro-meta-xylene (19-147%)	52 %					08/03/10 22:52	SW846 8082	10H0127
Surr: Decachlorobiphenyl (20-150%)	52 %					08/03/10 22:52	SW846 8082	10H0127
Volatile Organic Compounds by EPA Method 8260B								
Benzene	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
Hexane	ND		mg/kg dry	0.00965	1	08/07/10 19:00	SW846 8260B	10G5348
Ethylbenzene	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
Methyl tert-Butyl Ether	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
Toluene	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
1,2-Dichloroethane	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
Xylenes, total	ND		mg/kg dry	0.00482	1	08/07/10 19:00	SW846 8260B	10G5348
1,2-Dibromoethane (EDB)	ND		mg/kg dry	0.00193	1	08/07/10 19:00	SW846 8260B	10G5348
Surr: 1,2-Dichloroethane-d4 (67-138%)	109 %					08/07/10 19:00	SW846 8260B	10G5348
Surr: Dibromofluoromethane (75-125%)	101 %					08/07/10 19:00	SW846 8260B	10G5348
Surr: Toluene-d8 (76-129%)	99 %					08/07/10 19:00	SW846 8260B	10G5348
Surr: 4-Bromofluorobenzene (67-147%)	105 %					08/07/10 19:00	SW846 8260B	10G5348
Polyaromatic Hydrocarbons by EPA 8270C SIM								
1-Methylnaphthalene	ND		mg/kg dry	0.00351	1	08/06/10 04:19	SW846 8270CSIM	10G5350
2-Methylnaphthalene	ND		mg/kg dry	0.00351	1	08/06/10 04:19	SW846 8270CSIM	10G5350
Naphthalene	ND		mg/kg dry	0.00351	1	08/06/10 04:19	SW846 8270CSIM	10G5350
Surr: Nitrobenzene-d5 (17-120%)	109 %					08/06/10 04:19	SW846 8270CSIM	10G5350
Surr: 2-Fluorobiphenyl (14-120%)	67 %					08/06/10 04:19	SW846 8270CSIM	10G5350
Surr: Terphenyl-d14 (18-120%)	73 %					08/06/10 04:19	SW846 8270CSIM	10G5350
Purgeable Petroleum Hydrocarbons								
GRO (C4-C12) NW	ND		mg/kg dry	4.92	50	08/02/10 21:43	NWTPH-Gx	10G5392
Surr: a,a,a-Trifluorotoluene (50-150%)	81 %					08/02/10 21:43	NWTPH-Gx	10G5392
Extractable Petroleum Hydrocarbons with Silica Gel Treatment								
Diesel	ND		mg/kg dry	4.25	1	08/04/10 04:23	NWTPH-Dx	10H0043
Motor Oil	ND		mg/kg dry	4.25	1	08/04/10 04:23	NWTPH-Dx	10H0043
Surr: o-Terphenyl (50-150%)	90 %					08/04/10 04:23	NWTPH-Dx	10H0043

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Extractable Petroleum Hydrocarbons with Silica Gel Treatment							
NWTPH-Dx	10H0043	NTG2827-01	25.56	1.00	08/03/10 07:00	SAS	EPA 3550B
NWTPH-Dx	10H0043	NTG2827-02	25.53	1.00	08/03/10 07:00	SAS	EPA 3550B
Polyaromatic Hydrocarbons by EPA 8270C SIM							
SW846 8270CSIM	10G5350	NTG2827-01	30.54	1.00	07/31/10 07:30	CAG	EPA 3550B
SW846 8270CSIM	10G5350	NTG2827-02	30.82	1.00	07/31/10 07:30	CAG	EPA 3550B
Polychlorinated Biphenyls by EPA Method 8082							
SW846 8082	10H0127	NTG2827-01	30.69	10.00	08/02/10 13:30	SAS	EPA 3550C/3665A
SW846 8082	10H0127	NTG2827-02	30.20	10.00	08/02/10 13:30	SAS	EPA 3550C/3665A
Purgeable Petroleum Hydrocarbons							
NWTPH-Gx	10G5392	NTG2827-01	5.43	5.00	07/28/10 10:15	JRL	EPA 5035A (GC)
NWTPH-Gx	10G5392	NTG2827-02	5.51	5.00	07/28/10 14:25	JRL	EPA 5035A (GC)
Total Metals by EPA Method 6010B							
SW846 6010B	10G5401	NTG2827-01	0.50	100.00	08/02/10 08:30	JWD	EPA 3051A/6010
SW846 6010B	10G5401	NTG2827-02	0.51	100.00	08/02/10 08:30	JWD	EPA 3051A/6010
Volatile Organic Compounds by EPA Method 8260B							
SW846 8260B	10G5348	NTG2827-01	5.15	5.00	07/28/10 10:15	JRL	EPA 5035
SW846 8260B	10G5348	NTG2827-01	5.15	5.00	07/28/10 10:15	JRL	EPA 5035
SW846 8260B	10G5348	NTG2827-01	5.15	5.00	07/28/10 10:15	JRL	EPA 5035
SW846 8260B	10G5348	NTG2827-02	5.62	5.00	07/28/10 14:25	JRL	EPA 5035
SW846 8260B	10G5348	NTG2827-02	5.62	5.00	07/28/10 14:25	JRL	EPA 5035
SW846 8260B	10G5348	NTG2827-02	5.62	5.00	07/28/10 14:25	JRL	EPA 5035

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Total Metals by EPA Method 6010B						
10G5401-BLK1						
Lead	<0.571		mg/kg wet	10G5401	10G5401-BLK1	08/02/10 23:51
Polychlorinated Biphenyls by EPA Method 8082						
10H0127-BLK1						
PCB-1016	<0.0210		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1221	<0.0110		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1232	<0.0160		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1242	<0.0260		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1248	<0.0300		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1254	<0.0110		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
PCB-1260	<0.0280		mg/kg wet	10H0127	10H0127-BLK1	08/03/10 20:21
Surrogate: Tetrachloro-meta-xylene	64%			10H0127	10H0127-BLK1	08/03/10 20:21
Surrogate: Decachlorobiphenyl	68%			10H0127	10H0127-BLK1	08/03/10 20:21
Volatile Organic Compounds by EPA Method 8260B						
10G5348-BLK1						
Benzene	<0.00110		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Hexane	<0.00110		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Ethylbenzene	<0.000980		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Methyl tert-Butyl Ether	<0.000670		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Toluene	<0.000890		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
1,2-Dichloroethane	<0.000510		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Xylenes, total	<0.00190		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
1,2-Dibromoethane (EDB)	<0.000670		mg/kg wet	10G5348	10G5348-BLK1	08/07/10 15:48
Surrogate: 1,2-Dichloroethane-d4	105%			10G5348	10G5348-BLK1	08/07/10 15:48
Surrogate: Dibromofluoromethane	102%			10G5348	10G5348-BLK1	08/07/10 15:48
Surrogate: Toluene-d8	99%			10G5348	10G5348-BLK1	08/07/10 15:48
Surrogate: 4-Bromofluorobenzene	98%			10G5348	10G5348-BLK1	08/07/10 15:48
10G5348-BLK2						
Benzene	<0.0550		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Hexane	<0.0550		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Ethylbenzene	<0.0490		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Methyl tert-Butyl Ether	<0.0335		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Toluene	<0.0445		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
1,2-Dichloroethane	<0.0255		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Xylenes, total	<0.0950		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
1,2-Dibromoethane (EDB)	<0.0335		mg/kg wet	10G5348	10G5348-BLK2	08/07/10 16:18
Surrogate: 1,2-Dichloroethane-d4	98%			10G5348	10G5348-BLK2	08/07/10 16:18
Surrogate: Dibromofluoromethane	100%			10G5348	10G5348-BLK2	08/07/10 16:18
Surrogate: Toluene-d8	101%			10G5348	10G5348-BLK2	08/07/10 16:18

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Volatile Organic Compounds by EPA Method 8260B						
10G5348-BLK2						
<i>Surrogate: 4-Bromofluorobenzene</i>	98%			10G5348	10G5348-BLK2	08/07/10 16:18
Polyaromatic Hydrocarbons by EPA 8270C SIM						
10G5350-BLK1						
1-Methylnaphthalene	<0.000600		mg/kg wet	10G5350	10G5350-BLK1	08/06/10 02:25
2-Methylnaphthalene	<0.000800		mg/kg wet	10G5350	10G5350-BLK1	08/06/10 02:25
Naphthalene	<0.000600		mg/kg wet	10G5350	10G5350-BLK1	08/06/10 02:25
<i>Surrogate: Nitrobenzene-d5</i>	104%			10G5350	10G5350-BLK1	08/06/10 02:25
<i>Surrogate: 2-Fluorobiphenyl</i>	69%			10G5350	10G5350-BLK1	08/06/10 02:25
<i>Surrogate: Terphenyl-d14</i>	72%			10G5350	10G5350-BLK1	08/06/10 02:25
Purgeable Petroleum Hydrocarbons						
10G5392-BLK1						
GRO (C4-C12) NW	1.69		mg/kg wet	10G5392	10G5392-BLK1	08/02/10 15:46
<i>Surrogate: a,a,a-Trifluorotoluene</i>	81%			10G5392	10G5392-BLK1	08/02/10 15:46
10G5392-BLK2						
GRO (C4-C12) NW	1.72		mg/kg wet	10G5392	10G5392-BLK2	08/02/10 16:04
<i>Surrogate: a,a,a-Trifluorotoluene</i>	81%			10G5392	10G5392-BLK2	08/02/10 16:04
Extractable Petroleum Hydrocarbons with Silica Gel Treatment						
10H0043-BLK1						
Diesel	0.788		mg/kg wet	10H0043	10H0043-BLK1	08/04/10 02:48
Motor Oil	1.37		mg/kg wet	10H0043	10H0043-BLK1	08/04/10 02:48
<i>Surrogate: o-Terphenyl</i>	102%			10H0043	10H0043-BLK1	08/04/10 02:48

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	Analyzed Date/Time
General Chemistry Parameters										
10H0111-DUP1										
% Dry Solids	93.6	92.3		%	1	20	10H0111	NTG2827-01		08/03/10 08:23
Purgeable Petroleum Hydrocarbons										
10G5392-DUP1										
GRO (C4-C12) NW	1.45	1.19		mg/kg dry	20	50	10G5392	NTG2827-05		08/02/10 22:54
Surrogate: <i>a,a,a</i> -Trifluorotoluene		16.0		ug/L			10G5392	NTG2827-05	80%	08/02/10 22:54

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Total Metals by EPA Method 6010B								
10G5401-BS1								
Lead	19.5	18.4		mg/kg wet	94%	80 - 120	10G5401	08/02/10 23:54
Polychlorinated Biphenyls by EPA Method 8082								
10H0127-BS1								
PCB-1260	0.167	0.107		mg/kg wet	64%	56 - 150	10H0127	08/03/10 20:42
Surrogate: Tetrachloro-meta-xylene	0.0167	0.00833			50%	19 - 147	10H0127	08/03/10 20:42
Surrogate: Decachlorobiphenyl	0.0167	0.0110			66%	20 - 150	10H0127	08/03/10 20:42
Volatile Organic Compounds by EPA Method 8260B								
10G5348-BS1								
Benzene	50.0	52.5		ug/kg	105%	78 - 126	10G5348	08/07/10 14:18
Hexane	50.0	56.0		ug/kg	112%	55 - 136	10G5348	08/07/10 14:18
Ethylbenzene	50.0	54.9		ug/kg	110%	79 - 130	10G5348	08/07/10 14:18
Methyl tert-Butyl Ether	50.0	58.1		ug/kg	116%	70 - 128	10G5348	08/07/10 14:18
Toluene	50.0	54.0		ug/kg	108%	76 - 126	10G5348	08/07/10 14:18
1,2-Dichloroethane	50.0	53.9		ug/kg	108%	70 - 139	10G5348	08/07/10 14:18
Xylenes, total	150	175		ug/kg	116%	80 - 130	10G5348	08/07/10 14:18
1,2-Dibromoethane (EDB)	50.0	54.7		ug/kg	109%	80 - 131	10G5348	08/07/10 14:18
Surrogate: 1,2-Dichloroethane-d4	50.0	51.0			102%	67 - 138	10G5348	08/07/10 14:18
Surrogate: Dibromofluoromethane	50.0	50.8			102%	75 - 125	10G5348	08/07/10 14:18
Surrogate: Toluene-d8	50.0	49.8			100%	76 - 129	10G5348	08/07/10 14:18
Surrogate: 4-Bromofluorobenzene	50.0	50.7			101%	67 - 147	10G5348	08/07/10 14:18
Polyaromatic Hydrocarbons by EPA 8270C SIM								
10G5350-BS1								
1-Methylnaphthalene	0.0333	0.0213		mg/kg wet	64%	41 - 120	10G5350	08/06/10 02:48
2-Methylnaphthalene	0.0333	0.0227		mg/kg wet	68%	48 - 121	10G5350	08/06/10 02:48
Naphthalene	0.0333	0.0227		mg/kg wet	68%	42 - 120	10G5350	08/06/10 02:48
Surrogate: Nitrobenzene-d5	0.0333	0.0360			108%	17 - 120	10G5350	08/06/10 02:48
Surrogate: 2-Fluorobiphenyl	0.0333	0.0240			72%	14 - 120	10G5350	08/06/10 02:48
Surrogate: Terphenyl-d14	0.0333	0.0240			72%	18 - 120	10G5350	08/06/10 02:48
Purgeable Petroleum Hydrocarbons								
10G5392-BS1								
GRO (C4-C12) NW	10.0	10.0		mg/kg wet	100%	60 - 123	10G5392	08/03/10 00:21
Surrogate: a,a,a-Trifluorotoluene	20.0	20.0			100%	50 - 150	10G5392	08/03/10 00:21
10G5392-BS2								
GRO (C4-C12) NW	10.0	10.3		mg/kg wet	103%	60 - 123	10G5392	08/03/10 00:39
Surrogate: a,a,a-Trifluorotoluene	20.0	20.9			104%	50 - 150	10G5392	08/03/10 00:39

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
LCS - Cont.

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Extractable Petroleum Hydrocarbons with Silica Gel Treatment								
10H0043-BS1								
Diesel	40.0	37.5		mg/kg wet	94%	55 - 123	10H0043	08/04/10 03:07
Surrogate: <i>o</i> -Terphenyl	0.800	0.749			94%	50 - 150	10H0043	08/04/10 03:07

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA

LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Volatile Organic Compounds by EPA Method 8260B												
10G5348-BSD1												
Benzene		51.2		ug/kg	50.0	102%	78 - 126	3	50	10G5348		08/07/10 14:48
Hexane		51.8		ug/kg	50.0	104%	55 - 136	8	48	10G5348		08/07/10 14:48
Ethylbenzene		53.0		ug/kg	50.0	106%	79 - 130	3	50	10G5348		08/07/10 14:48
Methyl tert-Butyl Ether		56.8		ug/kg	50.0	114%	70 - 128	2	50	10G5348		08/07/10 14:48
Toluene		51.5		ug/kg	50.0	103%	76 - 126	5	50	10G5348		08/07/10 14:48
1,2-Dichloroethane		51.8		ug/kg	50.0	104%	70 - 139	4	50	10G5348		08/07/10 14:48
Xylenes, total		173		ug/kg	150	116%	80 - 130	0.7	50	10G5348		08/07/10 14:48
1,2-Dibromoethane (EDB)		52.9		ug/kg	50.0	106%	80 - 131	3	45	10G5348		08/07/10 14:48
Surrogate: 1,2-Dichloroethane-d4		50.5		ug/kg	50.0	101%	67 - 138			10G5348		08/07/10 14:48
Surrogate: Dibromofluoromethane		50.2		ug/kg	50.0	100%	75 - 125			10G5348		08/07/10 14:48
Surrogate: Toluene-d8		48.9		ug/kg	50.0	98%	76 - 129			10G5348		08/07/10 14:48
Surrogate: 4-Bromofluorobenzene		51.8		ug/kg	50.0	104%	67 - 147			10G5348		08/07/10 14:48

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Total Metals by EPA Method 6010B										
10G5401-MS1										
Lead	12.6	40.8		mg/kg dry	27.3	104%	75 - 125	10G5401	NTG2543-01	08/03/10 00:12
Polychlorinated Biphenyls by EPA Method 8082										
10H0127-MS1										
PCB-1260	ND	0.124		mg/kg dry	0.177	70%	51 - 159	10H0127	NTG2827-02	08/03/10 21:04
Surrogate: Tetrachloro-meta-xylene		0.0110		mg/kg dry	0.0177	62%	19 - 147	10H0127	NTG2827-02	08/03/10 21:04
Surrogate: Decachlorobiphenyl		0.0120		mg/kg dry	0.0177	68%	20 - 150	10H0127	NTG2827-02	08/03/10 21:04
Volatile Organic Compounds by EPA Method 8260B										
10G5348-MS1										
Benzene	ND	0.0521		mg/kg dry	0.0530	98%	42 - 141	10G5348	NTH0343-02	08/07/10 23:56
Hexane	0.00166	0.0577		mg/kg dry	0.0530	106%	10 - 180	10G5348	NTH0343-02	08/07/10 23:56
Ethylbenzene	ND	0.0540		mg/kg dry	0.0530	102%	21 - 165	10G5348	NTH0343-02	08/07/10 23:56
Methyl tert-Butyl Ether	ND	0.0537		mg/kg dry	0.0530	101%	34 - 154	10G5348	NTH0343-02	08/07/10 23:56
Toluene	ND	0.0536		mg/kg dry	0.0530	101%	45 - 145	10G5348	NTH0343-02	08/07/10 23:56
1,2-Dichloroethane	ND	0.0543		mg/kg dry	0.0530	102%	32 - 155	10G5348	NTH0343-02	08/07/10 23:56
Xylenes, total	ND	0.174		mg/kg dry	0.159	109%	31 - 159	10G5348	NTH0343-02	08/07/10 23:56
1,2-Dibromoethane (EDB)	ND	0.0521		mg/kg dry	0.0530	98%	30 - 155	10G5348	NTH0343-02	08/07/10 23:56
Surrogate: 1,2-Dichloroethane-d4		51.7		ug/kg	50.0	103%	67 - 138	10G5348	NTH0343-02	08/07/10 23:56
Surrogate: Dibromofluoromethane		50.4		ug/kg	50.0	101%	75 - 125	10G5348	NTH0343-02	08/07/10 23:56
Surrogate: Toluene-d8		49.0		ug/kg	50.0	98%	76 - 129	10G5348	NTH0343-02	08/07/10 23:56
Surrogate: 4-Bromofluorobenzene		49.4		ug/kg	50.0	99%	67 - 147	10G5348	NTH0343-02	08/07/10 23:56
Polyaromatic Hydrocarbons by EPA 8270C SIM										
10G5350-MS1										
1-Methylnaphthalene	0.00524	0.0214		mg/kg dry	0.0357	45%	20 - 120	10G5350	NTG2827-05	08/06/10 03:11
2-Methylnaphthalene	0.00558	0.0236		mg/kg dry	0.0357	50%	28 - 124	10G5350	NTG2827-05	08/06/10 03:11
Naphthalene	0.00419	0.0232		mg/kg dry	0.0357	53%	10 - 135	10G5350	NTG2827-05	08/06/10 03:11
Surrogate: Nitrobenzene-d5		0.0350		mg/kg dry	0.0357	98%	17 - 120	10G5350	NTG2827-05	08/06/10 03:11
Surrogate: 2-Fluorobiphenyl		0.0225		mg/kg dry	0.0357	63%	14 - 120	10G5350	NTG2827-05	08/06/10 03:11
Surrogate: Terphenyl-d14		0.0239		mg/kg dry	0.0357	67%	18 - 120	10G5350	NTG2827-05	08/06/10 03:11
Purgeable Petroleum Hydrocarbons										
10G5392-MS1										
GRO (C4-C12) NW	2.93	467		mg/kg wet	475	98%	59 - 130	10G5392	NTG2863-07	08/03/10 01:31
Surrogate: a,a,a-Trifluorotoluene		19.6		ug/L	20.0	98%	50 - 150	10G5392	NTG2863-07	08/03/10 01:31
10G5392-MS2										
GRO (C4-C12) NW	2.67	528		mg/kg dry	519	101%	59 - 130	10G5392	NTG2912-04	08/03/10 02:06

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Matrix Spike - Cont.

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Purgeable Petroleum Hydrocarbons										
10G5392-MS2										
<i>Surrogate: a,a,a-Trifluorotoluene</i>		20.1		ug/L	20.0	100%	50 - 150	10G5392	NTG2912-04	08/03/10 02:06
Extractable Petroleum Hydrocarbons with Silica Gel Treatment										
10H0043-MS1										
Diesel	2.64	38.1		mg/kg dry	42.9	83%	34 - 138	10H0043	NTG2827-02	08/04/10 03:26
<i>Surrogate: o-Terphenyl</i>		0.811		mg/kg dry	0.859	94%	50 - 150	10H0043	NTG2827-02	08/04/10 03:26

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Matrix Spike Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Total Metals by EPA Method 6010B												
10G5401-MSD1												
Lead	12.6	38.6		mg/kg dry	27.6	94%	75 - 125	6	20	10G5401	NTG2543-01	08/03/10 00:15
Polychlorinated Biphenyls by EPA Method 8082												
10H0127-MSD1												
PCB-1260	ND	0.122		mg/kg dry	0.176	69%	51 - 159	2	36	10H0127	NTG2827-02	08/03/10 21:26
Surrogate: Tetrachloro-meta-xylene		0.0120		mg/kg dry	0.0176	68%	19 - 147			10H0127	NTG2827-02	08/03/10 21:26
Surrogate: Decachlorobiphenyl		0.0120		mg/kg dry	0.0176	68%	20 - 150			10H0127	NTG2827-02	08/03/10 21:26
Volatile Organic Compounds by EPA Method 8260B												
10G5348-MSD1												
Benzene	ND	0.0527		mg/kg dry	0.0532	99%	42 - 141	1	50	10G5348	NTH0343-02	08/08/10 00:26
Hexane	0.00166	0.0612		mg/kg dry	0.0532	112%	10 - 180	6	48	10G5348	NTH0343-02	08/08/10 00:26
Ethylbenzene	ND	0.0544		mg/kg dry	0.0532	102%	21 - 165	0.9	50	10G5348	NTH0343-02	08/08/10 00:26
Methyl tert-Butyl Ether	ND	0.0567		mg/kg dry	0.0532	107%	34 - 154	5	50	10G5348	NTH0343-02	08/08/10 00:26
Toluene	ND	0.0538		mg/kg dry	0.0532	101%	45 - 145	0.3	50	10G5348	NTH0343-02	08/08/10 00:26
1,2-Dichloroethane	ND	0.0531		mg/kg dry	0.0532	100%	32 - 155	2	50	10G5348	NTH0343-02	08/08/10 00:26
Xylenes, total	ND	0.173		mg/kg dry	0.160	109%	31 - 159	0.2	50	10G5348	NTH0343-02	08/08/10 00:26
1,2-Dibromoethane (EDB)	ND	0.0528		mg/kg dry	0.0532	99%	30 - 155	1	45	10G5348	NTH0343-02	08/08/10 00:26
Surrogate: 1,2-Dichloroethane-d4		52.2		ug/kg	50.0	104%	67 - 138			10G5348	NTH0343-02	08/08/10 00:26
Surrogate: Dibromofluoromethane		50.9		ug/kg	50.0	102%	75 - 125			10G5348	NTH0343-02	08/08/10 00:26
Surrogate: Toluene-d8		49.8		ug/kg	50.0	100%	76 - 129			10G5348	NTH0343-02	08/08/10 00:26
Surrogate: 4-Bromofluorobenzene		49.7		ug/kg	50.0	99%	67 - 147			10G5348	NTH0343-02	08/08/10 00:26
Polyaromatic Hydrocarbons by EPA 8270C SIM												
10G5350-MSD1												
1-Methylnaphthalene	0.00524	0.0241		mg/kg dry	0.0354	53%	20 - 120	12	35	10G5350	NTG2827-05	08/06/10 03:33
2-Methylnaphthalene	0.00558	0.0255		mg/kg dry	0.0354	56%	28 - 124	8	38	10G5350	NTG2827-05	08/06/10 03:33
Naphthalene	0.00419	0.0255		mg/kg dry	0.0354	60%	10 - 135	9	36	10G5350	NTG2827-05	08/06/10 03:33
Surrogate: Nitrobenzene-d5		0.0401		mg/kg dry	0.0354	113%	17 - 120			10G5350	NTG2827-05	08/06/10 03:33
Surrogate: 2-Fluorobiphenyl		0.0248		mg/kg dry	0.0354	70%	14 - 120			10G5350	NTG2827-05	08/06/10 03:33
Surrogate: Terphenyl-d14		0.0245		mg/kg dry	0.0354	69%	18 - 120			10G5350	NTG2827-05	08/06/10 03:33
Purgeable Petroleum Hydrocarbons												
10G5392-MSD1												
GRO (C4-C12) NW	2.93	477		mg/kg wet	475	100%	59 - 130	2	50	10G5392	NTG2863-07	08/03/10 01:49
Surrogate: a,a,a-Trifluorotoluene		20.6		ug/L	20.0	103%	50 - 150			10G5392	NTG2863-07	08/03/10 01:49
10G5392-MSD2												
GRO (C4-C12) NW	2.67	539		mg/kg dry	519	103%	59 - 130	2	50	10G5392	NTG2912-04	08/03/10 02:23
Surrogate: a,a,a-Trifluorotoluene		20.8		ug/L	20.0	104%	50 - 150			10G5392	NTG2912-04	08/03/10 02:23

Client Sierra Piedmont Eng & Geol. (2649)
 12045 Highway 92
 Woodstock, GA 30188
 Attn Robert Mangum

Work Order: NTG2827
 Project Name: UPS - Washington
 Project Number: Spokane
 Received: 07/30/10 08:00

PROJECT QUALITY CONTROL DATA
Matrix Spike Dup - Cont.

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Extractable Petroleum Hydrocarbons with Silica Gel Treatment												
10H0043-MSD1												
Diesel	2.64	47.6		mg/kg dry	43.3	104%	34 - 138	22	43	10H0043	NTG2827-02	08/04/10 03:45
Surrogate: <i>o</i> -Terphenyl		0.907		mg/kg dry	0.866	105%	50 - 150			10H0043	NTG2827-02	08/04/10 03:45

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

CERTIFICATION SUMMARY

TestAmerica Nashville

Method	Matrix	AIHA	Nelac	Washington
NWTPH-Dx	Soil	N/A		X
NWTPH-Gx	Soil	N/A	X	X
SW846 6010B	Soil	N/A	X	X
SW846 8082	Soil	N/A	X	X
SW846 8260B	Soil	N/A	X	X
SW846 8270CSIM	Soil	N/A	X	X
SW-846	Soil			

Client Sierra Piedmont Eng & Geol. (2649)
12045 Highway 92
Woodstock, GA 30188

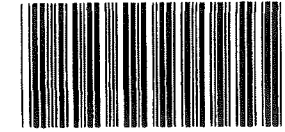
Attn Robert Mangum

Work Order: NTG2827
Project Name: UPS - Washington
Project Number: Spokane
Received: 07/30/10 08:00

DATA QUALIFIERS AND DEFINITIONS

ND Not detected at the reporting limit (or method detection limit if shown)

METHOD MODIFICATION NOTES



NTG2827

Cooler Received/Opened On 7/30/2010 @ 0800

1. Tracking # 3365 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID Raynger

2. Temperature of rep. sample or temp blank when opened: 1-2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? 1 front YES NO NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and Intact YES NO NA

Were these signed and dated correctly? YES NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NA

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used? YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a PIPE generated? YES NO # _____

